

SYMPOSIUM ABSTRACTS

[1] SYMPOSIUM • **BORDERS, BOUNDARIES, AND BRIDGES IN TEXAS ARCHAEOLOGY**
(SPONSORED BY SAA ANNUAL MEETING PROGRAM COMMITTEE)

Texas archaeology and archaeologists provide us with an opportunity to explore the materiality of social boundaries, tug at the borders of typological categories, and build bridges among seemingly disparate intellectual, theoretical, and professional categories. In this session we explore current research and practice in Paleo-Indian research, models of hunter-gatherers, collaborations among Native peoples and archaeologists, cultural resource management, and the archaeology of colonization. All of these topics have much to contribute to the archaeology of the Americas more broadly.

[2] POSTER SESSION • **ARCHAEOTECHNOLOGY ON THE KAIBAB NATIONAL FOREST, ARIZONA**
Using the Kaibab National Forest as a study area, the posters in this session explore the limits of various digital and traditional technologies when analyzing the Arizona landscape.

[3] POSTER SESSION • **BIOARCHAEOLOGY AND MORTUARY ANALYSIS**

[4] POSTER SESSION • **ZOOARCHAEOLOGY**

[5] POSTER SESSION • **GIS AND MAPPING IN ARCHAEOLOGY**

[6] POSTER SESSION • **HISTORICAL ARCHAEOLOGY**

[7] POSTER SESSION • **MESOAMERICAN ARCHAEOLOGY**

[8] FORUM • **CHACO AT 100 YEARS: THE FUTURE OF ARCHAEOLOGICAL RESEARCH IN THE CANYON**
In 2007 Chaco Culture National Historical Park celebrates the centennial of its founding. Chaco is one of the most-studied places in American archaeology, but the era of big government archaeology is over. In the future, Chaco Canyon archaeology involving excavation will need to be broadly collaborative to justify the impacts. However there are a range of non-destructive research projects the park would encourage. The park seeks to engage the profession in a discussion about its research needs and the current interests of Chacoan scholars and students, with the goal of determining where those interests intersect.

[9] SYMPOSIUM • **NEW HORIZONS IN INCA ARCHAEOLOGY**
In addition to the period of imperial expansion in the Late Horizon, Inca archaeology encompasses research into the formation of Inca society in the LIP and Inca and Spanish interactions throughout the Andes during the Colonial period. This is a forum for scholars pursuing investigations on a broad range of Inca-related topics and employing a variety of methodologies, such as excavation, survey, ethnohistory, ceramic analysis, GIS, etc. Topics include research into new questions as well as new data addressing old questions. This forum is intended to update scholars on current research and to promote cross-fertilization amongst Inca archaeologists.

[10] SYMPOSIUM • **THE FRYXELL SYMPOSIUM: INNOVATIONS IN BOTANICAL AND BIOLOGICAL ARCHAEOLOGY (PART 1 OF 2)**

(Sponsored by SAA Fryxell Symposium)

The Fryxell Symposium is in honor of Vaughn Bryant for his interdisciplinary research in botanical analyses within archaeology. The symposium focuses on new techniques, innovations, research, and analyses within the framework of botanical archaeology, specifically, and biological archaeology generally. Vaughn's research has included the realms of palynology, phytoliths, coprolite analysis, paleoethnobotany, DNA, and forensics. Focus is on the newest innovations and syntheses rather than a rehashing of old issues.

[11] SYMPOSIUM • ANCIENT ANCESTORS IN GLOBAL PERSPECTIVE

In a 2002 *Antiquity* article, James Whitley argued that archaeologists were increasingly relying on ancestors as an all-encompassing explanation for prehistoric behaviors. Contributors to this symposium critically evaluate the idea that ancestors played prominent roles in past societies of major world regions, including North America, Mesoamerica, South America, Europe, and Africa. Papers emphasize the identification of ancestors as conceptual components of ancient societies using material remains (including funerary structures, human remains, art and iconography, structured deposits, and architecture) and explore how textual, ethnographic, and ethnohistoric materials may contribute to the study of ancient ancestors.

[12] SYMPOSIUM • IS HINDSIGHT 20/20? EXPLORING THE APPLICATION OF VISUAL MATERIAL TO ARCHAEOLOGICAL PROBLEMS

Visual material, such as depictions, decorations, and architectural arrangements, provide modern researchers with a specific, deliberately created form that can allow them to understand aspects of the past otherwise invisible in the archaeological record. It can be examined from a variety of perspectives, including focuses on content, context, or on the ancient act of seeing itself. The purpose of this session is to bring together researchers focusing on visual material in archaeology from a variety of different theoretical perspectives and regional focuses to examine how visual material is currently being employed in the discipline and how it can be improved.

[13] SYMPOSIUM • BEYOND ILLUSTRATION: 3D RECONSTRUCTIONS, VIRTUAL REALITY, AND ARCHAEOLOGICAL COMMUNICATIONS IN THE EARLY 21ST CENTURY

This session explores the state of computer-aided visual communications in archaeology today. Individual papers will focus upon recent 3D reconstructions, virtual reality, online interactivity, and the history of archaeological illustration. Perspectives taken by the participants will range from technical production using commonly available 3D rendering software, remote sensing data, and project databases to the role such projects play in the fields of art history, education and communications. Presenters will draw upon their own examples of interactive reconstructions - from archaeological sites in the Americas to Roman architecture.

[14] GENERAL SESSION • THE ARCHAEOLOGY OF CENTRAL AMERICA AND THE CARIBBEAN**[15] SYMPOSIUM • LIVING ON THE LAND: THE COMPLEX RELATIONSHIP BETWEEN POPULATION AND AGRICULTURE IN THE AMERICAS**

Agricultural societies are intimately linked to their natural environments. Not only are they dependent upon the attributes of their environments, but their practices can significantly alter it. These local attributes and alterations can markedly impact production levels that, in turn, have important implications for population dynamics including population levels and distribution. The papers in this session demonstrate the ways that ecological and environmental variables have been used to address various aspects of agricultural production and population dynamics. These papers represent multiple disciplinary approaches applied in a range of cultural and ecological settings throughout the Americas.

[16] SYMPOSIUM • PROYECTO ARQUEOLÓGICO NAACHTUN: THE FIRST THREE YEARS

The ancient Maya city of Naachtun is one of the least known of all major Classic Maya centers. Although presently considered a very remote place, during the Classic Maya period, Naachtun was very much in the thick of things. Given the grand size and strategic location of Naachtun, there is little doubt that it was the capital of a very prominent Classic period kingdom. This session summarizes the results of the recent archaeological and epigraphic studies carried out at the site by the Proyecto Arqueológico Naachtun since 2002 and presents future directions of investigation.

[17] SYMPOSIUM • BETWEEN THE MOUNTAINS AND THE SEA: RECENT DEVELOPMENTS IN THE ARCHAEOLOGY OF THE SOUTH COAST OF PERU

Data from numerous recent and ongoing research projects on the south coast of Peru permit archaeologists to make great strides in reconstructing the culture history of this important region of the New World. These research programs provide a basis for interpretations that contribute to general archaeological interests and theory such as power, agency, identity,

politics, economy and ecology. Papers presented in this session reflect the contributions researchers are making to these larger thematic issues and when taken together provide a sense of the south coast's significant position in the sweep of Andean prehistory.

[18] SYMPOSIUM • HEARTLAND IN THE HINTERLANDS: NEW PERSPECTIVES ON THE HUASTEC MAYA OF THE NORTHEASTERN GULF COAST OF MEXICO

The Huastec region in northeastern Mexico has often been viewed as a peripheral area, and is largely omitted from mainstream archaeological discourses concerning the development of Mesoamerican civilizations. The convergence of archaeological, art historical, ethnohistorical, and ethnographic data increasingly highlights the heterogeneous nature of Huastec identity, and underscores the complex ways in which Huastec inhabitants were affiliated with peoples of Central Mexico, the Southern Lowlands, and even the Southeastern United States. This session seeks a more detailed understanding of what characteristics define the ancient Huastec and examines their role in the development of other Mesoamerican cultures. Participants also explore how interdisciplinary perspectives can yield a more holistic vision of this important, albeit neglected, Mesoamerican region.

[19] SYMPOSIUM • ARCHAEOLOGICAL PERSPECTIVES ON INDIGENOUS RESISTANCE TO SPANISH COLONIZATION IN THE NEW WORLD

This session examines indigenous resistance to Spanish colonization via the archaeological record, investigating not only the violent uprisings, but also the subversive, hidden transcripts of resistance enacted in everyday life. Case studies from North, South, and Mesoamerica will explore the limits of Spanish domination and the varieties of indigenous resistance: overt and covert, active and passive, and opposition via mimicry, mockery, appropriation, and ambivalence. Through these studies we hope to recover the details of indigenous resistance not recorded in official histories, while identifying shared patterns as well as unique strategies of resistance across the New World.

[20] SYMPOSIUM • ORIGINS AND DEVELOPMENT OF AGRICULTURE IN EAST ASIA

Research on agricultural origins and development in East Asia has been advancing quickly during the last few years. East Asia produced some of the world's most important crops such as rice and soybean, so a broader discussion of current research, including claims for great antiquity of rice domestication is critical. This session will critically evaluate the latest evidence for the development of agriculture in China as well as for the timing of the spread of agriculture to, and the role of local processes in Far Eastern Russia, Korea, Japan, and Taiwan.

[21] SYMPOSIUM • COPPER AGE SOCIAL ORGANIZATION ON THE GREAT HUNGARIAN PLAIN: THE LAST YEAR OF THE KÖRÖS REGIONAL ARCHAEOLOGICAL PROJECT

The transition from the Neolithic to the Copper Age in the Carpathian Basin is marked by changes in nearly every aspect of social organization—from the distribution of cultural groups across the landscape to the organization of households on settlements. Since 1998, the Körös Regional Archaeological Project has been investigating sites in southeastern Hungary to clarify the nature of these changes. This symposium presents the results of the multi-disciplinary research that occurred during the final season (2006), including extensive excavations at the Early Copper Age settlement of Körösladány-Bikeri and magnetometry surveys of other nearby sites.

[22] SYMPOSIUM • ISLAND WORLDS APART: INTERACTIONS AND REMOTENESS ON SEAS AND OCEANS

Questions of how peoples colonized islands and the linkages they forged with other groups have long been pervasive in the archaeological study of island societies. It is clear that a wide variety of goods, artifacts, animals, plants, and knowledge were transported to and from islands across vast distances. Although there was often a high degree of interaction between many island groups, others remained partially or completely isolated from the outside world. This session examines cases of both interaction and remoteness in the study of islands worldwide to better understand how connections and isolation shaped island cultures.

[23] SYMPOSIUM • PAPERS IN HONOR OF ANTHONY E. MARKS AND HIS CONTRIBUTIONS TO ARCHAEOLOGY

Professor Anthony E. Marks (Southern Methodist University) has conducted archaeological research on five continents. His efforts have done much to shape regional sequences,

introduce novel analytic protocols, inspire new behavioral interpretations, and spawn generations of students. The papers of the symposium, presented by friends, colleagues, and former students focus on the prehistory of Portugal and the Levant and range from Middle Paleolithic to Neolithic in temporal emphasis. In many ways the eclectic nature of the contributions mirrors the diverse career of Professor Marks.

[24] FORUM • GETTING OUR DATA OUT THERE: THE WHERE'S, WHY'S, AND HOW'S OF STUDENT PUBLISHING

(SPONSORED BY SAA STUDENT AFFAIRS COMMITTEE)

"Publish or perish" is a truism at all levels of professional research – including that of the student. This forum presents a panel of past and current editors from peer and non-peer reviewed journals and several publishers, and is designed to benefit students and professionals new to the publishing world. Topics for discussion include: (1) steps for publishing research; (2) obstacles to publishing; (3) strategic publishing (choosing an appropriate venue for your research, as well as choosing which research to publish); and (4) publishing ethics (publishing similar material in multiple journals, and questions of authorship and intellectual property rights).

[25] SYMPOSIUM • HABITUS AND HISTORY: SCALE AND EXPLANATION IN DEEP-TIME ARCHAEOLOGY

Time scale is important. However, archaeologists have usually assumed that time is transparent: that either social models grounded in ethnographic time can be extended to deep time, or that functional explanations of change over deep time can be postulated without considering the immediate scale of meaningful human action. This session investigates how archaeologists can theorize multiple scales of time. Does time scale impose structure upon history? How does explaining a millennium pose different problems than explaining a generation? Are different concepts, causal processes or methodologies required? Papers address these questions with case studies from North America, South America, and Europe.

[26] SYMPOSIUM • THE GREAT WESTERN TRADE ROUTE AND THE DEVELOPMENT AND DECLINE OF CLASSIC MAYA CIVILIZATION

For a century scholars have debated the role of interaction between ancient lowland Maya city-states and the very different societies of the volcanic highlands to the south. Yet 200 kilometers of the great western Maya trade route of the Pasión river and Verapaz montaña, the highland/lowland interface, remains unexplored. This gap is being filled by intensive multi disciplinary research projects in this zone. Preliminary results document complex interaction of interregional and local economics, religion, and politics that defined the centers of this "Ruta Maya" and its role in the apogee and collapse of the Classic Maya Kingdoms.

[27] SYMPOSIUM • SPYING ON THE PAST: ARCHAEOLOGICAL APPLICATIONS OF DECLASSIFIED INTELLIGENCE SATELLITE PHOTOGRAPHY

The 1995 declassification of 800,000 scenes from the United States' CORONA intelligence satellite program has provided a brilliant new tool for archaeological research. Declassified imagery programs have now made a high resolution dataset available for large areas of the world and at reasonable costs. This session will bring together case studies in CORONA-based landscape and settlement pattern archaeology. Papers will highlight a variety of ancient landscapes and demonstrate how their features can be reconstructed using CORONA; consider the strengths and weaknesses of CORONA imagery; and show how CORONA can be used with other datasets and ground observations.

[28] PRESIDENTS INVITED FORUM • PEOPLING THE AMERICAS

The peopling of the Americas is one of the central abiding issues for Americanist Archaeology regardless of individual archaeologist's research or intellectual emphases. The topic is also one in which it is difficult to stay reasonably current, giving widely scattered publishing venues and rapidly evolving fields such as the use of DNA evidence. This forum brings together three experts in the fields of archaeology, genetics and paleoenvironments to discuss their take on the topic and where they see research heading and/or where it should be going.

[29] ETHICS BOWL • ETHICS BOWL

[30] POSTER SESSION • **ARCHAOMETRIC METHODS, ARCHAEOLOGICAL APPLICATIONS (PART 1 OF 2)**

Archaeometry, the application of scientific techniques to archaeological questions, is not a new field of study. Indeed, archaeologists have applied physical, chemical, and geological methods to archaeological material since the 1700s. Today, archaeometry is increasingly seen as a discipline in its own right with a distinct vocabulary and professional journals. Increased communication and understanding between archaeologists and archaeometrists is fundamental for mutual benefit. In an attempt to facilitate this communication, participants will focus on down-to-earth explanations of methods and their application to anthropological and archaeological research. Part 1 addresses stone tools, ochre, soil, and stable isotopes.

[31] POSTER SESSION • **GEOPHYSICAL APPLICATIONS AND ADVANCES IN NORTH AMERICAN ARCHAEOLOGY**

(SPONSORED BY SAA GEOARCHAEOLOGY INTEREST GROUP)

Geophysics is undergoing a period of rapid innovation and growth in North American archaeology. The low contrast of the archaeological record and unique history of investigations underlie the emergence of a number of characteristics that distinguish North American archaeological geophysics from research conducted elsewhere. Examples include a stronger focus on ground-penetrating radar (GPR) and electromagnetic induction methods, the adaptation of downhole sensors for archaeology, the use of geophysics within excavation units, recent developments in data fusion, and a growing emphasis on verification. Posters in this symposium showcase recent directions and diverse contributions of geophysical applications to North American archaeology.

[32] POSTER SESSION • **RECENT RESEARCH IN THE CASAS GRANDES REGION OF CHIHUAHUA, MEXICO**

In 2006 the University of Missouri and University of North Florida conducted a collaborative field reconnaissance of the region surrounding Janos, Chihuahua approximately 50km north of Casas Grandes and 50km south of the U.S. – Mexico boundary. This area is within the generally acknowledged boundaries for the Casas Grandes culture and just south of the Mimbres region of New Mexico. The posters in this session provide a summary of the results of the survey including in-field artifact analyses, discussion of the relationship between these settlements and neighboring culture areas, as well as other research conducted on Casas Grandes materials.

[33] POSTER SESSION • **THE ARCHAEOLOGY OF THE SOUTHWEST U.S.**

[34] POSTER SESSION • **GEOARCHAEOLOGY AND ENVIRONMENTAL ARCHAEOLOGY**

[35] SYMPOSIUM • **EARLY MAYA POLITY FORMATION, ENVIRO-CULTURAL DYNAMICS, AND DEMOGRAPHIC DEMISE: MULTI-DISCIPLINARY INVESTIGATIONS IN THE MIRADOR BASIN, GUATEMALA (PART 1 OF 2)**

(SPONSORED BY FOUNDATION FOR ANTHROPOLOGICAL RESEARCH & ENVIRONMENTAL STUDIES (FARES))

Scientific investigations in the Mirador Basin of northern Guatemala have generated new perspectives on the rise, processual dynamics, and demographic reductions of early complex societies in the northern Peten of Guatemala. A compendium of the various multi-disciplinary studies presents a range of environmental and societal factors that contributed to the precocious cultural florescence, continuity, and ultimate demographic reductions that occurred in the Mirador Basin. The resultant data demonstrate the intertwined roles of environmental response, societal interactions, and cultural behaviors in crafting explanatory models for incipient complex societies in the Maya Preclassic and Classic periods.

[36] SYMPOSIUM • **THE FRYXELL SYMPOSIUM: INNOVATIONS IN BOTANICAL AND BIOLOGICAL ARCHAEOLOGY (PART 2 OF 2)**

(SPONSORED BY SAA FRYXELL SYMPOSIUM)

The Fryxell Symposium is in honor of Vaughn Bryant for his interdisciplinary research in botanical analyses within archaeology. The symposium focuses on new techniques, innovations, research, and analyses within the framework of botanical archaeology, specifically, and biological archaeology generally. Vaughn's research has included the realms of palynology, phytoliths, coprolite analysis, paleoethnobotany, DNA, and forensics. Focus is on the newest innovations and syntheses rather than a rehashing of old issues.

[37] GENERAL SESSION • **ZOOARCHAEOLOGY**

[38] GENERAL SESSION • **AGRICULTURAL ECONOMIES**

[39] GENERAL SESSION • **ARCHAEOCHEMISTRY**

[40] SYMPOSIUM • **FEDERAL ARCHAEOLOGY: MANAGING CULTURAL RESOURCES FOR THE FUTURE**

This symposium examines the newest, as well as traditional archaeological approaches to managing the diverse cultural resources in the federal sector. At the turn of the 20th century, federal agencies received the charge to protect America's cultural resources. The National Park Service, the U.S. Forest Service, and the Bureau of Land Management developed management plans that have become increasingly important as federal archaeologists emerge as the only line of defense in protecting, preserving, and managing America's unique archaeological heritage. Papers in this symposium discuss stewardship, resource assessment, preservation, and education.

[41] SYMPOSIUM • **THE SACRED AND THE SECULAR: RECENT ROCK ART RESEARCH FROM THE SOUTHWEST, THE HIGH PLAINS, AND THE MIDWEST**

(SPONSORED BY SAA ROCK ART INTEREST GROUP)

In the western hemisphere, rock art, whether painted, pecked, scratched or engraved, has played differing roles in the cultures that created it. Rock art has created portals between this world and others, marked territories, and recorded the presence of individuals and events. Whether located in rockshelters, rock overhangs, boulders, or bedrock, rock art represents communication at a basic level. It offers a window into the minds of peoples who lived here in past times. The papers presented in this symposium explore rock art in its many forms, be they sacred or secular.

[42] SYMPOSIUM • **TRANSPORTATION ARCHAEOLOGY: JUGGLING CULTURAL RESOURCES, PRESERVATION, AND PUBLIC BENEFIT**

Archaeologists employed by departments of transportation frequently find themselves juggling cultural resources, public funding, and improving transportation facilities. Academia trains archaeologists to view the preservation and leisurely excavation of archaeological sites as the norm. However, the need for transportation improvements means that all cultural resources are not equal in terms of preservation. Also, furthering our understanding of the past must demonstrate public benefit. This session will explore how transportation archaeologists reach decisions regarding cultural resources impacts, handle large-scale excavations, and balance public need with the stewardship of cultural resources.

[43] GENERAL SESSION • **SOUTH AMERICAN ARCHAEOLOGY**

[44] SYMPOSIUM • **FILLING THE GAP: QUESTIONING THE MEANINGS AND METHODS OF CURRENT RESEARCH IN NEW ENGLAND ARCHAEOLOGY**

How we recognize and present the past is becoming more crucially important as CRM archaeology in New England hastens full steam ahead into the future. From excavation techniques to presentation, from stone tools to pit houses to ubiquitous red-earth features, the information that archaeologists are collecting and are required to collect varies from state to state and from one job to the next. Coordinating what we know and how we know it, what we are looking for and how we record it, and who the recipients of the information are is the theme presented throughout these case studies from Massachusetts, Maine, New Hampshire and Connecticut.

[45] SYMPOSIUM • **ARCHAEOLOGICAL PERSPECTIVES ON HUMAN ANIMAL INTERACTION IN NORTH ASIA**

Complex relationships have long existed between humans and animals in North Asia. These relationships took many forms, including predator-prey, domestication, and veneration and likely were embedded within nearly all aspects of ancient cultures. The archaeological record of human-animal interaction in North Asia is extensive, but not well known in the West. Relatively recently, many nations in this region have become more accessible to non-local researchers, and many collaborative archaeological projects are now underway. Presented here are papers drawn from such projects in Russia, Mongolia, China, and Japan. Time periods examined range from the Upper Paleolithic through the historic period.

[46] SYMPOSIUM • INTEGRATING ARCHAEOLOGY AND HISTORY IN OAXACA, MEXICO

The culture area corresponding to the state of Oaxaca, Mexico, is known for the plethora of archaeological and (ethno)historical resources, which were explored by scholars for over a century. Additionally, oral traditions common to this ethnically diverse region are often considered as a potential source for reconstructing the past. Rather than focusing on a specific period or culture, this session will survey the applied and potential integration of archaeological, (ethno)historical, and oral data sets in various case studies before and after the Spanish conquest, and attempt to find common grounds for the formulation of theoretical and methodological guidelines.

[47] SYMPOSIUM • CURRENT RESEARCH TRACING THE TRANSITION FROM NATIVE TERRITORIES TO EUROPEAN SETTLEMENTS IN SOUTH TEXAS

Research in the Lower Nueces River Valley and Gulf Coast of South Texas is generating information about settlement patterns from AD 1400 to 1900. Over this period Indigenous settlements with a long tradition of tool manufacturing, hunting, and resource processing were replaced by European Land-Grant colonies. From Copano Bay to the inland coastal plains there was a dramatic cultural transition and economic shift in settlement patterns. The focus on settlement as a study unit in South Texas is offering a fresh research approach for documenting social organization, domestic activities, and regional integration patterns over distinct cultural periods.

[48] SYMPOSIUM • REPATRIATION LAW, THEORY, AND PRACTICE

Repatriation is founded upon humanitarian concerns and structured by a legal framework, but successful implementation requires well-developed methods and theory. Museums, federal agencies, and tribes utilize evidence that can span thousands of years while military and law enforcement agencies handle cases involving the more recently deceased; nonetheless, the theory and practice of repatriation is similar. Parallels include the consideration of legal requirements, application of historical and scientific methods, emphasis on consultation, and attention to cultural and religious sensitivities. Examples of repatriation cases and legal analyses demonstrate best practices and contribute to a body of theory regarding repatriation.

[49] GENERAL SESSION • BIOARCHAEOLOGY**[50] GENERAL SESSION • LITHIC TECHNOLOGIES****[51] SYMPOSIUM • CONTEMPORARY ISSUES IN HAWAIIAN ARCHAEOLOGY**

The practice of archaeology in Hawai'i is arguably in an exciting phase of transformation that continues to evoke mixed responses from the general public and archaeologists alike. This session presents papers from the private, academic, and government sectors of cultural resource management in the islands. Taken together, they represent a range of issues currently of concern in the islands, including the relationship between micro- and macro-scale analyses, the construction of regional prehistories, and what the profession may or may not offer the residents of Hawai'i today.

[52] SYMPOSIUM • THE UNESCO WATER PROJECT: THE LEGACY OF THE ANCIENT PAST

Because water is essential, controllable, and primarily responsible for configuring both natural and built landscapes, complex interrelationships evolved between people and their environments. An assessment of early complex societies—ecologically invasive social orders—reveals fundamental organizational aspects shared with present-day societies. As identified here by a subset of archaeologically minded contributors, the UNESCO book project accents these adaptations with the aim to best understand the cultural parameters of water use. By illuminating the social origins and maintenance activities associated with the development of water systems, we see how humans have engaged fundamental aspects of economy, political organization, and power relationships.

[53] SYMPOSIUM • "LIFE IS TOO SHORT FOR FAINT-HEARTEDNESS": PAPERS IN MEMORY OF ANDREW SHERRATT

The premature passing of Andrew Sherratt in February 2006 deprived the archaeological community of one of its preeminent scholars of European prehistory and archaeological theory. He wrote on a wide range of topics—early agriculture, animal husbandry, trade

systems, and drinking and feasting rituals, to name a few—and his penchant for making interregional linkages and proposing grand syntheses distinguished him in an era of increasing academic specialization. The papers presented here are all inspired in some way by Andrew's work, and by their variety speak to the breadth of his contribution and continuing influence on our understanding of prehistory.

[54] SYMPOSIUM • THE LEGACY OF SPANISH COLONIAL ARCHEOLOGY IN TEXAS: RANCHOS, MISSIONS, AND PRESIDIOS

Spanish Colonial settlement in Texas was accomplished by several methods, including ranchos, missions, and presidios. Two scholars who witnessed the birth of Spanish Colonial Archeology in Texas, Thomas Campbell and Anne Fox, leave current students a significant legacy. Contemporary studies continue to focus on missions and presidios, with growing emphasis on rancho settlements. This session will summarize the legacy of early Texas Colonial archeologists, current efforts to rehabilitate mission collections, the results of recent investigations at the Presidio at San Sabá and Mission San Antonio de Valero, European-made and Native ware colonial ceramics, and ethnicity on Nuevo Santander ranchos.

[55] GENERAL SESSION • THE ARCHAEOLOGY OF MEXICO (PART 1 OF 2)

[56] GENERAL SESSION • HUMAN BIOLOGICAL AND CULTURAL EVOLUTION

[57] SYMPOSIUM • THE ANCIENT MAYA AND THE SEA: THE CAYS, THE COAST, AND UNDERWATER IN BELIZE

Sea-level rise since the Late Classic period along the coast of Belize has inundated Maya communities and other sites that once were on dry land. From the underwater salt works in Paynes Creek National Park, to the partially inundated island trading ports of Wild Cane Cay in Port Honduras Marine Reserve and Moho Cay off the coast of Belize City, the papers in this session evaluate Classic and Postclassic Maya coastal lifeways. Spatial analysis using GIS is used in the analyses.

[58] SYMPOSIUM • COMPLEXITY AND TRANSFORMATION IN WORLD ARCHAEOLOGY

Complexity, perhaps one of the most important concepts in archaeology, is still poorly understood in terms of its implications for the study of social development and history. Neglected in most archaeological studies of complexity are the novel and unpredicted outcomes resulting from historical interactions among and between societies. In order to make studies of complexity more dynamic, we suggest a need to focus on and/or identify the transformative processes that worked to create unique social histories. Commensurate with these goals, participants will discuss issues of complexity and transformative elements among groups following small-scale economies from around the world.

[59] GENERAL SESSION • MORTUARY ANALYSIS

[60] POSTER SESSION • ORIGIN AND SPREAD OF SHELL-TEMPERED POTTERY IN THE EASTERN WOODLANDS

Shell-tempered pottery became the predominant pottery manufactured in the eastern woodlands during the late prehistoric. Origins of this pottery and how it replaced pottery tempered with other materials is debated. How much was the increase in frequency of shell-tempered pottery a pan-regional phenomenon? How much was local adaptation? How much can be understood in terms of cultural transmission? How much is due to selection of superior functional qualities? Are there connections with rise of social complexity or spread of maize agriculture? This symposium looks at the issue from the perspective of selective regions throughout the eastern woodlands.

[61] POSTER SESSION • ARCHAEOMETRIC METHODS, ARCHAEOLOGICAL APPLICATION (PART 2 OF 2)

(SPONSORED BY THE SOCIETY FOR ARCHAEOLOGICAL SCIENCES AND THE ARCHAOMETRY LABORATORY AT MURR)

Archaeometry, the application of scientific techniques to archaeological questions, is not a new field of study. Indeed, archaeologists have applied physical, chemical, and geological methods to archaeological material since the 1700s. Today, archaeometry is increasingly seen

as a discipline in its own right with a distinct vocabulary and professional journals. Increased communication and understanding between archaeologists and archaeometrists is fundamental for mutual benefit. In an attempt to facilitate this communication, participants will focus on down-to-earth explanations of methods and their application to anthropological and archaeological research. Part 2 addresses dating methods, textiles, ceramics, and metals.

[62] POSTER SESSION • **ARCHAEOOMETRY**

[63] POSTER SESSION • **CERAMICS**

[64] POSTER SESSION • **ARCHAEOBOTANY**

[65] POSTER SESSION • **LATIN AMERICA AND THE CARIBBEAN**

[66] POSTER SESSION • **NORTH AMERICAN ARCHAEOLOGY**

[67] SYMPOSIUM • **EARLY MAYA POLITY FORMATION, ENVIRO-CULTURAL DYNAMICS, AND DEMOGRAPHIC DEMISE: MULTI-DISCIPLINARY INVESTIGATIONS IN THE MIRADOR BASIN, GUATEMALA (PART 2 OF 2)**

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Investigations in the Mirador Basin, Guatemala have generated new perspectives on the rise, processual dynamics, and demographic reductions of early complex societies in the northern Peten of Guatemala. A compendium of the various multi-disciplinary studies presents a range of environmental and societal factors that contributed to the precocious cultural florescence, continuity, and ultimate demographic reductions that occurred in the Mirador Basin showing environmental response, and cultural behaviors.

[68] SYMPOSIUM • **RESIDENTIAL BURIAL: A MULTI-REGIONAL EXPLORATION**

(Sponsored by Archaeology Division, American Anthropological Association)

Ancestral-descendant approaches to burial ritual view mortuary remains as part of the living societies in which the deaths occurred. This session examines cases where the association of living and dead is unambiguous, namely, societies where human remains are situated within residential domains of the living. "Residential burial" takes many forms and has been identified in various regional, temporal, and social contexts. New World and Old World societies, mesolithic foragers to state societies, presented cases relate residential burial to topics such as ritual reproduction in house societies, social memory, heterarchical and hierarchical social dynamics, and cultural landscape definition and redefinition.

[69] SYMPOSIUM • **VIOLENCE AND CIVILIZATION**

Violence (sanctioned or unsanctioned, structural, symbolic or physical) and Civilization are topics long intertwined in the social sciences. Theorists of the state, from Hobbes to Agamben have written about the fundamental linkage of violence and socio-political order, while the notion of "civilization" itself has been both denounced as legitimating, and defended as reducing, practices of violence. With presentations ranging from Peru to China, this panel will bring the often striking examples of social violence (such as human sacrifice, slavery and warfare) found in early polities into a broader discussion of their relationship to social, political, and even civilizational orders.

[70] SYMPOSIUM • **BETWEEN THE SIERRA AND THE SEA: ARCHAEOLOGICAL INVESTIGATIONS IN SINALOA, MEXICO**

The state of Sinaloa remains as one of the least studied and poorly understood areas of Mexico. Yet, this region has also been identified as essential to our understanding of the northwestern expansion of Mesoamerican societies, as well as the southernmost extension of traditions generally considered associated with the southwestern U.S., and is especially critical to debates regarding long-distance interaction and integration between these two superareas. This symposium presents current research of virtually all those involved in the archaeology of Sinaloa, with themes ranging from prehistory, the Jesuit missionization, to the 19th C. colonization of Topolobampo by socialist idealists from the U.S.

[71] SYMPOSIUM • BAHAMIAN ARCHAEOLOGY*(SPONSORED BY THE NATIONAL MUSEUM OF THE BAHAMAS)*

This symposium outlines current archaeological research ongoing in the Bahamian Archipelago.

[72] GENERAL SESSION • RESEARCH REPORTS ON THE ARCHAEOLOGY OF THE SOUTHWEST U.S.**[73] SYMPOSIUM • RÍO GRANDE TO ROSILLO PEAK: REDISCOVERING THE ARCHAEOLOGY OF TEXAS' BIG BEND**

An intensive research program of survey and excavation has recently been undertaken by the Trans-Pecos Archaeological Program (TAP) of the Center for Big Bend Studies at Sul Ross University in Alpine, Texas, to document prehistoric and historic human adaptation to the Chihuahuan Desert. Recent data from numerous sites has yielded data from Archaic, Formative, Protohistoric, and early Spanish occupations. In addition, several rock art sites, displaying local petroglyph styles, have been investigated. Prehistorically speaking, the emerging picture is one of a long-lived and successful foraging adaptation to the arid and often harsh Big Bend country.

[74] SYMPOSIUM • MESOAMERICAN JADE STUDIES

Greenstone and jade are cultural constructs involving a variety of green colored rocks. Jadeites, serpentinites, schist, and gneisses were significant materials. This session examines three recent areas of jade and greenstone studies: (1) the geological, mineral, and chemical characteristics of greenstone in Mesoamerica; (2) the social meaning of jade in religion, historical processes, its cultural biographies; and (3) the productive processes involved in the quarrying of raw material and manufacture of greenstone items. This symposium represents the preliminary base for an upcoming series of conferences in which jade-bearing regions and their exploitation are compared around the world.

[75] GENERAL SESSION • ARCHAEOLOGICAL CERAMICS**[76] SYMPOSIUM • INKA ARCHITECTURE OF POWER: A REDEFINITION**

In 1980, Graziano Gasparini and Luise Margolies published their seminal work entitled *Inka Architecture*. The authors grouped Inka buildings into three categories one of which is "The Architecture of Power". They define Inka Architecture of Power as public works which they extend to everything built under state direction. This session aims to narrow down this definition based upon new archaeological data and recent theoretical discourse. Papers discuss newly excavated public structures, their pre-Inka prototypes, new insights into the functions of long known buildings, as well as methodological issues of how to identify function and theoretical questions of architecture and power.

[77] SYMPOSIUM • THE UPPER TIGRIS ARCHAEOLOGICAL RESEARCH PROJECT (UTARP): REPORTS FROM THE EXCAVATIONS AT KENAN TEPE

After seven years of research in the Upper Tigris River region of southeastern Turkey members of the Upper Tigris Archeological Research Project (UTARP) are completing excavations at the multi-period mound of Kenan Tepe. This panel will present preliminary analyses of various categories of data that are emerging from this important site.

[78] GENERAL SESSION • THE ARCHAEOLOGY OF MEXICO (PART 2 OF 2)**[79] SYMPOSIUM • A BRIDGE OVER TROUBLED WATERS: IS THERE ANY USE IN A NORTH-SOUTH ARCHAEOLOGICAL DIALOGUE?**

Traditionally, the archaeology of hunter-gatherers in South America emphasized the similarities with North American hunter-gatherers, and disregarded their differences. The labels used in North American sequences that were applied to South America masked the diverse array of South American hunter-gatherers. Recent studies have strongly criticized this bias and are now stressing those differences. However, comparisons are useful and can raise a series of interesting questions and discussions. Is an articulation between the North and the South possible, or even fruitful? This session attempts to address this question by contributing papers from both North and South American archaeologists.

[80] SYMPOSIUM • ARCHEOLOGIES OF URBANISM IN TEXAS

Historical archeology is critically positioned to articulate with urban studies to reveal patterns of race, class, gender roles, poverty, housing, labor, infrastructure, etc. This session will explore the peculiar manifestations of urbanism in Texas through a look at some of the ways that historical archeology has contributed to an understanding of urban social history. Papers will explore a range of topics that historical archeologists have been working on and archeology's role in those narratives. It will also explore how historical archeologists who work in Texas cities articulate with local descendant communities and the benefits and challenges such interactions can bring.

[81] SYMPOSIUM • PERSPECTIVES ON THE GRADUATE SCHOOL EXPERIENCE

(SPONSORED BY SAA WOMEN IN ARCHAEOLOGY INTEREST GROUP)

What are the challenges faced by graduate student teachers and what resources are available to them? Is gender an issue in graduate school completion rates? Do some universities exert pressure channeling women into specialized sub-fields of archaeology? These are some of the topics present in this symposium, showcasing facts, experiences, and strategies of women in graduate school.

[82] SYMPOSIUM • SIPAPUS, SINKHOLES, AND SHRINES: NEW APPROACHES TO THE STUDY OF RITUAL CAVE USE IN SOUTHWESTERN ARCHAEOLOGY

For over a century, archaeologists have recognized the ritual use of caves in the Greater American Southwest. Nonetheless, cave archaeology in the region has generally neglected ritual and focused instead on chronology, the peopling of the New World, and the recovery of well-preserved perishable assemblages. Current scientific investigations suggest that Southwestern cave activities were, in fact, ritual, and are directly comparable to the growing corpus of data on Mesoamerican cave use. Moreover, the study of ritual cave use has profound implications for issues as important as our understanding of settlement patterns in the region.

[83] SYMPOSIUM • SEATED? FLEXED? EAST? WEST? RECENT RESEARCH ON TIWANAKU MORTUARY PRACTICE IN COCHABAMBA, BOLIVIA AND MOQUEGUA, PERU

In the late first millennium AD, the highland Tiwanaku civilization expanded through migration, colonization and cultural hegemony to dominate two maize-producing lowland regions on opposite sides of the Andes: the intermontane valleys of Cochabamba, Bolivia and the Pacific-draining Moquegua Valley of Peru. To each region, the Tiwanaku diaspora brought with it a new set of burial practices that was both characteristically Tiwanaku, yet highly diverse. This symposium brings together recent mortuary research from these two mirror regions to compare mortuary practices and address questions of migration, local emulation, social organization and diasporic identity in an early expansive state.

[84] SYMPOSIUM • ADVANCING REMOTE SENSING TECHNOLOGY IN THE DISCOVERY, ANALYSIS, AND PRESERVATION OF CULTURAL RESOURCES

(SPONSORED BY NPS NCPTT ARCHAEOLOGICAL PRESERVATION TECHNOLOGY RESEARCH CONSORTIUM)

As the pace of construction development continues to impact cultural resources, the need for effective and efficient methods of archaeological feature discovery, definition, and analysis becomes increasingly imperative. Recent advances in remote sensing technologies integrated with computer support and processing systems are discussed from the perspectives of research, efficiency, effectiveness, and economics. Mitigation and preservation activities benefit from the acquisition of remote sensing data; these serve as analytical data, but also form digital 3D models of vanishing sites. These "discovery phase" technologies enhance the planning and implementation of archaeological research and enrich the interpretation and preservation of the archaeological record.

[85] SYMPOSIUM • CURRENT INITIATIVES AND PROPOSALS ABOUT PUBLIC ARCHAEOLOGY IN HONDURAS

National State agencies and foreign academic institutions doing archaeological research in Honduras have marginalized community outreach and public educational programs in archaeology. Recently, local governments, communities, and indigenous groups have challenged the State's control of cultural resources. The papers in this session explain how archaeologists are working with Honduran communities interested in using heritage to build

cultural identities and developing local tourism. Archaeologists also propose how to use archaeological data to understand past environmental processes.

[86] SYMPOSIUM • ECOLOGICAL FOOTPRINT OF EARLY AGRICULTURAL SOCIETIES: INTEGRATING ON-SITE AND OFF-SITE RECORDS

The beginning of agriculture greatly increased the potential of human communities to modify their natural surroundings. However, early human landscape transformations are often difficult to identify solely from off-site records such as lake pollen cores. Likewise, it is difficult to obtain a picture of human impact on the landscape from on-site environmental data due to the cultural filter and lack of off-site provenience. In this session we explore ways to compare and integrate on-site and off-site records to obtain a more holistic picture of the ecological footprint of early agriculturalists in different landscape contexts worldwide.

[87] ELECTRONIC SYMPOSIUM • EXPLORING REGIONAL VARIATION IN PREHISTORIC MINES AND QUARRIES

(SPONSORED BY PREHISTORIC QUARRY AND EARLY MINES INTEREST GROUP)

This symposium will examine the evidence for regional variation among prehistoric mines and quarries: geological constraints and cultural assemblages will be explored. The form and structure of extraction loci will be considered to establish whether there was a discrete regional type. Complimentary themes such as extraction process, refinement sequence, chain of operation, presence / absence of evidence for ritualisation or tribute and off-site use-histories of artefacts crafted from mined materials will provide insights into regional and supra-regional variability (geographical regions rather than modern political boundaries will be used).

[88] WORKING GROUP • INKA IMPERIAL EXPANSION

Early studies considered the Inka empire as monolithic and characterized dominated by a strong central government. More recently, numerous scholars have begun to examine the extent, nature and strategies of Inka control and hegemony throughout their empire, and the relationship between the Inka and supposedly conquered and incorporated other ethnic groups. These analyses have utilized a variety of theoretical perspectives, including without limitation, world systems and territorial, "hard" and "soft" boundaries, public demonstrations of control over labor (Ogburn 2005a), performance and semiotics, and wealth and staple finance. Such studies have demonstrated enormous diversity in the relationship between the Inka and other ethnic groups within their purported borders. This working group will consider various case studies that examine Inka imperial strategies and the relationships among the Inka and other ethnic groups, with a strong focus upon archaeological data. What are the material correlates of different expansive strategies? What are the strategies being employed by other ethnic groups encountered by the Inka-resistance, submission, cooperation? How do these strategies and their interplays change through time and space? The working group will seek to address these questions in order to develop a better and more nuanced view of the empire and its constituent parts.

[89] POSTER SESSION • THE GAULT SITE, TEXAS: RESULTS OF THE TEXAS A&M UNIVERSITY EXCAVATIONS

This symposium presents the results of the analyses of materials recovered from the area of the Lindsey Pit at the Gault site in 2000 and 2001. Located in central Texas, this quarry/campsite was occupied by people from Clovis times until European contact. While most of the artifact analyses concentrate on the two stratigraphically separate Clovis components, a few incorporate materials from later periods. Geoarchaeological analyses of the stratigraphy and microstratigraphy within the Lindsey Pit also are presented.

[90] POSTER SESSION • RECENT ARCHAEOLOGICAL RESEARCH IN THE AREAS SOUTH OF CHACO

Several ongoing projects have been examining the nature of Chacoan and post-Chacoan developments and society in the areas south of Chaco Canyon. Posters in this session report on aspects of this empirical research, exploring themes of regional articulation with Chaco, Chacoan ideology, community organization, and patterns of production and exchange. We also explore Chaco's touch, across space and time, looking to distant regions for the echoes of Chaco in the Mimbres, Zuni and Mesa Verde regions, and to contemporary Pueblo people's perspectives on Chacoan and post-Chacoan sites, archaeological research, and the importance of landscapes.

[91] POSTER SESSION • MESA VERDE NATIONAL PARK: CURRENT ARCHAEOLOGICAL RESEARCH ON PUEBLO III COMMUNITIES

There is a unique opportunity to study extant Ancestral Puebloan architecture at Mesa Verde. Unlike the surrounding community, there has been very little human impact to these sites since they were first put under National Park Service protection over 100 years ago. For the past 10 years, Mesa Verde National Park's Archaeological Site Conservation Program (ASCP) has been collecting detailed architectural information aimed at addressing theories regarding intra- and inter-site movement and social connections. This poster session will highlight recent studies on Pueblo III communities and discuss the future direction of data collection methods.

[92] POSTER SESSION • NEW RESEARCH ON EASTER ISLAND

The remote and tiny island of Rapa Nui (Easter Island) has long been famous for its monumental statues and architecture. The spectacular nature of the record has resulted in popular accounts that interpret the past simply as a function of these monuments. New field and laboratory research challenges popularized accounts and provides empirical evidence that can be used to rethink some of the orthodox views about the island's prehistory. In this session, we present the results of recent research on the history of colonization; architecture; statue quarrying; settlement patterns; artifact composition; rat populations; and human genetic variability.

[93] POSTER SESSION • CURRENT RESEARCH IN SAMOA

Over the past century, archaeological research in Samoa has contributed to the investigation of economy, social stratification, settlement, subsistence, and technological innovation in Polynesian chiefdoms. Intended to complement the symposium Current Research in Polynesia, this poster symposium presents recent archaeological research in Samoa. Investigators will report on current studies concerning the production, distribution, and consumption of lithic and ceramic technology, landscape archaeology, settlement and subsistence, and the interpretation of archaeological assemblages through ethnoarchaeology.

[94] POSTER SESSION • LITHIC ANALYSIS**[95] POSTER SESSION • OLD WORLD ARCHAEOLOGY****[96] POSTER SESSION • PUBLIC EDUCATION AND COMMUNITY ARCHAEOLOGY****[97] SYMPOSIUM • THE ARCHAEOLOGY OF COMPLEX SOCIETIES IN THE CENTRAL VALLEYS OF MESOAMERICA**

Current research in Mexico provides insights into the development of social complexity from the Preclassic to the Late Postclassic. The papers included in this session attest to the articulation of theory and practice to study the variations of complexity focusing on stratified societies in the central valleys of Mesoamerica. This symposium illustrates the multidimensionality of complex societies through analyses dealing with agency, craft production and specialization, settlement hierarchy, regional interaction and sociopolitical relations, ethnicity and identity, ideology and symbolic systems, as well as place and landscape.

[98] SYMPOSIUM • DIVIDING THE PAST FROM THE FUTURE: BORDERLANDS ARCHAEOLOGY AND THE INTERNATIONAL BORDER FENCE

California Indian, park service, and private archaeologists review the construction of the second international border fence at San Diego-Tijuana. They describe precontact and historic sites within the Tijuana River and Otay River watersheds, fence routes, and current efforts to mitigate construction damages. Kumeyaay Indian tribal members note that the waiver of NAGPRA for Homeland Security, dividing the past from the future, is a legal test unprecedented in CRM history.

[99] SYMPOSIUM • THE TOYAH PHASE: REVISITING THE LATE PREHISTORIC IN CENTRAL TEXAS

The Toyah Phase was first defined as a focus that swept across Central TEXAS around A.D. 1200. Since it has been defined as a phenomenon exclusive to central Texas, the use of a specific projectile point type (Perdiz), a buffalo-hunting tradition, or other cultural entity. This symposium presents new research on sites in and around Central Texas dating between A.D.

1200-1700. This new research provides a series of fresh views into patterns of residential mobility, risk, diet, and interactions of Toyah folk with peoples in the regions that flanked their homelands.

[100] GENERAL SESSION • **PALEOCLIMATE AND PALEOENVIRONMENT**

[101] GENERAL SESSION • **IDEOLOGY AND ECONOMY IN THE ANCIENT NEAR EAST**

[102] SYMPOSIUM • **FORENSIC ARCHAEOLOGY: DEFINING ITS STRUCTURE & APPLICATIONS**

The term "forensic" is instantly recognisable but is often subject to wild misinterpretation thanks largely to its recent media exposure. Forensic archaeology as a discipline aims to provide an application of archaeological method and theory to criminal investigations; however, other sorts of investigations ranging from human remains recovery, war crime investigation, and ancient fingerprints have also been dubbed as forensic archaeology. The goal of this symposium is to bring a better understanding of the "forensic" in forensic archaeology. By evaluating the research presented can we better define forensic archaeological practise and application? How should degree courses addressing forensic archaeology be structured and what does the future hold for career prospects? Speakers from a wide range of backgrounds and research interests shall contribute their experiences and opinions to the debate.

[103] SYMPOSIUM • **RITUAL BEHAVIOR AND DISPLAYS OF POWER AT EL PERÚ-WAKA**

Excavation, survey and epigraphic analysis demonstrate the extensive Maya site of El Perú-Waka' was of considerable political and ritual significance. Data indicate occupation from the Middle Preclassic through the Terminal Classic, and suggest ruling elite and sub-royal elite groups exhibited their power through displays of wealth, prestige and performance. This is evident through the layout of the site; the emphasis on built landscapes and mortuary monuments; the creation of sacred performance spaces; and both violent and reverential termination of monumental structures. The varying meanings and expressions of ritual behavior and displays of power will be explored.

[104] GENERAL SESSION • **HISTORICAL ARCHAEOLOGY IN NORTH AND CENTRAL AMERICA**

[105] SYMPOSIUM • **THE LAND CONVEYANCE AND TRANSFER PROJECT: A WINDOW INTO THE PAST**

Los Alamos National Laboratory is located on the Pajarito Plateau of north-central New Mexico. This symposium will present the results of a four-year excavation project which was conducted in order to transfer lands to Los Alamos County. The project encompassed 8000 years of human occupation on the Plateau, ranging from Archaic campsites, to Coalition period roomblocks to Jicarilla Apache campsites. The papers will focus on an array of topics including geomorphology, paleoclimate, hunter-gatherer archaeology, ceramic technology, subsistence, agriculture and architectural studies. It therefore provides a rare and detailed view of the archaeology of the Pajarito Plateau.

[106] GENERAL SESSION • **GEOGRAPHICAL INFORMATION SYSTEMS**

[107] SYMPOSIUM • **HOUSEWORK: SPECIALIZATION, RISK, AND DOMESTIC CRAFT PRODUCTION IN MESOAMERICA**

This symposium examines the structure, diversity, and scale of domestic craft production in Mesoamerica. It explores four important questions: 1) How was domestic craft production organized? 2) How were domestic craft specialists integrated into the political economy? 3) Did social context influence the manufacture of utilitarian and/or prestige goods in domestic settings? 4) Do the concepts of full- and part-time specialization help or hinder our understanding of domestic craft production? Symposium participants investigate these issues using a combination of archaeological, ethnohistoric, and experimental approaches. The session examines the importance of independent craft specialization in the prehispanic Mesoamerican economy.

[108] SYMPOSIUM • **CAVE PERSPECTIVES ON MESOAMERICAN RELIGION AND POLITICS**

Because of the importance of the sacred earth in Amerindian religion, caves as sacred landmarks become nodes of power that are contested within societies. Since the early 1990s

cave archaeologists have demonstrated that data from ritual cave sites are integral to interpretations of pre-Hispanic Mesoamerican political and social organization. The number of cave studies has steadily grown, along with the range of topics that these studies inform. This symposium brings together investigators involved in ongoing research of Mesoamerican ritual cave use, incorporating approaches utilizing iconography, ethnoarchaeology, pre-Columbian writing, landscape studies, and the archaeology of religion.

[109] SYMPOSIUM • INTER-REGIONAL INTERACTION IN BRONZE AGE CHINA AND EURASIA: A MULTIDISCIPLINARY APPROACH

Until recently, research on inter-regional interaction in Bronze Age China has focused mainly on stylistic studies of pottery and bronzes. With new discoveries, changing perspectives, and increasing use of regional surveys and sourcing, we can begin to develop more detailed pictures of interaction and flesh-out models initially proposed by Kwang-chih Chang and Su Bingqi. The panel is both "multi-disciplinary", incorporating perspectives of art historians and epigraphers, and "multi-centered", with scholars discussing new discoveries and fieldwork within and beyond the traditional core of Chinese civilization, including North, Southwest, Southeast and Central China, and other regions of Eurasia.

[110] GENERAL SESSION • PALEO-INDIAN ARCHAEOLOGY

[111] SYMPOSIUM • DIVERSIFYING ARCHAEOLOGY'S IMPACT THROUGH NEW FORMS OF PUBLIC ENGAGEMENT: CURRENT HAPPENINGS IN PUBLIC ARCHAEOLOGY

(SPONSORED BY SAA PUBLIC EDUCATION COMMITTEE)

Public archaeology - and archaeology itself - is being transformed by new technologies, by archaeologists working in the margins, and by publics pushing/pulling archaeology to move beyond its traditional definitions and purposes. This session will explore developments taking place on the borderlands of public archaeology. These include new art/archaeology interfaces, promotional marketing for education and fund-raising, organizational strategies to grow audiences, and the hermeneutic advantage in the newest communication mediums. Participants will share the developments that excite them now, and, just as importantly, comment on the implications that these aspects of practice have for the profession's development.

[112] SYMPOSIUM • ACROSS THE GREAT DIVIDE: CONTINUITY AND CHANGE IN NATIVE NORTH AMERICAN SOCIETIES, A.D. 1400-1850

Over the last 30 years, anthropologists, historians, economists and other scholars have shown that the outcomes of colonial interaction between Europeans and Native North Americans were determined as much by indigenous cultural practices, many of which were established long before the arrival of Europeans, as they were by the ambitions of colonists. Archaeological research comparing precolonial and colonial economic, social, and political practices therefore plays a central role in understanding the worldwide impacts of European colonial expansion during the last five centuries. The participants in this session use archaeological data to trace continuity and change in indigenous societies.

[113] SYMPOSIUM • GO GUARD: CULTURAL RESOURCE MANAGEMENT IN THE ARMY NATIONAL GUARD

The Army National Guard (ARNG) encompasses 54 states and territories, representing a vast array of environments and culture histories. Across the ARNG, Cultural Resource Management programs have been responsible for a variety of unique projects and management approaches. Exploring data management through GIS, consulting with Native Americans in unique ways, investigating historic and prehistoric sites, and applying new models to improve site prediction and understanding of the past are just a sampling of various ARNG projects. This symposium presents a summary of various activities carried out in the management of our Nation's historic resources.

[114] SYMPOSIUM • CONTINUING THE LEGACY: PAPERS IN MEMORY OF PAUL W. PARMALEE

The field of zooarchaeology has recently lost one of its founders, Paul W. Parmalee. In this symposium former students and colleagues of Paul W. Parmalee come together to celebrate his life and contributions to the field. His contributions to the field are tremendous and extremely diverse, ranging over subjects that have impacted the research of many scholars. Thankfully, Paul W. Parmalee's legacy lives on through the continuing investigations and

research of the many students he worked with throughout his career. This symposium highlights their research, much of which was made possible through his influence, guidance, and scholarship.

[115] SYMPOSIUM • BREATHING NEW LIFE INTO THE EVIDENCE OF DEATH: CONTEMPORARY APPROACHES TO MORTUARY ANALYSIS (PART 1 OF 2)

Of the biological absolutes that shape human existence, few are more powerful than death. Investigations into the evidences of death have long been pursued in archaeology as a way to approach past cultural experience. Mortuary remains, once thought merely to reflect the identity of the deceased, are now considered an active and creative element of social life, engaging and encompassing the human and material worlds. This session will explore recent innovative approaches to mortuary studies with insights from a wide body of data, including ceramics, human skeletal remains, jewelry, spatial analysis, and others.

[116] SYMPOSIUM • HONORING LINDA CORDELL: SOUTHWESTERN SYNTHESSES, COLLABORATIONS, AND PUBLIC OUTCOMES (PART 1 OF 2)

Linda Cordell has been instrumental in framing Southwestern archaeology over the past several decades. She has written outstanding syntheses for professional and public audiences, and worked with international colleagues to bridge the U.S.-Mexico border. In addition to studying the past, Linda Cordell has been an advocate for contemporary Native peoples, especially in her role as a museum director. Drawing inspiration from her work, the participants in this session present papers that reflect the breadth of Linda Cordell's scholarship from regional syntheses to international collaborations to the public outcomes of archaeology.

[117] SYMPOSIUM • RECENT RESEARCH IN SOUTH ASIAN ARCHAEOLOGY: PREHISTORY AND THE INDUS VALLEY CIVILIZATION (PART 1 OF 2)

In recent years the number of American institutions engaged in archaeological research in South Asia has steadily increased. The papers in this session introduce recent research that has been carried out in South Asia – in particular, the Indian subcontinent. Drawing from a diverse array of methodological and theoretical perspectives, the participants in this session will present the results from recent excavations, surveys, and collections research projects. This panel is the first of a two-part session and focuses on prehistoric time periods.

[118] FORUM • HERITAGE TOURISM AND ARCHAEOLOGY - CHALLENGES AND OPPORTUNITIES (SPONSORED BY ADVISORY COUNCIL ON HISTORIC PRESERVATION)

What is the public importance of the story that archaeological resources can tell? What are the benefits and costs associated with making archeological resources available for heritage tourism? These are a few of the questions this forum will explore in the context of the Preserve America initiative and Executive Order 13287, which call for Federal leadership in the preservation and use of the nation's heritage, and which provide ideal vehicles for the promotion of archaeological information to the public. Given that the majority of archaeological excavations in the US are conducted pursuant to Section 106 of the National Historic Preservation Act, and much of it with public funds, interpretation and tourism programs are crucial in providing the public with a return on its archaeological investment.

[119] SYMPOSIUM • INDIGENOUS STORIES ON THE USE AND CARE FOR CULTURAL COLLECTIONS (Sponsored by Committee on Museums, Collections and Curation and Indigenous Populations Interest Group)

The impact of NAGPRA on archaeological collections' research accessibility and use has been discussed extensively. What has not, is the increased involvement of indigenous peoples use of cultural material by identifying their location and creating access. As a result, elders have shared various stories including their powerlessness to stop the removal of ancestral remains and not knowing their eventual location to the recognition of a grandmother's basket design. These connections are crucial to understanding the current value and meaning of these collections. This session explores how these stories, from the museum and tribal perspectives, creates a brighter future.

[120] GENERAL SESSION • OLD WORLD ARCHAEOLOGY

[121] WORKING GROUP • **QUARRIES, MINES, FACTORIES AND WORKSHOPS: STANDARDIZING NOMENCLATURE FOR THE ARCHAEOLOGICAL COMMUNITY (PART 2 OF 2)**

(SPONSORED BY PREHISTORIC QUARRY AND EARLY MINES INTEREST GROUP)

An international working group of anthropologists, archaeologists and geologists convened at the 2006 SAA meeting in Puerto Rico to initiate the classification and clarification of the vast nomenclature that has evolved in prehistoric quarry and early mine research. Differences and similarities of the terms quarries, mines, factories and workshops were discussed, along with usage implications, how usage includes certain archaeological sites and excludes others and the importance of such terms. The recommendation of the 2006 working group was to develop a glossary of terms that will be published in peer-review journals for distribution to the anthropological and archaeological community-at-large and standardize a prehistoric quarry and early mine nomenclature. To date, scholarly discussion has ensued, via electronic bulletin boards, on how to best qualify the terms quarries, mines, factories and workshops. The goal of a second working group at the 2007 SAA meeting in Austin is to review the progress of glossary construction and start to contour the shape of the glossary by grouping terms into subtopics; such as regional standards, architectural types (surface vs. subsurface), raw material types (metallic vs. non-metallic) and cultural variations. Special consideration should be given to terminology in branch sciences such as field and mapping geology, where geologic variables play a significant role in the delineation of quarry nomenclature.

[122] POSTER SESSION • **ARCHAEOLOGICAL INVESTIGATIONS AT THE MARINE CORPS AIR GROUND COMBAT CENTER (MCAGCC), TWENTYNINE PALMS, CA**

Archaeological and Ethnohistoric Investigations at the Marine Corps Air Ground Combat Center (MCAGCC), Twentynine Palms, CA., is the focus of this poster session.

[123] POSTER SESSION • **AVOCATIONAL AND PROFESSIONAL PARTNERSHIPS: THE POWER OF COOPERATION**

(SPONSORED BY SAA COUNCIL OF AFFILIATED SOCIETIES)

The SAA recognizes the importance of avocational and professional cooperation in our discipline. Many state and local groups have long traditions encouraging and celebrating the public archaeology aspects of amateur and professional associations. These partnerships enrich traditional research projects by bringing fresh perspectives and providing the public with hands-on opportunities to make tangible contributions to the field of archaeology through site stewardship and training programs, data recovery projects and preservation efforts. This symposium celebrates the "power and potential of cooperation" by highlighting just a few of the many successful projects and programs undertaken by avocational/professional organizations across the U.S.

[124] POSTER SESSION • **BUILDING ARCHAEOLOGICAL KNOWLEDGE USING BINFORD'S FRAMES OF REFERENCE**

The posters in this symposium each begin with environmental or ethnographic variables from Binford's frames of reference used to explore variability in some realm of archaeology. Analytical strategies include using projected ethnographic variables in conjunction with paleoclimatic models to anticipate site structure, using projected mobility variables to explore patterns in the manufacture and use of lithics, and using environmental frames of reference to explore herd composition and milk processing strategies among pastoralists. Continuing research efforts to anticipate variability in agricultural dependence and in the distribution of archaeologically documented cooking features and artifacts related to clothing manufacture are also included.

[125] POSTER SESSION • **THE TANO ORIGINS PROJECT: LANDSCAPE, CONFLICT, AND TRANSFORMATION IN THE GALISTEO BASIN**

The rich archaeological record of the Galisteo Basin has been the subject of intense archaeological interest for nearly a century. Despite this, however, we have a very poor understanding of the origins of Ancestral Pueblo settlement in the region. The Tano Origins Project, begun in 1999, has focused on Burnt Corn Pueblo and the associated cultural landscape, emphasizing the Pueblo III/Coalition Period. Five field seasons of survey and excavation with associated analyses have provided unique insights into the Ancestral Pueblo world of the Galisteo during the 13th and 14th centuries AD, a time of population movement, conflict, and transformation.

[126] POSTER SESSION • WHAT HAPPENED AFTER AD 1000? RECENT RESEARCH IN THE UPPER OHIO WATERSHED

For the past six years, students and faculty primarily from Indiana University of Pennsylvania have been investigating post AD 1000 sites in the Upper Ohio River drainage of west central Pennsylvania and adjacent areas. New data have been generated through field school and CRM projects, through the analysis of lithics, ceramics, faunal and floral materials, through the application of geophysical and spatial technologies, and through a program of radiocarbon dating of known village sites. This combination of traditional and new methods promises to add much to our understanding of the post AD 1000 cultures in this region.

[127] POSTER SESSION • ARCHAEOLOGY AND THE RESPONSE TO CATASTROPHE

Catastrophic events are occurrences that can result in dramatic change and innovative responses by people and societies. Understanding human response to catastrophes requires that archaeologists be able to accurately identify and date catastrophic events and associated archaeological phenomena, as well as articulate the consequences of such events on particular aspects of societies such as political institutions, subsistence economies, or sacred places. The impacts of catastrophes may vary tremendously as may the responses of social groups. Using case studies from the Americas and Africa, posters in this session illustrate archaeological approaches to catastrophes and their consequences.

[128] POSTER SESSION • ARCHAEOLOGY AND THE SANAK BIOCOMPLEXITY PROJECT

The Sanak Biocomplexity Project is a multidisciplinary research effort funded by the National Science Foundation to investigate the long-term history of the North Pacific. The underlying thesis of the project is that the Aleut have been harvesting the region for over 10,000 years and thus, have engineered many of the complex dynamics between the Aleut and other marine and terrestrial species in the region. While the project integrates mathematical modeling, ecology, oceanography, social anthropology, and other disciplines, this symposium presents a range of archaeological and paleoecological results from this project in relation to findings from the greater research efforts.

[129] POSTER SESSION • ARCHAEOLOGICAL THEORY AND METHOD

[130] FORUM • ETHICAL ISSUES IN ARCHAEOLOGY: PERUVIAN PERMITTING AND THE ETHICS FORUM (SPONSORED BY REGISTER OF PROFESSIONAL ARCHAEOLOGISTS)

The RPA forum again will be partitioned into two sections. The first section of the forum will present, for discussion and comment, an MOU among the Peruvian government and the Register of Professional Archaeologists outlining the guidelines for fieldwork permitting of American archaeologists wishing to practice in Peru. The second part of the forum will provide the SAA membership an opportunity to continue the discussion of topics debated during the Ethics Bowl. Topics likely to be discussed include professional behavior in and outside of the U.S., indigenous archaeology, repatriation, and consultation.

[131] SYMPOSIUM • HONORING LINDA CORDELL: DEMOGRAPHIC, SOCIAL, AND IDEOLOGICAL PERSPECTIVES ON POPULATION MOVEMENT (PART 2 OF 2)

Linda Cordell has shaped discussion of population movement in the North American Southwest for the past three decades. Her early work on abandonment and migration in the Mesa Verde region influenced how we understood site and regional scale movements. Her later overviews addressed processes and explanations for movement at different scales. Cordell's intensive studies of Pueblo IV and historic settlement in the northern Rio Grande have provided models for explaining village and regional population movement. This session builds on the legacy of Cordell's work by considering demographic, social, and ideological aspects of population movement in the American Southwest.

[132] SYMPOSIUM • CONFOUNDING CATEGORIES AND CONCEPTUALIZING COMPLEXITIES

North American archaeologists face an interesting problem. Given an increase in data, it is more difficult to fit our research into categories and subcategories. We have too many details to be satisfied with generalizing typologies. Even seemingly simpler hunter gatherer societies prove to be more complex than older models can explicate. Recent discussions of ideas such as historicity, hierarchy, hegemony, centrality, alliance building, migration, memory, monumentality or identity formation move beyond the categorical, and provide specific ways to

investigate how people constructed complexities. Papers in this symposium explore ways of thinking about complexity in North America, and the implications of such thinking for our understandings of the past.

[133] SYMPOSIUM • **BREATHING NEW LIFE INTO THE EVIDENCE OF DEATH: CONTEMPORARY APPROACHES TO MORTUARY ANALYSIS (PART 2 OF 2)**

Of the biological absolutes that shape human existence, few are more powerful than death. Investigations into the evidences of death have long been pursued in archaeology as a way to approach past cultural experience. Mortuary remains, once thought merely to reflect the identity of the deceased, are now considered an active and creative element of social life, engaging and encompassing the human and material worlds. This session will explore recent innovative approaches to mortuary studies with insights from a wide body of data, including ceramics, human skeletal remains, jewelry, spatial analysis, and others.

[134] GENERAL SESSION • **THE ARCHAEOLOGY OF EUROPE**

[135] SYMPOSIUM • **RECENT RESEARCH IN SOUTH ASIAN ARCHAEOLOGY: PROTOHISTORY AND HISTORICAL PERIODS (PART 2 OF 2)**

In recent years the number of American institutions engaged in archaeological research in South Asia has steadily increased. The papers in this session introduce recent research that has been carried out in South Asia – in particular, the Indian subcontinent. Drawing from a diverse array of methodological and theoretical perspectives, the participants in this session will present the results from recent excavations, surveys, and collections research projects. This panel is the second of a two part session and focuses on protohistoric and historic time periods.

[136] SYMPOSIUM • **TAKING THE CAMINO REAL TO SCHOOL**

(SPONSORED BY SAA PUBLIC EDUCATION COMMITTEE)

The SRI Foundation, through grants from the New Mexico Bureau of Land Management and the New Mexico Office of Cultural Affairs created, "La Gran Aventura! El Camino Real Tierra Adentro". This educational unit, in conjunction with Project Archaeology's "Intrigue of the Past: A Teacher's Activity Guide for Fourth through Seventh Grades", formed the base for three workshops along the Camino Real—two in New Mexico and one in Mexico. This session will highlight the development and execution of an international preservation education program with the Instituto Chihuahuenses de la Cultura, Chihuahua, Mexico.

[137] SYMPOSIUM • **KHONKHO WANKANE AND BEYOND: RECENT RESEARCH IN THE MACHACA REGION OF BOLIVIA**

Ongoing research in the Machaca Region of Bolivia is shedding critical new light on long-term prehispanic cultural development in the high south-central South American Andes. Machaca occupies an environmental and cultural frontier between the Lake Titicaca Basin, to the north, and the dry central altiplano to the south. Research in Machaca ties together regional survey, excavation, and analysis at and around the Late Formative ritual-political center of Khonkho Wankane. Archaeology at other regional sites provides comparative perspective that helps flesh out the cultural processes and environmental shifts behind profound long term changes in the Titicaca Basin.

[138] GENERAL SESSION • **THE ARCHAEOLOGY OF THE SOUTHWEST U.S.**

[139] FORUM • **LOOKING FOR COMMON GROUND: TECHNICAL AND ANALYTICAL DEVELOPMENTS IN THE SOURCING OF MESOAMERICAN CERAMICS**

Recent spectrochemical studies of Mesoamerican ceramics have illuminated past social and economic interactions from the Early Formative through the Colonial era. Such work affords unique opportunities for studying both long-term patterns of local pottery manufacture and the emergence of new centers of production and distribution. Mexican and U.S. investigators engaged in these studies follow distinctive protocols in ceramic source analysis, based on Particle-Induced X-ray Emission analysis and Instrumental Neutron Activation analysis respectively. This forum brings together physicists, archaeologists, and geologists from both countries to exchange ideas and explore new avenues for collaboration.

[140] SYMPOSIUM • **DEBATING WITH ROBERT: THE CAREER AND LEGACY OF R. S. SANTLEY**

The vigor with which Robert S. Santley (1948-2006) pursued knowledge of the past constitutes an important part of his intellectual legacy. This symposium honors the signature Santley-argumentative-flair, which few could match, through presentation of current research and reflections inspired by debates with this prolific and provocative scholar. Mirroring the diverse methodological and topical interests of Robert Santley, participants explore key issues in survey and sampling techniques as well as topics of political economy, ecological systems, and political organization ranging across Mesoamerica and North America at the scale of households to macroregional systems of the past and present.

[141] SYMPOSIUM • **TEN YEARS SINCE NASHVILLE: ASSESSING THE FIRST DECADE OF MESOAMERICAN CAVE ARCHAEOLOGY**

The self-conscious subdiscipline of Mesoamerican cave archaeology coalesced out of a session held at the 1997 Annual Meeting of the Society for American Archaeology in Nashville. In the following decade, eight additional sessions have been held as the new subdiscipline rapidly professionalized and achieved visibility within archaeology. This session explores the historical events leading up to the emergence of the field and assesses development during the decade from 1997 to 2007.

[142] GENERAL SESSION • **EASTERN NORTH AMERICA**

[143] SYMPOSIUM • **NEW PERSPECTIVES ON ANCIENT MAYA ASTRONOMY**

(SPONSORED BY MAYA EXPLORATION CENTER)

Far more than just investigations of ancient science, studies of ancient Maya astronomy have profoundly aided our understanding of the Maya worldview. Maya concepts of time and space, meanings encoded in religious art, intentions underlying architectural alignments, and even methods of political legitimization have all been illuminated through the study of Maya astronomy. Six years after the seminal Maya astronomy symposium at the 2001 SAA Meetings, it is time to present the new perspectives and discoveries in ancient Maya astronomy that have resulted in the interim from ongoing studies of architectural alignments, codices, epigraphy, iconography, ethnography, and calendrics.

[144] SYMPOSIUM • **ETHNIC AMBIGUITY IN AFRICAN HISTORICAL ARCHAEOLOGY**

(SPONSORED BY SOCIETY FOR AFRICANIST ARCHAEOLOGISTS)

Africanists have become increasingly sensitive to the fluidity of social boundaries and ethnic constructs in the past and present. This has prompted skepticism about the possibility of studying ethnicity in the archaeological record. Material landscapes, however, embody forms of social experience that may shed critical light on the depth and salience of ethnic identities in precolonial Africa. This session will examine how Africanist archaeologists can grapple with the "ambiguity" of ethnicity. Authors are invited to draw on specific case studies and explore how material patterns can illuminate - or challenge - our knowledge of processes of cultural identification in the African past.

[145] SYMPOSIUM • **HISTORICAL ECOLOGY AND AGRICULTURE: MULTI-SCALAR PERSPECTIVES ON THE COURSES AND CONSEQUENCES OF AGRARIAN LAND USE**

Proper management of our planet's agricultural landscapes is critical for maintaining a successful and sustainable relationship between humans and the environment. However, agricultural impacts on the socio-natural environment operate on multiple scales, where on many levels, human activities enhance the landscape for agricultural purposes at the expense of degradation and diminished biodiversity across time and space. Bringing together research from across the globe, this symposium explicitly examines issues of scale as they relate to historical ecology, agricultural landscapes, sustainability, and the role humans play in altering the evolution of local, regional, and global socio-natural environments.

[146] SYMPOSIUM • **IDENTITY AND COLONIALISM IN CALIFORNIA, 1769-1848**

In the late eighteenth and early nineteenth centuries, California came under the control of European colonial forces. During this period, local populations underwent profound changes in demography, material culture, settlement patterns, ritual practice, and social and political organization. These changes are traditionally understood as a consequence of European rule, but indigenous life in the Colonial period was neither uniform nor entirely reactionary. In this

session we ask how indigenous California communities navigated the colonial experience as active agents. Using archaeological, ethnographic, and historical data sets, we address how indigenous peoples reformulated their identities, materially and symbolically, in the Colonial period.

[147] SYMPOSIUM • STRATEGIES OF INTEGRATION AND ADMINISTRATION IN THE SOUTHEAST MAYA AREA: A CASE STUDY FROM THE EL PARAÍSO VALLEY, HONDURAS

While much has been done to examine political organization within Classic period (AD 200-900) Maya polities, the mechanisms of polity integration and administration remain understudied. Recent research in the El Paraíso Valley, Honduras, sheds light on the administration of one such polity, the Classic Maya kingdom of Copan. Recent multidisciplinary research demonstrates that the valley was administered from two markedly different centers in the Classic period; El Cafetal was a seat of local power while El Paraíso extended Copan control into the region. This dual-center model is contextualized through comparisons with administrative strategies employed elsewhere in the region.

[148] SYMPOSIUM • NATIVE AMERICAN IDENTITY IN THE MARKET ECONOMY, 1775-1850

This symposium attempts to bridge the divide between an archaeology of early historic periods (ca. 1500-1750), investigating connections between historic Native American groups and pre-contact cultures, and an archaeology of later periods, dealing with European settlement, industrialization, and urbanization. We focus on the period 1775 to 1850, and the associations between Native Americans, the market economy, and modernization. The expansion of European migration dramatically altered the social, economic, and demographic landscapes for Native groups across the continent. How did Native Americans negotiate the often-contradictory challenges of adapting to rapid social and economic changes and maintaining group identity?

[149] ELECTRONIC SYMPOSIUM • CERAMIC EXCHANGE AND STYLISTIC INTERACTION AMONG THE ANCIENT MAYA

Many assessments of ancient Maya interaction among sites and zones rely on the comparison of ceramic styles and the identification of imported ceramics. Physical characterization of clays and slips and stylistic classification can provide information about (and help differentiate) ceramic exchange and stylistic interaction, but each presents theoretical and methodological challenges. In this symposium we'll discuss problems and prospects for the identification of ceramic exchange and stylistic interaction among the ancient Maya. Although the presentation of new ceramic data is included, participants also discuss methodological and theoretical issues in their papers.

[150] GENERAL SESSION • EXPERIMENTAL ARCHAEOLOGY

[151] SYMPOSIUM • CENTRAL AMERICAN ARCHAEOLOGY: CURRENT SITUATION AND FUTURE PERSPECTIVES

(SPONSORED BY THE BOARD OF DIRECTORS OF THE SOCIETY FOR AMERICAN ARCHAEOLOGY)
Many research projects take place in Central America. However, few are known to the worldwide community because they are carried out by the official local institutions responsible for protecting the cultural patrimony. This symposium will examine archaeological research from Belize, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, and Panama, as well as future perspectives. Papers will present legal issues and official expectations on how foreign archaeologists should interact with national authorities. Academics will discuss their experiences. The papers will touch on ways in which the national and international communities could work together improving the flow of information on the research being done in Central America.

[152] SYMPOSIUM • PATHWAYS TO POWER

There are few larger questions in the prehistory of our species than the emergence of social inequality. Social inequality, the basis of hierarchical structure of human society, is manifested in unequal access to goods, information, decision-making and power. This structure is essential to higher orders of social organization and basic to the operation of more complex societies. Understanding of the transformation from relatively egalitarian societies to more hierarchical organization is fundamental to our knowledge about the human condition. This symposium examines some of the mechanisms, forces and motivations involved in the shift in human societies from egalitarian to hierarchical.

[153] FORUM • **DIVERSITY AND CHANGE: DISCUSSIONS ON FUTURE NEEDS AND CHALLENGES FOR ARCHAEOLOGY**

As archaeological practice becomes increasingly diverse and global, expanding beyond its traditional core within the academy, the SAA faces a variety of challenges to the ways in which it addresses the needs of its constituents. This collaborative forum seeks to problematize the idea of the SAA as a more inclusive and representative body and through a constructively critical lens discuss concerns and potential implications on practice and policy of the organization. Discussants include members of several of the SAA's standing committees, providing a variety of experience-based perspectives.

[154] SYMPOSIUM • **RITUALS IN US CAVES, ROCKSHELTERS, AND SINKS**

Caves and rockshelters are customarily treated as temporary shelters for male hunters or family units. Site reports for some caves and rockshelters have evidence for rituals. Inspired by a decade of work in Mesoamerica, this symposium was created to highlight cave rituals and even ritual caves in the US and to stimulate future work on rituals and a sacred landscape. Participants take a look at US caves, rockshelters, and sinks in California, Montana, northern Plains, Texas, Alabama, Missouri, Kentucky, and Tennessee to uncover evidence of burial programs, human sacrifice, rituals with dogs, birds, ocher, shells, glyphs, shrines, and birth.

[155] GENERAL SESSION • **CULTURAL RESOURCE MANAGEMENT AND PRESERVATION**

[156] GENERAL SESSION • **ARCHAEOBOTANY**

[157] SYMPOSIUM • **HEALTH, DIET, AND GENETIC AFFINITY IN A CHACO ERA COMMUNITY**

The Point Community, an extensive Chacoan small house community, flourished near Farmington, New Mexico, during the Pueblo I to Pueblo II periods. This symposium presents the results of recent research on human skeletal remains from this community, excavated on private land over 30 years ago. The Tommy Site, a Pueblo I/II small house, had a sample population of 117 individuals, while the Mine Canyon Site, dating to the Pueblo III period, had a sample of 45 individuals. Our research includes a demographic study, a description of the paleopathology present at the two villages, and craniometric, bone chemistry, and DNA analyses.

[158] SYMPOSIUM • **APPROACHING DARWIN'S BICENTENNIAL: THE STATE OF THE ART IN EVOLUTIONARY ARCHAEOLOGY**

Regarding science is approaching to Charles Darwin's bicentennial birthday and the 150th anniversary of the first edition of "Origin" it's an adequate moment to revise the current perspective in the application of evolutionary theory in archaeology. The symposium main objective is to show how is today's impact of Evolution in a variety of topics and analytical scales. The Symposium presents a spectrum of examples and case studies in different world regions, dealing with scenarios such as sociopolitical hierarchy, artifact phylogenies, cultural transmission processes, and human dispersal and migration routes.

[159] SYMPOSIUM • **LATE PLEISTOCENE AND HOLOCENE PALEOECOLOGY AND ARCHAEOLOGY AT THE RICHARD BEENE SITE, COASTAL PLAIN, SOUTH-CENTRAL NORTH AMERICA**

Archaeological and paleoecological studies at the Richard Beene site, on Texas' inner Gulf Coastal Plain near San Antonio, revealed 15 m of overbank alluvium, a 30,000 year-old ecological record, hints of mammoth-bone quarrying, and remains of 20 distinct hunter-gatherer encampments spanning 10,000 years. Geomorphic studies and carbon isotope analysis of paleosols, land snails, and river mussels indicate considerable climatic fluctuations. The site's lithic and feature assemblages are comparatively homogeneous, as are its meager faunal and flora records. Overall, site structure and land-use strategies remained fairly stable through time, with a decidedly woodland orientation.

[160] SYMPOSIUM • **RECENT CARIBBEAN COLLECTIONS RESEARCH AT THE PEABODY MUSEUM OF NATURAL HISTORY, YALE**

The Peabody Museum of Natural History maintains one of the world's largest and most comprehensive collections of Caribbean archaeological material. While most of these collections were acquired between 1930 and 1975 during research focused on culture history,

chronology, and migration, they continue to be a source of information on a wider array of topics. These collections are also the focus of new analytical methods. The papers in this session report the results of recent research on Peabody Museum collections from the Caribbean region.

[161] SYMPOSIUM • THE ARCHAEOLOGICAL RECOGNITION OF MARKET PLACES: VIEWS FROM THE MAYA LOWLANDS

The economic signature of market exchange has been recognized as a trait of pre-Hispanic Maya society for decades, but the actual location of market places remains elusive. Researchers using various methodological approaches have recently identified what may be market locations in several Maya centers, both large and small. The methodologies used blend different approaches, from traditional analyses of architecture and artifact distributions to micro-artifact studies and soil chemistry tests. This symposium brings together some of this new information to help define future research strategies for recognizing and documenting market places among the Maya and, potentially, in other cultural contexts.

[162] SYMPOSIUM • CONVERSATIONS FROM CAMPECHE: COMMEMORATING WILLIAM J. FOLAN'S CONTINUING CONTRIBUTIONS TO MAYA ARCHAEOLOGY

William J. Folan has worked in the field of American Archaeology for over half a century. He is best known for his research in the Maya area at sites like Dzibilchaltun, Coba, Calakmul, and Champoton as well as his support of Maya ethnography, environmental studies, and historical archaeology. We bring together scholars who have benefited through collaboration with Folan since the 1950s. Papers address work in archaeology, ethnography, bioarchaeology, and environmental research, with a discussants' section designed to allow field reminiscences and personal recollections in tribute to Folan's ever-growing legacy as a visionary in the field of Maya studies.

[163] SYMPOSIUM • CERAMICS, MOBILITY, AND INTERACTION IN LATE PREHISTORY

Some residentially mobile groups in North America used ceramic vessels, especially within the crowded landscapes of late prehistory. These groups, who were often near or surrounded by sedentary, food-producing, ceramic-using populations, had different opportunities and constraints than the earliest adopters of ceramics on the continent. Ceramic assemblages from sites in interaction zones may shed light on territory, mobility, and adaptation to new physical and social environments as well as the exchange of goods, information, and people. We address these topics using case studies from the United States, including the Northwest, Southwest, Great Basin, Great Plains, and Great Lakes regions.

[164] SYMPOSIUM • ARCHAEOLOGY, CULTURAL RESOURCES, AND BEYOND: FORT HOOD'S CONTRIBUTION TO CENTRAL TEXAS CULTURAL RESOURCES

Fort Hood, a U.S. Army training installation located in Central Texas, is home to 2236 archaeological sites. For over 25 years, Fort Hood has maintained an active Cultural Resource Management program, employing both traditional investigative techniques and modern technologies to produce a wealth of data and knowledge concerning the peoples that once occupied the lands of Fort Hood, both prehistorically and historically. This knowledge has contributed greatly to our general understanding of the archaeology and cultural resources of Central Texas. The papers in this symposium represent many aspects of the contribution Fort Hood's CRM program has made to the region.

[165] SYMPOSIUM • CURRENT AND FUTURE DIRECTIONS IN THE PALEOINDIAN ARCHAEOLOGY OF THE GREAT PLAINS AND SOUTHWEST

The Great Plains and Southwest have played a key role in the writing—and rewriting—of North American Paleoindian archaeology. Many classic sites come from this area, and the pioneering interpretations drawn from them continue to guide current thought. On the 80th anniversary of the Folsom discovery, it is time to take stock of Paleoindian research in the region, to see where it has been, where it stands, and where it might be going. These papers build on the legacy of Plains and Southwest Paleoindian research by reporting new sites and analyses, and by advancing, and sometimes questioning, received wisdom.

[166] SYMPOSIUM • THEORETICAL AND METHODOLOGICAL CONTRIBUTIONS OF HUNTER-GATHERER POTTERY STUDIES

Hunter-gatherer pottery has been amply documented globally in the archaeological record.

Archaeologists use pottery as a tool to understand hunter-gatherer diets and settlement patterns, among other topics. Study of hunter-gatherer pottery has produced fertile theoretical work concerning human social organization, the organization of technologies, and the nature of technological change. Hunter-gatherers face a different suite of constraints and issues than agro-pastoral societies when making and using pottery and often arrive at novel technological adaptations that are only rarely discussed in the archaeological literature. This session highlights recent theoretical and methodological approaches in hunter-gatherer ceramic research in a variety of regions.

[167] SYMPOSIUM • CURRENT RESEARCH IN POLYNESIA

Archaeological research has shown that Western Polynesia was settled first around 1000-900 B.C. Current thinking is that subsequent migrations from Western Polynesia led to the settlement of Eastern Polynesia between 500 B.C. and A.D. 1000 (though this continues to be studied and debated). The archaeology of the island nations is diverse, and recent studies are explaining the rapid changes that took place on each island after colonization. This symposium reports recent archaeological work in Polynesia. Investigators report on current studies of cultural change, innovation, elaboration of production and exchange, landscape archaeology, and cultural exchange within and beyond Polynesia.

[168] ELECTRONIC SYMPOSIUM • THE END OF THE BEGINNING: EXPLAINING THE FINAL YEARS OF THE MESOAMERICAN PRECLASSIC

Strong traditions of regional research sometimes obscure broad patterns across Mesoamerica. This session focuses in particular on the concluding years of the Preclassic, in regions as diverse as the Yucatan Peninsula, West Mexico, Central Mexico, the Gulf Coast, and Oaxaca. Similar shifts, even convulsions in some places, point to the need for a comparative survey that evaluates the reasons for those shifts, the forces influencing them, and the continuities that endure across such divides. Some presenters will present on a specific region, exploring and defining the Preclassic to Classic transition there, while others will present on pan-Mesoamerican topics.

[169] GENERAL SESSION • ARCHAEOLOGICAL METHODS

[170] SYMPOSIUM • PUBLIC ARCHAEOLOGY AND EDUCATION IN NORTHEAST RESEARCH AND COMPLIANCE PROJECTS

Public outreach and education are increasingly becoming important components of Northeast research and compliance projects. Public programming, whether in an academic or cultural resource management context, provide an important opportunity to inform the public about the importance of archaeology and stewardship of the archaeological record. However, the dissemination of information and incorporation of diverse constituencies in archaeological projects is not without its limitations. The papers in this symposium discuss recent public outreach efforts in the Northeast and the challenges in conveying information about archaeology to the public.

[171] SYMPOSIUM • GIS AND REMOTE SENSING TECHNOLOGIES IN HISTORICAL ARCHAEOLOGY

GIS and remote sensing technologies have become well-established as part of the archaeology toolkit. These technologies have arguably had the most impact in archaeological research focused on pre-Contact periods, often emphasizing predictive modeling and cultural ecological analyses. Papers in this session present recent substantive and methodological research in historical archaeology, highlighting a broad range of applications for the subfield. Current research presented points out not just greater use of these technologies in historical period research, but also an emerging depth of impact in terms of analyses that go beyond baseline mapping.

[172] SYMPOSIUM • THE DIGITAL EXCAVATION: APPROACHES TO RECORDING, REPOSITORY AND PUBLICATION (PART 1 OF 2)

A vast majority of today's excavation and survey projects use some form of digital recording, be this a spreadsheet, database, GIS, digital photography or other applications. Digital recording, analysis and publication have enormous potential, but at the same time generate their own problems. The purpose of this session is to outline the challenges and promises at a theoretical and practical level, by comparing several well-developed systems that are in use at

the moment. This session is followed by a second Digital Excavation session featuring ancient Urkesh (Syria).

[173] GENERAL SESSION • **MISSISSIPPIAN ARCHAEOLOGY**

[174] GENERAL SESSION • **ARCHAEOOMETRY**

[175] GENERAL SESSION • **COASTAL ARCHAEOLOGY**

[176] GENERAL SESSION • **GEOARCHAEOLOGY**

[177] GENERAL SESSION • **PUBLIC ARCHAEOLOGY**

[178] SYMPOSIUM • **FOUR DECADES OF ARCHAEOLOGICAL RESEARCH IN MESOAMERICA: PAPERS IN HONOR OF BARBARA VOORHIES**

During four decades of research in Mesoamerica, Barbara Voorhies has overseen numerous projects in Guatemala, Chiapas, and Guerrero. Her interest has focused mainly on Archaic period lifeways along Pacific coastal Chiapas, but she also has conducted research on a range of other issues. Voorhies is noted for her scientific rigor, her ecological approach, and her effective use of ethnographic data to bring life to the past. Voorhies's students and colleagues have been inspired by her approach to archaeology, her enthusiasm for fieldwork, and her love of Mesoamerica. We pay tribute to her continuing work in this symposium.

[179] FORUM • **THE DISCIPLINE OF ARCHAEOLOGY**

(SPONSORED BY SOCIETY FOR AMERICAN ARCHAEOLOGY)

A discussion of the status of academic archaeology. This is an intellectual, a practical, and an emotional issue. Autonomy represents a major sea change for our discipline in the United States and one that requires careful thought and protracted discussion. Our reactions to the question come from inner feelings, colleague relationships, pedagogical inclinations, intellectual needs, and anticipated costs and benefits. The goal of the symposium is to consider as many aspects of autonomy, and its consequences, as possible. Our format includes a panel of discussants followed by questions and discussion with the members of the audience.

[180] SYMPOSIUM • **THE MATERIAL SIGNATURES OF NONHUMAN AGENCY**

Recent social theory challenges an anthropocentric view of societies and human social networks, arguing that such perspectives do not reflect the primacy others place on daily interactions between human and non-human agents. Following ethnographic evidence they note that supernatural beings are active participants in the social worlds of many present and past peoples. Artifacts, architecture, natural places, and other objects are often animated beings imbued with agency. As active social participants, supernatural agents are involved in human interactions that leave discernable traces in the archaeological record. This session explores material, methodological, and theoretical implications of the agency of spirits.

[181] SYMPOSIUM • **NEW LIGHT ON THE THIRTEENTH-CENTURY DEPOPULATION OF THE NORTHERN SOUTHWEST**

The northern Southwest experienced an unparalleled depopulation during the thirteenth century that coincided broadly with perturbations in regional climate regimes. Some recent research, however, has questioned whether climate change was a causal factor. This symposium brings together the latest paleoclimatic data (including current understandings of climatic processes) with the latest archaeological research to assess the effects of climate change on the northern Southwest's demography at local and regional scales, with emphasis on the Mesa Verde region. The results suggest that climate played a critical role in the regional depopulation, but perhaps not in the way that is usually supposed.

[182] GENERAL SESSION • **THE ARCHAEOLOGICAL STUDY OF ARCHITECTURE**

[183] GENERAL SESSION • **SETTLEMENT PATTERNS IN ARCHAEOLOGY**

[184] SYMPOSIUM • **ADVANCES IN THE PLEISTOCENE PREHISTORY OF THE NEW WORLD PACIFIC COAST**

Interest in the peopling of the New World has focused the attention of archaeologists toward

its coastal margins. Although a coastal route of initial human entry into the New World holds promise for explaining the timing, manner of dispersal, and observed archaeological patterns at continental scales, this field of study remains in its infancy. Progress in this field of study will be made through the presentation of new information, the dissemination of stimulating ideas, and the exchange of fresh insights and perspectives.

[185] SYMPOSIUM • RUINS STABILIZATION IN THE NORTH AMERICAN SOUTHWEST: KEEPING THE WALLS FROM TUMBLING DOWN

(SPONSORED BY NATIONAL PARK SERVICE, VANISHING TREASURES INITIATIVE)

In 1891, the first ruins preservation project in the North American Southwest was initiated at Casa Grande in Arizona. Since that time numerous significant historic and prehistoric ruins have been preserved with a bewildering array of stabilization techniques, some of which have been more detrimental than helpful for long term preservation. In this symposium, archeologists and stabilization experts from multiple parks throughout the region evaluate the long-term effects of prior stabilization techniques, identify current preservation technologies, and describe recent documentation practices, including laser scanning and GIS mapping, in an effort to develop a more consistent methodological approach.

[186] SYMPOSIUM • THE WARI AND THEIR DESCENDANTS: IMPERIAL TRANSFORMATION IN CUZCO, PERU

Recent archaeological investigations in Cuzco, Peru, provide new insights into the transformation from Wari provincial imperialism to regionalization and the eventual rise of the Inca state. Research results support a Wari cultural tradition perpetuated into the Late Intermediate Period as manifested by the Lucre culture. This session presents papers addressing this socio-political transition as evidenced by the following: militarism and political strife suggesting Wari imperial decline; continuity in Wari and Lucre ceramic fabrication, architectural construction, and funerary practice; and archival records linking Lucre to the Pinagua and Muyna, ethnic groups, which among others, formed the fabric of Inca imperial society.

[187] SYMPOSIUM • EXCAVATION AND WEB APPLICATIONS: REAL TIME LINK BETWEEN RECORDING AND PUBLICATION: DIGITAL ARCHAEOLOGY AT ANCIENT URKESH (PART 2 OF 2)

A distinctive recording/publication system has been developed for the Urkesh excavation, a large urban site in Northeastern Syria. Based on rigorous theoretical principles, it provides a seamless integration of all levels of analysis. The result is a real-time link between the very first observation of stratigraphic/typological attributes and the final online publication, as a browser edition. Each daily input acquires an immediate published status, against which the ongoing strategy of excavation can accurately measure itself. The various papers illustrate the theory, give hands-on demonstrations of codes and programs, explain the structure of the resulting browser edition.

[188] GENERAL SESSION • SOCIAL COMPLEXITY

[189] SYMPOSIUM • PORTS, POLITIES, AND POLITICAL ECONOMIES: NEW PERSPECTIVES ON THE ORGANIZATION AND OPERATION OF TRADE IN THE ANCIENT MAYA LOWLANDS

Assessing the institutional organization and physical operation of both long-distance and local trade in the Maya lowlands has proved deeply problematic. Much of our knowledge is based on limited data sets, and too few inter-project comparisons are being made. The purpose of this symposium is to bring together researchers working throughout the Maya lowlands and to provide a forum for the discussion of new perspectives on ancient trade. For this session, trade is broadly defined to embrace all varieties of nonviolent transaction and should be understood to include both local systems and larger regional networks.

[190] SYMPOSIUM • GAULT SITE, TEXAS: CONTEXT AND RAMIFICATIONS OF ONGOING RESEARCH

Investigations at the multicomponent Gault Site in Central Texas from 1991-2002 documented and recovered more than 1.2 million artifacts and established their contexts. This symposium presents intermediate results from ongoing analysis of artifacts and new data regarding site context. Data regarding Clovis, Late Paleoindian, and Archaic lifeways at Gault are presented. Special attention is given to regional and continental implications of these data.

[191] SYMPOSIUM • XENOPHILE: THE ALLURE OF THE EXOTIC

Exotics mark archaeological sites across time and space. Non-local goods were transported, traded, and exchanged through myriad means, over short and long distances. Archaeological tools for identifying foreign objects, such as provenance studies, stylistic analyses, and economic documentary sources reveal non-local materials in prehistoric and historic assemblages. Yet trade and exchange encompass more than mere production and consumption. Exchange was a mechanism for introducing the foreign into daily life, and the sources of alien objects surpass archaeological expectations of exchange and geographic distance. Foreign objects were integrated into everyday practice long before the advent of a global economy.

[192] SYMPOSIUM • A NEW LOOK AT A COMMON DILEMMA: PERISHABLES AND THE DEFINITION OF BOUNDARIES. A SESSION IN MEMORY OF JAMES PETERSEN

(SPONSORED BY SAA FIBER PERISHABLES INTEREST GROUP)

Boundaries can occur at all levels of social organization, between broadly defined interaction spheres or between households within single villages. Perishables, especially textiles, are shaped by the complex array of learned behaviors that are transmitted within such bounded social groups. Therefore, perishables are especially useful to explore how material culture traditions are established and maintained, how they reflect broader aspects of their cultural context, and how their boundaries are shaped. The papers in this session will explore these concepts in more detail.

[193] SYMPOSIUM • IMPERIAL INSPECTIONS: ARCHAEOLOGISTS, WAR, AND VIOLENCE

Archaeologists in many parts of the world work at the edges of war and violence. Western archaeologists often ignore complex politico-ethical issues that emerge in such contexts. Our discussions cannot be limited to theoretical reflections, but must also engage at the level of praxis, including the choice of sites, research questions and publication strategies. In a world of highly unequal international relations, neither indignant withdrawal nor opportunistic adaptation to politically problematic conditions is acceptable. This session forms part of a larger discussion that aims to develop a politically aware ethics of archaeological praxis.

[194] SYMPOSIUM • INTER-VALLEY RELATIONS IN THE CENTRAL MEXICAN HIGHLANDS: DEVELOPING COMPARATIVE AND DIACHRONIC PERSPECTIVES

Recent studies on the inter-valley relations in the Central Mexican Highlands from the Formative to Postclassic periods are presented to better understand the trajectories of social changes through comparison of material culture, exchange relationships, socio-political and urban-rural relations. These studies examine the nature of interactions among different valleys including Valley of Toluca, Tula, Tlaxcala, Cholula, Morelos, and Basin of Mexico. Topics include demography, subsistence, archaeometry, biogeochemical analysis, ceramics, lithics, and architecture. The format encourages broadly based inter-regional sharing of current ideas, methods, and approaches and promotes further research in the Central Mexican Highlands.

[195] SYMPOSIUM • ISLAND ZOOARCHAEOLOGY: SYNERGY AND SYNTHESIS

Zooarchaeologists working on islands are united by special challenges and issues that form a basis for a disciplinary community of island zooarchaeology. Despite these shared interests, analytic findings often fail to transcend geographically bounded research areas (eg. Caribbean, Polynesia). This symposium facilitates dialogue and collaboration between practitioners by bringing together zooarchaeologists from diverse island regions to explore research developments, novel contributions, and new lines of inquiry and to promote the synthesis and advancement of island zooarchaeology as a subdiscipline. Contributions address issues bearing on larger questions in zooarchaeology and island archaeology, emphasizing island zooarchaeology's importance to understanding past cultures.

[196] SYMPOSIUM • THE ANIMAS-LA PLATA PROJECT: CULTURAL DIVERSITY ON A CHANGING LANDSCAPE

(SPONSORED BY UTE MOUNTAIN UTE TRIBE)

The Animas - La Plata (ALP) reservoir project facilitated the intensive archaeological investigation of a large geographic area in the northern Southwest. This area was used by a number of temporally defined groups, including Archaic, Basketmaker, early Pueblo, Ute, and historic Euroamerican groups, each of whom constructed vastly different cultural landscapes. This symposium presents the major findings of these investigations with particular focus on

the changing character of the cultural landscape and issues of cultural diversity and identity construction on those landscapes.

[197] SYMPOSIUM • MESOLITHIC MEETS ARCHAIC: HUNTER-GATHERER RESEARCH ACROSS THE ATLANTIC DIVIDE

This session focuses on the archaeological evidence on the small scale societies in temperate Europe and North America during the Early and Mid-Holocene. Themes explored are hunter-gatherers' local social and economic dynamics, regional and interregional interaction with other groups including the role of different scales of population movement in the formation of the Archaic and Mesolithic archaeological record. An attempt is made to evaluate approaches to the study of hunter-gatherers and early food producers in European and North American archaeology, explore the causes of commonalities and differences in these approaches, and highlight their potential in future research.

[198] SYMPOSIUM • RITUAL AND REPRESENTATION AT TEOTIHUACAN: INTERDISCIPLINARY APPROACHES

Teotihuacan was a city designed for procession and public gathering. Its massive central pyramids and plazas, reflected in more intimate settings and on a smaller scale, indicate the importance of ritual in every aspect of life. The nature of these rites is less clear, however, and has most often been interpreted by analogy with much later Aztec rites. The papers in this session bring together recent discoveries and new forms of analyses, and consider archaeological findings, textural evidence, and artistic imagery. Together they explore the relationship between ritual, ritual depiction, and the nature of sacred space in Teotihuacan.

[199] GENERAL SESSION • ARCTIC AND SUBARCTIC ARCHAEOLOGY

[200] SYMPOSIUM • COLLECTIVE MEMORY IN MIDDLE AMERICA

Memory is an essential part of constructing the present. People situate themselves in a plethora of social contexts by referencing the past. As demonstrated by recent work on the "Past in Past," we know that many references to the past can be manifested materially and in a variety of contexts. The objective of this session is to explore ideas such as how archaeologists can access collective versus individual memories, as well as how Precolumbian cultures constructed, erased, negotiated, and contested memories in material form, in a broad Middle American context.

[201] SYMPOSIUM • ARCHAEOLOGISTS AS GATEKEEPERS OF NATIVE AMERICAN AND NATIVE HAWAIIAN IDENTITY

(SPONSORED BY SAA COMMITTEE ON NATIVE AMERICAN RELATIONS)

US and Canadian archaeologists find themselves embroiled in conflicts over identity. Laws and public opinion have traditionally empowered anthropologists as the authorities on indigenous identity. More recently, Native Americans and Hawaiians have challenged this authority and asserted the right to establish their own identity. They often embrace oral history and tradition in opposition to archaeology as "data" for determining identity. These conflicts have real consequences in debates over repatriation, land claims, and government recognition. This session examines the rights and autonomy of indigenous people in determining their own identity and the role of archaeologists as gatekeepers in legitimating that identity.

[202] SYMPOSIUM • MAYA ARCHAEOLOGY IN BELIZE

This symposium represents a cross-section of current work by both established and emerging scholars from Canada, England, and the United States, whose research is based on the archaeological investigations of ancient Maya sites in Belize, Central America. Individual research papers vary widely, including materials-based studies, bioarchaeological and isotopic analyses, investigations into intra- and inter-site variation, trends in socio-political change, ideological representation, and ritual practices. The papers in this session contribute substantial insight into the lives of the ancient Maya who once made the country of Belize their home and provide archaeological data for all Maya researchers.

[203] SYMPOSIUM • **THE WEIMER RANCH COLLECTIONS AND THE GATEWAY DATASET: MAKING SENSE OF FORMATIVE DEVELOPMENTS ON THE NORTHERN ANASAZI PERIPHERY**

The Weimer Ranch Collections consist of archaeological data from several west-central Colorado sites that were excavated in the 1970s. These collections, which were never analyzed, represent the Gateway Tradition (A.D. 900-1200), a poorly understood Formative development north of the Four Corners region. Fortunately, the Weimer Ranch materials were recently analyzed under the direction of Alpine Archaeological Consultants, Inc., providing new information on the Gateway phenomenon. This symposium highlights the contributions that the Weimer Ranch Collections have made towards understanding local, and perhaps inter-regional dynamics pertaining to this relatively unknown chapter of Colorado prehistory.

[204] GENERAL SESSION • **NORTH AMERICAN ARCHAEOLOGY**

[205] GENERAL SESSION • **HOUSEHOLD ARCHAEOLOGY**

[206] SYMPOSIUM • **EXPLORING RAISED AND DRAINED WETLAND FIELD AGRICULTURE IN LATIN AMERICA THROUGH HISTORICAL, CULTURAL, AND TECHNICAL PERSPECTIVES**

Raising and draining wetland fields, resulting in characteristic rectilinear patterned ground formations, has long comprised an agricultural strategy in Latin America. Once viewed primarily in the theoretical context of hydraulic societies, previous and ongoing research demonstrates the need to understand these field systems in broad historical and cultural perspectives. This session applies a number of approaches to studying raised and drained field systems, including paleoenvironmental reconstruction, exploring linkages with adjacent settlements and political centers, documenting geotechnical processes underlying field formation, the place of patterned ground formations in landscape histories, and efforts to conserve and preserve both relic and still-active complexes.

[207] SYMPOSIUM • **THE MULTI-DISCIPLINARY RESEARCH RESULTS: INVESTIGATION OF AYN ABU NUKHAYLA, AN EARLY NEOLITHIC SETTLEMENT IN SOUTHERN JORDAN**

The results of geoarchaeologic, chronometric, paleobotanic, zooarchaeologic, isotopic, artifactual, stratigraphic, architectural, and intra-site spatial studies are presented for the 8.5Kbp, Early Neolithic site.

[208] GENERAL SESSION • **REMOTE SENSING AND GEOPHYSICAL TECHNIQUES**

[209] SYMPOSIUM • **PALEOLITHIC IN JAPAN: CURRENT ARCHAEOLOGICAL RESEARCH**

Paleolithic research in the Japanese Archipelago, which first started in 1949, now has more than half a century of history behind it. Although the disgraced "Fake scandal" (revealed in 2000) distorted the notion of the Japanese "Early and Middle Paleolithic", a rich and reliable Upper Paleolithic archaeological record has been continuously documented and investigated. The purpose of this session is to provide the significant results of recent investigations of the Paleolithic record across the archipelago to the public and an international scholarly audience.

[210] SYMPOSIUM • **SMALL PIECES: BIG PICTURE - MAKING RESULTS FROM CONTRACT ARCHAEOLOGY ILLUMINATE THE PAST**

Contract archaeology on both sides of the Atlantic generates a wealth of archaeological material while posing considerable challenges in terms of how we use all these bits and pieces to make meaningful representations of the past. How can the full academic value of such results be realised? How can they improve the future management of the archaeological resource? And how can the archaeological profession ensure that public benefits justify continuing expenditure on such work? This session will explore current approaches to the use of results from contract projects, and open a discussion on what more can be done in future.

[211] SYMPOSIUM • **NUU DZAHUI: RECENT STUDIES AND NEW PERSPECTIVES IN MIXTEC ARCHAEOLOGY**

This session assesses recent archaeological findings from new projects in the Mixteca region of southern Mexico. After several years of "drought" Mixtec archaeology can once again draw on valuable efforts at research and interpretation in a quest for answers to the long list of questions shared by archaeologists working in the region. Surveys and extensive excavation extend our understanding of Mixtec urbanism while analysis of domestic contexts addresses household activities in different socio-economic settings. We give special attention to two of

the most important Postclassic Mixtec cities, Yucundaa (Pueblo Viejo de Teposcolula) and Tututepec.

[212] SYMPOSIUM • NEIGHBORHOOD, COMMUNITY, AND POLITY: ALTERNATIVE INTERPRETATIONS OF MISSISSIPPIAN SOCIETIES

New models and data are challenging established views of Mississippian organization. Diverse themes are emerging: the heterarchy of corporate and residential groups, limitations to tributary or prestige good models of elite economic control, and the constraints on hegemonic polity models revealed in variable mound-center settlement patterns and histories. How was group identity, autonomy, or complementary in rituals, relations of production, and social status materialized within neighborhood, community and polity? Did the built environment formalize a group's place in the community? Eclectic in theory and method, these new directions have implications for the archaeology of middle-range societies.

[213] SYMPOSIUM • DIGGIN' THE GOLDEN STATE: RECENT STUDIES IN THE PREHISTORIC AND HISTORIC ARCHAEOLOGY OF CALIFORNIA

This symposium traverses time from prehistory to historical times. Various geographic points in California are considered. The symposium opens with a paper on the challenges and opportunities the Corps Regulatory permitting process presents to cultural resource managers. Five papers on prehistoric topics include consideration of material culture, features and issues such as, for example, nomadism versus sedentism. Another paper examines the transition from Mexican to American California through analysis of mortuary remains. Two historic period papers consider late 19 to mid 20 century recreational and residential sites from a cultural landscape perspective on the suburbanization of the Los Angeles region.

[214] SYMPOSIUM • STRUCTURING ROCK ART "SITE" STUDIES

(SPONSORED BY SAA ROCK ART INTEREST GROUP)

Rock art powerfully organises social and spatial relations. This symposium aims to consider structures and patterns that persist at multiple scales. This search for structure may help integrate rock art into the archaeological record as a prominent element: its object of study ranges from 'images', their 'components', to the 'sites' and 'landscapes'. The symposium will further explore if structural exceptions should be interpreted as marginal or individual activities within systems. Finally, structuring rock art studies requires an examination of its limits and possibilities and revisits the notion of the rock art 'site' as a conventional etic study unit.

[215] SYMPOSIUM • NEW KNOWLEDGE FROM OLD SITES: THE VALUE OF REVISITING SITES AND THEIR COLLECTIONS

New tools, methods, and ideas offer opportunities to accomplish significant research using existing collections and previously studied sites. Given the critical preservation decisions archeologists must make about the value of sites and collections, the question of reanalysis becomes increasingly important. To what extent does the potential application of new methods and theoretical perspectives inform the values we assign to the archaeological research of today? The wide range of papers presented here collectively explores application of new technology in the field and lab, testing of new hypotheses on old sites, and the potential contained in existing collections.

[216] SYMPOSIUM • CUSCO BEFORE THE INKAS

Recent research in the Inka heartland of Cusco has greatly contributed to our understanding of the socioeconomic and political processes that preceded and influenced Inka state formation. In this session, intra- and inter-site data will be presented in order to explore if and how the sociocultural and economic practices of earlier polities and local ethnic groups conditioned the ascendancy of Cusco in the South-Central Andes. The symposium will provide new insights on Inka political economic development, and more generally, how state formation is grounded in and influenced by earlier political agendas, cultural practices, and economic strategies.

[217] SYMPOSIUM • DELVING DEEPER INTO SUBSISTENCE: INTEGRATING PLANT AND ANIMAL DATA

For decades, archaeobotany and zooarchaeology have been treated as complementary yet distinct areas of inquiry. This academic distinction rarely reflects the ways in which people incorporated plants and animals into their lives in antiquity. This session examines ways in

which archaeobotanical and zooarchaeological data can be integrated to provide a much deeper understanding of food production and consumption and the ways in which human populations interacted with the environment. While the papers focus upon the Old World, the methods can be applied to any area of the world.

[218] FORUM • THE 110TH CONGRESS - A NEW START AND WHAT IT MEANS FOR ARCHAEOLOGY
(SPONSORED BY SAA GOVERNMENT AFFAIRS COMMITTEE)

The 110th Congress is underway, and Capitol Hill is trying to tackle a legislative agenda that contains many new issues and some leftovers from previous years. This forum will address that agenda and its possible ramifications for historic preservation policy in general, and archaeology in particular.

[219] SYMPOSIUM • ARCHAEOLOGICAL APPROACHES TO MARKET EXCHANGE IN PRE-CAPITALIST SOCIETIES

The participants in this symposium address how market systems developed (or failed to develop), evolved, and articulated with other, non-commercial forms of exchange in different times and places in pre-capitalist economies. The symposium is organized around four principal questions: (1) what are the defining characteristics of market exchange? (2) How do we recognize market exchange archaeologically? (3) What is the relationship between market and non-market exchange? And (4) how and under what conditions do market systems develop and evolve? It is intended to initiate a cross-cultural dialogue and generate new ideas about pre-capitalist market exchange and the evolution of market systems.

ABSTRACTS OF INDIVIDUAL PRESENTATIONS

Abbott, David (Arizona State University)

[219] *Marketplaces in Middle-Range Societies: A Hohokam Case Study*

One question concerning market exchange in pre-capitalist societies asks if marketplaces can develop in middle-range contexts. And, if so, how can we recognize them archaeologically, and how are they organized and financed? Among the Hohokam of south-central Arizona, ceramic provenance and distribution data imply that geographically concentrated production of commodities and their dissemination to far flung consumers may have been dependent on marketplace transactions associated with ritual ballgames. In the presence of frequent ceremonial events that regularly drew large crowds, a heavy dependence on marketplace barter may have developed among the Hohokam without elite oversight or sponsorship.

Abbott, David [39] see Fertelmes, Craig

Abdenur, Adriana [5] see Sunseri, Kojun

Abraham, Meg [77] see Sands, Ashley

Acton, James [5] see Womack, Andrew

Acuña, Mary Jane (University of Texas at Austin)

[103] *The Royal Couple Building at El Perú-Waka'*

Excavations on M12-35 revealed an occupation spanning from the Terminal Preclassic through the Terminal Classic. Architectural modifications during the Late Classic and the placement of two sets of paired stelae suggest its ritual and political importance at the site during the reign of K'inich B'ahlam and also during the reign of his successors in veneration of that earlier king. However, evidence of ritual termination and architectural destruction in the Terminal Classic indicate a violent end along with other contemporaneous monumental structures at El Perú-Waka'.

Acuna, Mary Jane [103] see Lee, David

Adair, Mary (University of Kansas) and Kay, Marvin (University of Arkansas)

[197] *North American Eastern Prairie Adaptation: The Middle to Late Holocene Record*

Hunter-gatherer groups that once inhabited this region successfully adapted to the changing Holocene climate and environments. Although our understanding of the dynamic interrelationship among these groups is not complete, data document that some groups adopted cultivated plants into their diet while other groups began to produce ceramics.

Exchange networks that may have been the origins of these new technologies are discussed while geomorphic events that may have promoted seasonably stable environments to encourage cultivation are presented. Finally, the timing and context of early cultivation is evaluated according to current food production models.

Adams, Brian (University of Illinois)

[37] *Talking Bones: Scapulae and European Upper Palaeolithic Rituals*

While much is known about the subsistence and settlement systems of Upper Palaeolithic hunter-gatherers, the belief systems of such groups remain elusive. Cave paintings are the most common source of insight into Palaeolithic belief systems, while portable objects are commonly used to investigate social interactions. In this paper, the occurrence of non-human scapulae in possible ritual contexts at Upper Palaeolithic sites are investigated.

Adams, Elizabeth (Eastern New Mexico University)

[157] *Exploring the Paleopathological Conditions of Human Skeletal Remains from the Mine Canyon Site, Farmington, New Mexico*

Numerous archaeological sites have been documented on the B-Square Ranch located near Farmington, New Mexico. Mine Canyon Site, one of the largest communities on the ranch dating to the Pueblo III time period, offered an excellent opportunity to conduct a paleopathological study of human skeletal remains. This study of the Mine Canyon Site has shed insight into health and disease patterning between the sexes at this ancient pueblo. It also has provided suitable data for comparative analyses to other temporally similar Puebloan communities in an effort to better understand both local and regional affliction patterns within the San Juan Basin.

Adams, Karen (Crow Canyon Archaeological Center) and Murray, Shawn (University of Wisconsin, Madison)

[10] *Plant Resource Potential: A Quantitative Plant Assessment Scheme to Supplement the Archaeobotanical Record*

Archaeobotanical evidence provides an incomplete view of ancient plant use, confounded by variability in: location(s) of plant use, preparation technique(s), inherent qualities of diverse parts, and preservation conditions. Animas La Plata Project (SW Colorado) archaeobotanists employ a quantitative scheme to evaluate the "plant resource potential" of 80+ native plants present within Ridges Basin. Our scheme scores each plant (summing all parts) for food and non-food uses. Food traits include dependability, season(s) available, and actual/estimated energy return rate data. These results supplement archaeobotanical evidence, and contribute to a "site catchment analysis" of important resources surrounding Ridges Basin archaeological site clusters.

Adams, Karen [181] see Ryan, Susan; [196] see Anderson, Kirk; [196] see Murray, Shawn; [33] see Meegan, Cathryn; [38] see MacWilliams, Arthur

Adams, Richard (UT San Antonio) [162] Discussant

Adams, Ron (Simon Fraser University)

[68] *The Social Life of Tombs in West Sumba, Indonesia*

Burials situated in prehistoric residential contexts have oft been considered to reflect concerns for social memory and social reproduction. The continued practice of erecting stone tombs within residential compounds in West Sumba, Indonesia enables an ethnoarchaeological examination of these issues and the active social dynamics associated with the creation of residential burials. Tomb building in West Sumba is embedded in traditional clan social structures of continued relevance. These tombs convey not only a link to the past, but are also a central aspect of active processes associated with power negotiation, achievement and the continuity of house-based groups.

Adamu, Mosheh (Yates Community Archaeology Program)

[111] *HipHop'n the Historical Archaeology of Freedman's Town*

The poetics of words and images have played a critical role in the presentation of archaeological knowledge about Freedmen's Town, a National Register-designated neighborhood in Houston, Texas. Photography and graphic design have been valuable tools in

the dissemination of data acquired by material culture research, land use analysis, interviews and participant-observation. In addition, visual media has simplified the complexity of archaeological investigation for audiences seeking understanding of the history of this community. In this paper, I will consider both method and praxis in creating and presenting ethnographic visual media, and will discuss its legitimacy within formal historical archaeology discourse.

Adelsberger, Katherine (Washington University in St. Louis) and Smith, Jennifer (Washington University in St. Louis)

[176] *The Geoarchaeology of High-Desert Archaeological Surface Survey, Eastern Libyan Plateau, Egypt*

The eastern Libyan Plateau near Abydos, Egypt has been the focus of systematic archaeological surface survey by the Abydos Survey for Paleolithic Sites (ASPS). Paleolithic artifacts in this high-desert environment are found most frequently on desert pavement surfaces. Geoarchaeological investigations into the nature and development of desert pavements of the Libyan Plateau therefore provide data concerning the geologic history and stability of this landscape but also provide context for understanding the taphonomic processes affecting archaeological materials since their deposition. Assemblage composition and positioning suggest a highly stable land surface since the Middle Paleolithic, with minimal transport of deposited materials.

Adler, Michael (Southern Methodist University) and Tsesmeli, Evangelia (Southern Methodist University)

[33] *Social Integration, Segregation and Architectural Variability at Hummingbird Pueblo (LA 578), New Mexico*

Hummingbird Pueblo is an Ancestral Pueblo site located west of Albuquerque, N.M. Its three main blocks of surface architecture differ considerably in layout, size, and composition of building material. The site's location and its occupation during the 13th–14th century transition make it an important context for studying relationships of migrant and local groups at the site. This paper discusses the results of adobe compositional analysis at the two of the site's roomblocks, presenting data on the site's occupational history as seen through the building phases and materials used, to reveal instances of social integration and segregation of various residential groups.

Adovasio, James [102] see Cabo-Pérez, Luis; [164] see Vento, Frank

Adovasio, James M. (Mercyhurst College), Pedler, David (Mercyhurst College) and Illingworth, Jeff (Mercyhurst College)

[192] *Prehistoric Basketry and Archaeological Frontiers: The Fremont Case, Again*

Since its definition over 70 years ago, Fremont's origin, character, and fate have been broadly debated. Archaeological interpretation of Fremont has evolved from a "backwoods Anasazi" culture to a distinct cultural entity, first with two – and later, five – poorly defined regional variants. Fremont culture has remained elusive due to a lack of universal durable material culture traits, architecture, land-use patterns, and subsistence strategies. Fremont basketry, however, is one of the most distinctive varieties in the entire Great Basin and, as such, has the capability to illuminate what the Fremont may have been, where they came from, and perhaps where they went.

Adovasio, James M. (Mercyhurst College) [192] Discussant

Agha, Andrew [71] see Poplin, Eric

Aguilera, Miguel (Arizona State University)

[11] *Maya Skeletal Semen: Emerging from the White-Bone Snake*

Maya cosmology is centered on inter-relational rituals with ancestors and many pre-European contact Native-American societies created and maintained a relationship with "oracular" skeletal bundles. The pre-Columbian practice of bundling skeletal material continues in some contemporary Maya communities in order to venerate and communicate with their ancestors via their bones. This talk presents archaeological, ethnohistorical, and ethnographic data to analyze Mayan communicating bones used in fertility based reciprocal ancestor rituals. Emphasizing past and present burial material culture, alongside human practice, the talk shall

focus on how interdisciplinary methods can yield rich data concerning indigenous American socio-religious notions regarding their living dead.

Aguilar, Miguel [18] *see Caretta, Nicolas*

Agurcia, Ricardo [151] *see Ramos, Jorge*

Ahuja Ormaechea, Guillermo (Proyecto Tamtoc, INAH)

[18] *Los Materiales Arqueológicos de Tamtoc*

Esta ponencia permitirá conocer los objetos y arquitectura recuperados de 2001 a 2006, en la zona arqueológica de Tamtoc, SLP. Un lugar muy importante de la exposición estará dedicada a los elementos icónicos que nos marcan dos estilos o corrientes diferentes. Esto nos ha llevado a cuestionar desde la temporalidad del área de estudio, así como algunos aspectos de cosmovisión, organización, contactos culturales y comerciales con otros grupos de la Costa del Golfo. Por lo cual se considera muy necesario la revisión y los alcances de las cronologías y secuencias culturales que se han establecido para la Huasteca.

Aimers, Jim (University College London)

[149] *The Impact of Fine Orange on the Ceramics of Lamanai*

Fine Orange Ware types were produced by the Maya for hundreds of years and are widely distributed across the Maya world. Many of the red-slipped Postclassic ceramics of Lamanai are decorated in designs that closely resemble those of Fine Orange Ware types, although they are not themselves Fine Orange Ware. I will use a ceramic systems perspective to discuss this phenomenon and its implications for understanding Lamanai's connections to other regions and its role in the Postclassic Maya world.

Aiuvalasit, Michael (Geoarchaeology Research Associates)

[34] *The Geoarchaeology of Deweyville Terraces in Texas*

Research at the McNeill-Gonzales Ranch site (41VT141) and other localities across the Gulf Coastal Plain of Texas have found prehistoric occupations preserved in Deweyville terraces. Deweyville terraces formed during the Late Pleistocene yet archaeological materials are found in the upper portions of these terraces. Detailed stratigraphic studies indicate the potential for intact archaeological deposits buried by eolian and colluvial processes during the Holocene. This study demonstrates Deweyville terraces provide opportunities to investigate prehistoric sites, including Paleoindian components in a region where Paleoindian sites are not readily observed due to submersion by sea level change, stable uplands, and deep alluvial sequences.

Akai, Fumito (Graduate School of Letters, Hokkaido University)

[209] *End Scraper Reduction Process: An Analysis of End Scrapers from Osatu16 Site, Hokkaido*

Microblade assemblages existed from the LGM (Last Glacial Maximum) to the Terminal Pleistocene in Hokkaido, Japan. Nowadays it is generally accepted that microblade assemblages in Hokkaido can be divided into at least two periods: early and late. Especially late period of microblade assemblages in Hokkaido during the Terminal Pleistocene contain numerous formal end scrapers on blades. This paper presents an analysis to examine patterns of end scraper manufacture and maintenance from Osatu16 site located in the southern part of Ishikari Lowland, Hokkaido. I discuss end scrapers reduction process in microblade assemblages of Northern Japan.

Akins, Nancy [157] *Discussant*

Akoshima, Kaoru (Tohoku University)

[209] *Recent Researches on the Early Paleolithic of Japan*

Excavations of the Tsurugaya-higashi site in Gumma prefecture by Serizawa, Akoshima, and Yanagida in 2004 and 2005 shed new light on the Early Paleolithic industries of east-central Honshu Island. The assemblage includes scrapers, burins, pointed tools, drills, notches, and denticulates, mostly made of chert. Tephrochronology places the assemblage between 40,000 and 80,000 years bp, as artifacts were found below the Yunokuchi pumice. Re-excavations in 2001 and 2002 of the Sozudai site, Oita prefecture, which was the first discovered Early

Paleolithic in Japanese archipelago, also reveal characteristics of early lithic technology. These sites will contribute to reconstruction of cultural chronologies.

Akridge, Glen (Arkansas Archaeological Society)

[123] *Forty-Four Years of Collaboration*

Arkansas's Training Program in Archeology for Amateurs began in 1964 as a cooperative endeavor between the University of Arkansas Museum and the Arkansas Archeological Society. In 1967 the Arkansas Archeological Survey took over the Program's supervisory responsibilities. In 1972, a Certification Program was added. For 44 years the Program has attracted people from around the country, but the greatest benefit has accrued to Society members in Arkansas and to the Survey's Research Stations. Trained volunteers respond to calls for help, whether emergencies, short-term testing, site monitoring, or lab work. Actually, the real benefit has been to the preservation of the past.

Alarcón Esquivel, Cynthia Encarnacion (Esc. Carlos Salinas de Gortari No. 2747)

[136] *Archeology and History Visiting my School*

My school is located in the outskirts of Ciudad Juarez, a place where children lack even the basics, such as water. From a very young age they have had to fight for bread, fit in with a social group, and the possibility of dreaming of a better future. About a year ago I was invited to participate in a project that looked interesting but removed from my teaching experience—Archeology in my school?—as it might help my students. But I discovered an experience of life, learning, imagination, archeology, and history through the eyes of the children.

Albert, Rosa Maria (ICREA, University of Barcelona (SPAIN)), Portillo, Marta (ICREA, University of Barcelona (SPAIN)) and Henry, Donald (University of Tulsa)

[207] *Domestic Activities at the Early Neolithic Site of Ayn Abu Nukhayla, Southern Jordan*

The research carried out at Ayn Abu Nukhayla (Wadi Rum, Jordan) focuses on the identification of domestic activities and their spatial distribution through the combined analyses of phytoliths and spherulites. The results of detailed quantitative, morphologic, and morphometric studies from three different structures (Loc 2, 3, and 4) are discussed. Cereal processing is evidenced by the concentration of inflorescent parts of grass phytoliths associated with handstones and querns. These loci appear to have been used for the grinding of seeds and the preparation of other plant resources.

Alcock, Susan (Sue Alcock, Brown University) [200] Discussant

Alconini, Sonia (University of Texas at San Antonio) [88] Discussant; [76] see Kim, Lynn

Aldana, Gerardo (UCSB)

[143] *Maya Astronomy as an Oracular Science: Thoughts on the Philosophical Underpinnings of Indigenous Sciences*

Ancient Maya astronomy has been investigated from various methodological approaches over the last century, most of which have revealed technical localized practices. While the rigorous focused recovery of the practices and elements of Maya astronomy are necessary for assembling the larger intellectual endeavor, we must also keep in mind that any such assemblage is dependent on underlying epistemologies, which are precariously subject to interpretation. In this paper, I propose a few epistemological principles, including a Mesoamerican desire for stochastic accuracy in prediction, that, along with corroborating interpretive evidence, makes a case for a Maya oracular astronomy.

Aldenderfer, Mark (University of Arizona)

[152] *Religion, Ritual, and Belief in the Emergence of Social Inequality*

Although it is widely acknowledged that economic factors have played a powerful role in the emergence of social inequality, less attention has been paid to how religion, ritual, and belief play out in these scenarios. This is unfortunate, because religion has the capacity either to transform or to maintain existing social relationships. In this paper, I examine how a fuller treatment of the role of religious belief can help to better understand how social inequality emerged.

Aldenderfer, Mark (University of Arizona) [24] Discussant; [79] Discussant

Alexander, Rani (New Mexico State University)[140] *The World According to Robert: Macroregional Systems Theory in Mesoamerica*

Throughout his career, Robert Santley sought to explain the spread of Teotihuacan-derived material culture to other areas of Mesoamerica and to develop better archaeological methods for recognizing variation in the organization of macroregional economic systems. In this paper, I review his approaches to understanding the Mesoamerican World. I outline a few unresolved questions in the archaeological use of World-Systems Theory as applied to Mesoamerica by comparing evidence from the Classic and Postclassic periods. I consider one of Robert's running arguments—"What's Wrong with the World"—and some fruitful new directions for research.

Allard, Francis (Indiana University of Pennsylvania)[109] *Trajectories to Complexity in Pre-Han Southeast China: Gauging the Impact of Inter-Regional Interaction*

The prehistory of China witnessed the emergence of numerous hierarchical societies, which themselves display different trajectories to complexity. A comparison of a number of pre-Han archaeological cultures in southeast China allows us to contrast two such trajectories, one more gradual and extended and the other characterized by a rapid but relatively short-lived increase in socio-political inequality. It is suggested that these different outcomes are in part explained by the degree to which the products and benefits of inter-regional interaction (such as access to prestige goods) are successfully integrated throughout the local system.

Allen, Catherine J. (George Washington University)[180] *Rethinking Andean Animism*

My paper contributes to a reappraisal of animism by exploring the interactive relationship between people and utilitarian objects in the southern highlands of Peru. The coherence and integrity of an object is transmitted to it by the craftsman, who manipulates animate matter through a mixture of persuasion and force. This dialogical relationship continues with regard to the finished object, which is treated as possessing a kind of agency in its own right. I go on to discuss the implications of this interactive stance for our understanding of technological styles and management strategies in the pre-Columbian Andes.

Allen, Eowyn (Arizona State University) and Barton, Michael (Arizona State University)[38] *Sustainability of Agricultural Land-Use and Territorial Expansion*

Agricultural intensification and unsustainable land use practices are widely considered consequences of the development of complex societies and territorial expansion. However, an alternative explanation is that the tendency toward territorial expansion is a consequence of pressures created by unsustainable land use practices, and that expansion may have been employed as a strategy to avoid social collapse over the short-term. These alternative processes are evaluated for land use and the rise of complex society among the Classic Maya of Central America, the Bronze Age in Greece, and the Bronze Age in the Southern Levant.

Allen, Kathleen M Sydoriak (University of Pittsburgh)[142] *Cayuga Iroquois in the 16th century: The Impact of Socio-Political and Climatic Factors on Regional Population Growth and Abandonment*

Iroquoian populations in the 15th and 16th centuries were confronted with social, political, and economic challenges that led to population reorganization in the face of increasing hostility between groups as well as climate change. In this paper, settlement and ceramic data from a regional cluster of western Cayuga villages are analyzed and placed within the broader spatial and temporal framework of larger scale processes occurring in the eastern Great Lakes region. This study has implications for understanding ethnogenesis, social identity, and abandonment in this area.

Allen, Kathleen Sydoriak [142] see Lockard Reed, Angela**Allen, Mark (Cal Poly Pomona) and Gilbert, Rebecca**[125] *Big Questions about Small Pueblos in the Galisteo Basin: The View from the Burnt Corn Pueblo Hinterland*

Long ignored, small sets of room blocks dot the landscape of the Galisteo Basin. Several small pueblos with surface ceramics similar to those at the larger Burnt Corn Pueblo were investigated through surface mapping and test excavations. These contemporary sites provide

a larger frame of analysis for the Tano Origins Project. The smaller communities reveal idiosyncratic architectural details, but similar assemblages and occupational spans. Evidence is persuasive that each of the investigated small pueblos was burnt at site abandonment, indicating that the destruction of Burnt Corn Pueblo was not an isolated occurrence in the region during the Late Coalition Period.

Allen, Mark [125] *see Gilbert, Rebecca*

Allison, James (Brigham Young University)

[181] *The End of Farming in the Northern Periphery of the Southwest*

The area once called the northern periphery of the Southwest was occupied for approximately 1,000 years by prehistoric farmers identified by archaeologists as Fremont and Virgin Anasazi, although hunter-gatherers occupied the area at European contact. Although the timing is similar, possible relationships between the end of farming in the northern periphery and the Four Corners abandonments have not often been considered. This paper reviews the cultural context and timing of, as well as explanations for, the end of the Fremont and Virgin Anasazi sequences, and explores the linkages with the better documented abandonments in the Four Corners region.

Allison, James [196] *see Hagopian, Janet*

Alonso, Alejandra [16] *see Rangel, Martin*

Alt, Susan (Indiana University, Bloomington)

[132] *Considering Complexity: Confounding Categories with Practices*

Current models for political complexity do not always fit the ways North American people were complex. If complexity involves differentiation and interconnectivity, heterarchy and hierarchy, then there are innumerable ways to be complex. Complexity is to be located in practices and genealogies of past lives, not gross generalizations. North Americanists now have enough data to explicate the histories of past people, rather than simply engage in reductionist categorization projects. Using data from the Southwest to the Eastern Woodlands, we move past critiques to offer ways to analyze and discuss the dimensions of complexity.

Alt, Susan [212] *see Baltus, Melissa*

Altschul, Jeffrey (Statistical Research, Inc./SRI Foundation) [130] *Discussant; [213]*
Discussant

Alvarado, Silvia [26] *see Forne, Melanie; [26]* *see Suasnavar, Jose*

Alvarez Palma, Ana Maria (Instituto Nacional de Antropología e Historia, México)

[70] *Reflexiones sobre el Periodo Huatabampo*

Recent investigations of early sites in northwest Mexico, U.S. Southwest and Southern Sinaloa allow new interpretation of the role of Huatabampo archaeological society in the social network of late Holocene. The Huatabampo period appear to be a key moment in the consolidation of versatile subsistence strategies that involve interactions with several microenvironments. The agricultural management improves during the long occupation stage together with practices of fishing, gathering and hunting, that are more precisely scheduled. Social and ritual practices and consumption of goods that, as turquoise and obsidian, are obtained by exchange, propose the existence of a network of intra and interregional relationships.

Ameri, Marta (Institute of Fine Arts, New York University)

[117] *The View from the Other Side: Using Iranian-Mesopotamian Models to Identify Patterns in Indo-Iranian Interrelations*

While the patterns of contact between Mesopotamia and Iran have been studied extensively by archaeologists working in the Near East, the study of relations between Iran and South Asia has been haphazard. As the evidence for contact between these two regions continues to increase, it seems the time has come to closely examine the material and to attempt to identify the patterns of this contact. This paper attempts to apply the methodologies used to study the patterns of contact between Iran and Mesopotamia to South Asia with a view towards creating a workable model for all of Middle Asia.

Ames, Kenneth (Portland State Univ)[152] *On The Evolution of the Human Capacity for Egalitarianism and Inequality*

Most explanations of the origins of inequality focus on overcoming the inertia of egalitarianism, invoking either systemic processes, such as population growth, or aggrandizers. These explanations rest on a deep seated assumption that egalitarianism is the default social organization for small-scale human societies. By implication the roots of inequality are shallow. More recently, some scholars suggest that in the Late Pleistocene egalitarianism was imposed on inherited tendencies towards dominance hierarchies, implying the roots of inequality are deep. Both miss the fundamental point that egalitarianism and inequality in modern human societies rests on modern human cognition, specifically the capacity to symbol.

Ames, Kenneth (Portland State Univ.) [179] Discussant**Amick, Daniel (Loyola University Chicago)**[66] *What Were Great Basin Chipped-Stone Crescents Used For?*

Study of morphological and technological attributes of 594 prehistoric crescents is used to compare patterning and ranges of variation in size, shape, raw material, and blank type. This archaeological study also documents evidence of use wear, tool rejuvenation, and lateral recycling. The functional implications of these patterns are suggested by numerous experiments using crescent replicas as transversely hafted projectile points, animal butchery tools, plant harvesting and processing tools, and tools for slotting or engraving bone and antler. These studies suggest functional diversity among prehistoric crescents although most appear to have been mainly used as projectile tips, butchery tools, and/or engravers.

Amundson, Krystle R. (Pacific Lutheran University)[203] *New Gateway Perspectives: An Example of Utilizing Abandoned Collections*

The Weimer Ranch Collections consist of 12,982 artifacts from several sites that were investigated in the 1970s. Recently, Alpine Archaeological Consultants, Inc. was hired to catalogue and analyze the collections, an effort which has been critical for understanding the Gateway Tradition. This paper will look at the history of "Gateway" research, outline the current interpretations and debate about this tradition, and emphasize how these once abandoned collections have proven to be extremely valuable.

Anaya, Armando (UNIVERSIDAD AUTONOMA DE CAMPECHE)[162] *Royal Houses and Geopolitics in the Peten*

The inscriptions in the Peten Campechano attest to the complexity of the geopolitical system often based on the establishment of political alliances through marriage. In this paper I address the changing geopolitical map of the Peten making use of Levi-Strauss' notion of House as an explanatory model for the inter-elite alliances that gave form to the Calakmul Regional State. I argue that in the Classic Maya political system in the absence of formal political categories the Maya rulers made use of the only language that they could easily relate to, kinship.

Anderson, David (University of Tennessee), Gillam, Christopher (University of South Carolina), Carr, Christopher (Arizona State University), Emerson, Thomas (Illinois Transportation Archaeological Research Program) and Gibson, Jon (Homer, Louisiana)[204] *Resolving Interaction Networks in Eastern North America*

Native American trails were documented crisscrossing Eastern North America in the centuries following European contact. Factors shaping the occurrence and antiquity of these transportation and communication arteries are explored using least cost pathway analyses, linking archaeological sites, artifacts, and raw material source areas at three periods in prehistory: Mississippian Cahokia, Middle Woodland Ohio and Havana Hopewell, and Late Archaic Poverty Point. The routes, mechanisms, and directions of interaction changed appreciably over time, and were influenced by the ways people were distributed and organized on the landscape. Evaluating the plausibility of mapped historic trails is an additional benefit of the research.

Anderson, David (University of Tennessee) [159] Discussant; [15] see Meeks, Scott C.

Anderson, J. Heath (Penn State University)[50] *Expedient Blade Production for Workshop Activity in Kaminaljuyú, Guatemala*

During the 1968–1970 field seasons, Penn State archaeologists conducted excavations at Kaminaljuyú, Guatemala, uncovering dense deposits of obsidian blades and production debris. Some of these deposits contained apparent workshop dumps, which were comprised of obsidian blades and flakes corresponding to all core reduction phases. Many of the blades and flakes exhibited identical use wear, suggesting that they been produced expediently for in-situ craft activity. This paper presents a detailed description of this assemblage and argues that it is the product of non-export blade manufacture. This will provide valuable comparative information helpful for identification of export blade workshops.

Anderson, Karen (University of California, Santa Barbara)[83] *Variety and transformation: Tiwanaku Impact on Local Mortuary Practices at Piñami, Cochabamba, Bolivia*

Over 40 Middle Horizon burials were excavated at the site of Piñami, a long term habitation mound in Cochabamba, Bolivia. The burials come from throughout the Middle Horizon and evidence a variety of mortuary practices, some showing strong ties to the local formative traditions and others clearly influenced by Tiwanaku. I present data by time period on offerings, burial context, tomb form and construction as well as age, sex, body position and orientation. I compare Piñami with other Tiwanaku regions and discuss the implications of Piñami's variable and changing mortuary traditions for understanding Tiwanaku influence and diaspora in Cochabamba.

Anderson, Karen [83] see Echevarria L., Gori Tumi; **[83]** see Yoshida, Bonnie Y.;

[83] see Terceros C., Zulema

Anderson, Kirk (Northern Arizona University), Adams, Karen (Crow Canyon Archaeological Center) and Reeder, Trent (SWCA)

[196] *Landscape Change and Stability in Ridges Basin: Implications for Pueblo I Habitation*
Geomorphic investigations in Ridges Basin focus on characteristics of the Pueblo I landscape and processes that helped change the landscape over time. Goals of soil investigations include understanding soil forming processes and characterizing soil fertility. Studies of sediments and soils exposed in arroyo cuts along Basin Creek include chronostratigraphic reconstructions, alluvial pollen profiles, and the influence of alluvial fan constriction on basin outflow. Results of these investigations are interpreted within the context of local and regional climate conditions known to have occurred during ancestral puebloan times, and aid our understanding of human-landscape interactions during this critical cultural period.

Anderson, Kirk [100] see Elson, Mark

Anderson, Patricia C. (CNRS, CEPAM & EARTH Programme, ESF, Valbonne, France), Cummings, Linda (Paleoresearch Institute, Inc.) and Bryson, Reid A. (University of Wisconsin)[145] *Agriculture, Sustainability, Risk, and Climate in Modern Tunisia*

Agriculturalists assess local conditions when determining their yearly chance of success. We examine an agricultural system and tools used in the Middle East beginning roughly 8000 years ago. Modern ethnological work in Tunisia focuses on non-mechanized agricultural tools and techniques to better understand the past. We examine the decisions farmers are making in light of climatic reconstructions and models and assess sustainability and risk. This study focuses on decisions people are making today, based on yearly changes they perceive in their climate and environment and errors they feel were made in recent field management, soil preparation, and seed stock.

Anderson, R. Scott (Northern Arizona University), Smith, Susan (Northern Arizona University) and Herr, Sarah (Desert Archaeology, Inc.)[34] *Drought, Fire, and Farming: A 2700 Year Paleoecological Record from Little Green Valley, Central Arizona*

Little Green Valley is located in central Arizona in the rugged canyon country below the Mogollon Rim. Pollen, macrobotanical fossils, and, charcoal were analyzed from a 7 m section of alternating sand, gravel, and organic sediment exposed in an arroyo cut at the foot of the valley. Prehistoric farmers are glimpsed in the occurrence of maize pollen between AD 980

and 500, which mirrors the archaeological record in the valley. Climatic cycles inferred from the multi-disciplinary data provide another dimension to understanding past human population cycles in the region.

Anderson, Soren [166] *see Heron, Carl*

Anderson, Stephen (Northern Arizona University)

[40] *Comparing Cattle Grazing Impacts on Archaeological Sites in Two Ranger Districts of the Humboldt-Toiyabe National Forest*

This paper compares cattle grazing in the Jarbidge and Ely districts, and its impacts on archaeological sites. Methods used to assess this impact include recordings of cattle trampling, trailing, and wallowing along perennial spring sites; samplings from 12"x 12" test pits to identify artifact deposition and erosion; and establishing photo points at selected sites. Results from this study show that grazing in the Ely district impacted archaeological sites greater than that of the Jarbidge district. One possible reason for this difference could be the increased congregation of cattle along spring sites in the Ely district compared to the Jarbidge district.

Andrefsky, Jr., William (Washington State University) [130] *Discussant*; [150] *see Wilson, Jennifer Keeling*; [150] *see Noll, Christopher*; [50] *see Ferris, Jennifer M.*

Andrews, Anthony (New College of Florida) [189] *Discussant*

Andrews, Bradford W. (Pacific Lutheran University) and Greubel, Rand A. (Alpine Archaeological Consultants, Inc.)

[203] *The Gateway Phenomenon: A Punctuated Formative Development Linked to Inter-Regional Population Dynamics?*

Assessing ethnicity and the nature of contact between prehistoric groups is a challenging research topic for archaeologists. It is important, however, because it provides a level of understanding that often surpasses that of straightforward cultural historical and ecological considerations. Although distinct from the Anasazi, the Gateway peoples definitely shared some material traits with their southern neighbors. This paper explores whether this overlap was the result of cultural developments that are frequently associated with contact in frontier zone settings. Moreover, the sudden appearance of the Gateway Tradition may be directly tied to population dynamics in the greater Four Corners region.

Andrews, Brian (Southern Methodist University)

[165] *The Mountaineer Site and Folsom Adaptation in the Southern Rocky Mountains*

The Mountaineer site contains a Folsom assemblage indicative of intensive use of the Gunnison Basin. At least two temporally discrete occupations are recognized. One may represent a winter residential occupation, with the assemblage consisting of a wide variety of tool types associated with structures and possible storage pits. The other represents a temporary hunting camp. Utilizing a model of seasonally scheduled elevationally controlled zonal resource procurement, it is argued that 1) subsistence ranged from broad spectrum to specialized, depending on the season, and 2) Mountaineer served as a centralized residential base during winter occupations, and a logistic hunting base during other seasons.

Andrews, Timothy [106] *see Fairley, Helen*

Andrus, C. Fred T. [175] *see Hodgins, Gregory*

Andrushko, Valerie (University of California, Santa Barbara) and Bellifemine, Viviana (Archeo-Tec., Inc.)

[186] *Osteological Analysis at Cotocotuyuc, Peru: A Study of Health and Trauma from the Middle Horizon – Late Intermediate Period Transition in the Cuzco Region*

Burials from the Huaro Valley, Peru, were analyzed for evidence of physical stress and trauma, possibly caused by political instability and warfare that contributed to the collapse of the Wari Empire. Observed pathological conditions from this study include traumatic injuries, non-specific stress indicators, and joint disease. Some individuals exhibit a combination of dental and skeletal non-specific stress indicators, likely as a result of nutritional deficiencies or

disease. Comparison of Wari burials to later Lucre burials reveals diachronic-shifts in the frequencies of pathological conditions that suggest changes due to Wari Empire collapse and Late Intermediate Period regionalization.

Anfruns, Josep [68] *see Guerrero, Emma*

Angel, Jules (The Ohio State University, Dept of Anthropology) and Ramenofsky, Ann (The University of New Mexico)

[5] *Now I See It; Now You Don't. Vegetation Signature Comparison between Ground and Aerial Measurements at San Marcos, NM*

This research mapped negative vegetation signatures (NVS) created by buried adobe walls at the 65 acre site of San Marcos Pueblo, NM, using a Total Station on the ground and an analytic stereoplotter measuring the signatures captured on aerial photographs. Wilcoxon's Signed – Rank test shows a correlation between NVS segment counts within the pueblo roomblocks, but no correlation between individual NVS lengths within the roomblocks. These results demonstrate that at large sites, photogrammetrically delineated buried adobe walls from aerial photographs can substitute for extensive ground mapping if gross, site – wide wall patterns are required rather than specific, individual wall lengths.

Anschuetz, Kurt F (Rio Grande Foundation)

[131] *Becoming the Tewa World: People, Place, and Time in North-Central New Mexico, A.D. 1250 – 1600*

The Pueblo people leaving the Mesa Verde region during the thirteenth century for north-central New Mexico did not find a *tabula rasa* for building a new homeland. Portions of this region, which is known as the Tewa Basin, already were the homes for Pueblo populations. This paper considers the processes through which the Tewa Basin's existing residents and arriving immigrants established—and elaborated upon—new traditions of place and time. Using these traditions, the people transformed north-central New Mexico's physical environment, as well as themselves, to create the cultural landscape that is the Tewa World.

Anthony, Dana (Anthony & Brown Consulting) and Brown, David O.

[76] *Inka Architecture in Ecuador: Traces of Power on the Northern Frontier*

As at Inka sites throughout the Andes, the constructions of many Cusqueno installations in Ecuador are clear reminders of imperial power. In location, layout, scale, and elaboration, the Inkas displayed architectural messages of might and grandeur to subjugated peoples and their yet to be conquered neighbors. Nonetheless, at some sites the underlying text of imperial power was muted or mixed. In this paper, we examine San Agustín de Callo, Ingapirca, and other Inka sites in Ecuador in an effort to better understand the variability in expressions of imperial power on the northern frontier.

Anthony, David (Hartwick College)

[53] *The Secondary Products Revolution, Horse-Riding, and Chariots*

Andrew Sherratt's analytical scale, the size of his canvas, was unusual, but it was also a needed reaction to his recognition of a tectonic shift in the scale of prehistoric interactions across Eurasia at the beginning of the Bronze Age. The beginning of horseback riding and chariotry in the steppes played a role in this shift, as Sherratt recognized, but his interpretation that both began as the result of influences from the Near East is contradicted by new evidence suggesting a much earlier and largely independent beginning of riding and chariotry in the steppes.

Antonaccio, Carla (Duke University)

[11] *Achieving Ancestorhood among the Ancient Greeks*

Greek myth narrates the births and deeds of semi-divine heroes who provided a point of reference, articulated through interlocking systems of shared descent, for membership in groups (civic, clan, regional). Several Greek communities also acknowledged collective, anonymous ancestors, and a family's remembered ancestors were also important to personal and civic identity and privilege. This paper will explore the archaeological evidence for the development of the categories of ancestors among the Greeks in the early historical period (ca. 1000–700 BCE), concentrating on ritual practices connected either with actual tombs or with prehistoric remains.

Aoyama, Kazuo (Ibaraki University, JAPAN)

[162] *Classic Maya Regional State and Obsidian Exchange Boundaries: A Case Study of the Copan Valley and Its Hinterland*

This paper uses data on 91,916 pieces of chipped stone artifacts from in and around Copan, Honduras, to investigate the relationship between Late Classic Maya political boundaries and the boundaries of obsidian exchange. The sharp drop-off in Ixtepeque obsidian distribution in the La Entrada region is roughly 60 km from the Principal Group of Copan. This distance parallels the hypothesized radius of Classic Maya regional states (Adamas and Jones 1981). This pattern may also suggest both a direct economic interaction sphere of the Copan state and the political boundaries between the two local centers in the La Entrada region.

Arakawa, Fumiyasu (Washington State University), Duff, Andrew (Washington State University) and Shackley, M. Steven (University of California)

[138] *Obsidian Toolstone Procurement Patterns in the Mesa Verde Region*

A growing body of evidence from the Mesa Verde region demonstrates that the ancestral Puebloans migrated and interacted frequently with people throughout the Southwest. These issues have traditionally been addressed with demographic and ceramic data. This research uses obsidian from the Mesa Verde region, A.D. 600 to 1280 to suggest that the early Puebloans obtained obsidian from various sources, whereas later residents acquired obsidian from only the Jemez Mountain area. This suggests strong interaction and connection between people in the Mesa Verde region and the Rio Grande Valley of New Mexico, particularly during later Pueblo periods.

Aranda, Claudia [59] *see Berón, Mónica*

Aráoz Silva, Miriam [216] *see Bauer, Brian*

Arbolino, Risa (Smithsonian/NMNH) and Neller, Angela (Wanapum Heritage Center)

[48] *Working Together: Legal and Practical Aspects of Multi-Tribe Repatriations*

Multi-tribe repatriations are becoming more common as museums and federal agencies address the complexity of cultural affiliation. In order to address the reality of the relationship between ancestors and the present-day political divisions representing their descendants, multi-tribe cultural affiliations are often necessary. This paper will explore the legal aspects of this process and highlight case studies from the Smithsonian's National Museum of Natural History from both museum and tribal perspectives. Joint repatriations are often accompanied by logistical and cultural challenges for tribes and repatriating institutions. We will discuss the burdens and benefits of this often complex process.

Arbuckle, Benjamin (Baylor University)

[101] *Hunting and Herding in a Pottery Neolithic Village: Sheep and Goat Exploitation at Erbaba Höyük*

The animal economy of the Pottery Neolithic of Central Anatolia is known in detail from only one site, Catalhöyük, which represents a unique "super-village" in the region. In this paper I present faunal data that describes the organization of the animal economy at the Pottery Neolithic site of Erbaba Höyük, a small village site that is probably more representative of small farming hamlets of the period. In particular I focus on the organization of systems of sheep and goat exploitation and explore changes in the importance of hunting and herding through the cultural sequence at the site.

Ardren, Traci [162] *see Manahan, Kam; [168]* *see Glover, Jeffrey*

Arendt, Nicole (University of Arizona)

[34] *Archaeological Palynology Processing Methods and Poaceae Pollen Size Statistics*

Archaeological palynology is used to interpret past environments and subsistence patterns, and can inform upon the colonial period in the Southwest, providing information on environmental and agricultural impacts. The differentiation, using pollen grain diameter, of wild grasses, Old World domesticates, and maize is particularly important. Size statistics on reference pollen are needed, as well as better information on factors that could affect pollen size, such as processing methods and mounting media. While this will discuss Poaceae pollen, this study is important more broadly for the study of pollen, as size is often an important variable in identifying pollen.

Areshian, Gregory (University of California at Los Angeles)

[101] *Beyond Environmental Determinism and Sociocentrism: Social Responses to Environmental Changes in the Bronze Age of Mesopotamia and Adjacent Regions*

Two mutually exclusive hypotheses are widespread in the studies of interdependences between nature and society in Ancient Mesopotamia and adjacent areas. One suggests that no major climatic shift has happened during the last 6000 years, while according to the other abrupt climatic changes have caused catastrophic declines of ancient societies during the same period. A new synthesis of the data available from the area allows us to identify several major phases in the nature-society relationship and analyze adaptation strategies (imperialization, ruralization, nomadization, migration) from the perspective of the two principal modes of sociopolitically centralized and decentralized responses to environmental change.

Arias, Veronica (University of New Mexico)

[106] *Exploring the Utility of 3D Modeling and Reconstruction in Public Archaeology*

Digital reconstructions and 3D models of archaeological sites are powerful educational tools that can help promote the mission and ethical principles of the Society for American Archaeology. This paper discusses how interactive geovisualization models within the domain of public archaeology are useful not only to convey past culture history but also to teach critical geographic and spatial reasoning skills. A 3D web-enabled GIS model of a temple in Luxor, Egypt, is proposed as a case-study. The dissemination plans discussed consider issues involving GIS public participation, assessing model efficacy and usability, and exploring methods of streaming 3D-GIS models via the Internet.

Arkush, Elizabeth (University of Virginia)

[69] *Warfare and the Creation and Diminution of Social Hierarchy in the Late Prehistoric Andes*

Warfare works in complex ways: useful to leaders and elites, it may also help maintain egalitarian institutions and communal identities, sometimes simultaneously. For centuries, Andean elites extended their power through military victories and violent, post-victory rituals. These traditions ceased in the war-torn Late Intermediate Period, when social stratification and militaristic ideologies were strongly deemphasized. I argue that people at this time warred in ways that reinforced anti-hierarchical ideals—through a commitment to autonomy and through collective defensive and aggressive actions—but also, though less visibly, undermined them, necessitating war leadership and ranking some households as more expendable than others.

Armillas, Ignacio (Cornell University)

[206] *The Chinampas of Xochimilco-Chalco and Mexico-Tenochtitlan: A Symbiotic Relationship through History*

Late in the 15th Century raised and/or drained agricultural fields covered a major portion of the Xochimilco-Chalco lacustrine sub-basin. Although this type of agriculture predates the Aztec Empire, the area under chinampa cultivation underwent rapid expansion during the periods Aztec III & IV. This paper recounts this process in support of the hypothesis that a symbiotic relationship existed between the urban area and the chinampa area 30 kilometers away; a relationship that continued beyond the conquest through the Colonial Period and into modern times.

Arnn, John (Texas Department of Transportation)

[99] *Toyah as a Social Field: Defining Hunter-Gatherer Social Identity at a Regional Scale*

Toyah represents a widespread, homogenous hunter-gatherer material culture, spanning approximately 400 years, located between and linked to at least four cultural traditions (Puebloan, Mississippian, and Mexican agriculturalists and the bison hunters of the plains). Thus, Toyah was not a single hunter-gatherer social group, but may represent a large social field of distinct groups inhabiting a large environmentally variable region and participating in a variety of long distance social relationships including extended kinship systems, exchange networks, and alliances. This presentation explores the evidence for a Toyah social field and discusses its implications in terms of defining hunter-gatherer social identity.

Arnold, Craig [110] see Wiewel, Adam

Arnold, Dean E. (Wheaton College (IL))[200] *The Materiality of Social Memory among Potters in Ticul, Yucatan*

This paper explores the way in which potters in Ticul, Yucatan, Mexico, have materialized their social memory at several different social scales. Specifically, this paper describes those ways in which social memory is corporately and materially expressed in rituals common to the population of potters: the potters' gremio organized each year to honor an image of a 'black Christ'. This image is associated with the emergence of a unique indigenous Yucatecan identity in the 17th century, but gremio activities also materially express social class, kinds of social relations, and serve multiple social purposes for the potters.

Arnold, Philip (Loyola University Chicago)[140] *Giving 'em the Business: Ancient Economies à la Santley*

Economic systems loom large in Robert S. Santley's investigations of ancient Mesoamerica. Particular interests include the geographical integration of these networks and their energetic requirements. This paper examines Santley's contributions to the study of pre-Columbian Mesoamerican economies with special attention to the Tuxtla Mountain region of southern Veracruz, Mexico. Reviewed topics include debates concerning obsidian production-distribution monopolies and the scale of pottery-making activities. In addition to Santley's personal insights, this paper also considers his impact on the author's own economic perspectives.

Arredondo, Nicolasa (Pre-Columbian Archaeological Research Group, Inc.)[186] *Contextos y Estructuras Funerarios del Cementerio Wari en Cotocotuyoc, Huaro, Cuzco*

Los trabajos de investigación arqueológica de Cotocotuyoc se descubrieron una ocupación desde la época del horizonte medio (Wari) continuando con el horizonte medio tardío (Lucre). En un área se encontró un sitio funerario Wari. Esta exposición describe este cementerio y el uso posterior por los Lucres.

Arrington, Cindy [155] *see Wesson, Alex***Arriola, Carlos (Instituto Nacional de Cultura, Cuzco)**[186] *Ofrenda guerra de Pikillaqta*

Investigaciones recientes del sitio Pikillaqta en Cuzco han resultado en el descubrimiento de una ofrenda de figuritas de un carácter extraordinario a la cual tiene mucha potencia para avanzar nuestro conocimiento de la ocupación de este sitio Wari tan importante. La mayoría de las estatuitas que componen la ofrenda representan guerreros humanos o supernaturales y sugiere que las guerras eran parte de la cultura del estado Wari y el establecimiento y colapso de Pikillaqta.

Arroyave Prera, Ana Lucía [103] *see Navarro Farr, Olivia***Arroyo, Barbara (Universidad del Valle de Guatemala)**[151] *The New Face of Archaeology in Guatemala*

Carrying out archaeological work in Guatemala is changing. New regulations are on the works but a larger intervention from indigenous groups is surfacing. Their participation needs to be examined. While they are a valid voice, their institutionalization needs to be evaluated and its relationship with the academic community. This paper proposes a dialogue and ways to interact between the different constituents involved. The government participation is reviewed and suggestions are presented. Examples from other areas are incorporated and discussed to learn from past experiences.

Arthur, John (University of South Florida St. Petersburg), Weedman, Kathryn (University of South Florida St. Petersburg) and Curtis, Matthew (University of California at Santa Barbara)[6] *Historical Archaeology and Ethnography in the Gamo Highlands of Southern Ethiopia*

There is little known about the history and prehistory of southern Ethiopia, including the Gamo Highlands. The Gamo are Omotic speaking peoples, who have a distinctive three-tiered caste system. Common in Africa and Asia, this form of social organization has profound effects on marriage relations, status, occupation, settlement patterns, ritual purity, diet, and burial placement. This poster focuses on our preliminary research implementing oral history,

ethnoarchaeology, and archaeological techniques to reveal the origins and development of the Gamo caste system.

Aschero, Carlos (Universidad Nacional de Tucuman)

[79] *Aspects of Early Cultural Diversity in the Argentine Puna that Range ca. 10,600 – 9200 BP*

Inca Cueva-4 is an example of an early adaptation to high altitude deserts, with characteristics that clearly separate it from relatively synchronic occupations assigned to the Paleoindian in Fuego-Patagonia and central Chile. These characteristics include, among others: a dug-out habitation floor (pit-house), an external refuse area, storage pits, basketry, cordage made of vegetal and animal fibers, and rock art. Added to the evidence from other early sites in the Atacama Desert (Chile) it is clear that there are enough differences to support the existence of cultural diversity prior to 10,500 BP—greater than the terms Archaic-Paleoindian define.

Ashmore, Wendy (University of California, Riverside) [137] Discussant; [147] see Schortman, Edward M.

Atahan, Pia [86] see Dodson, John

Atalay, Sonya (Stanford University) [179] Discussant

Atwood, Kirsten (University of Texas at Austin)

[39] *The Faunal Remains of Bosutswe*

Bosutswe, located in southern Africa, was occupied for nearly a millennium (ca 700–1700 CE) during the Iron Age, providing an ideal opportunity to study changes in animal exploitation over time. Exploratory data analysis of faunal remains indicates that while the frequency of domestic animals increased, the frequency of wild game decreased. Examination of stable isotope data is used to determine past climatic conditions, and suggests differences in the management strategies of large and small stock animals. The research investigates how changes in herd management and game exploitation are related to political transformations that occurred during this time period.

Audet, Carolyn (Vanderbilt University)

[14] *Understanding Maya Ritual Activity: Caches and Burials from Two Lowland Maya Centers*

The discovery of ritual deposits is commonplace at both large and small centers throughout the Maya lowlands. Archaeologists have come to expect elaborate caches, but lack the information and guidance to successfully interpret the importance of artifact types, deposit configurations and combinations, and temporal variations. This paper seeks to summarize the remains of several deposits from Xunantunich and Baking Pot in the Belize Valley and provide insight into their meaning within the wider Lowland Maya context.

Audouze, Francoise [208] see Enloe, James

Ausel, Erica (Indiana U of PA), Littman, Ali (Indiana U of PA), Williams, Samuel (Indiana U of PA) and Brock, Stephen (Indiana U of PA)

[126] *A Comparison of Lithic Assemblages from the Johnston and Carl Fleming Sites in Indiana County, Pennsylvania*

Students from Indiana University of Pennsylvania investigated the Carl Fleming site and the Johnston site during archaeological field school in 2004 and 2006. One of the most common type of artifact recovered from both sites was lithic artifacts, including tools and debitage. Analysis of the lithics focused on the manufacturing sequences and types of raw material used at these two locations some 25 miles apart. Through this analysis, we have been able to compare the assemblages and tool making technologies.

Austerman, Gini (LSA Associates)

[66] *Ground, Grooved, Pecked and Painted: Indigenous Imagery of Orange County, California*

Orange County possesses a sparse yet interesting array of imagery upon its bedrock and boulders. From coastal rockshelters to granite outcroppings of interior tree-lined canyons, imagery in the form of petroglyphs, pictographs, grooved and shaped stones are present. Urban development and natural weathering are slowly eroding the elements of many of the panels. This poster will exhibit examples of the known sites within the area, thought to be an area of stylistic transition.

Austermuhle, Stefan [169] *see Hiebert, Fredrik T.*

Aveni, Anthony (Colgate U) [143] *Discussant*

Aviña Cerecer, Gustavo (Coordinación de Ciencias Sociales, UASLP)

[97] *Tonalpohualli: Ecology of the Lagoons of Central Mexico as a Cosmological Device*

The Nahuatl calendar known as Tonalpohualli, also called the 260 days calendar, it's a significant key for the comprehension of the logic of the Mesoamerican cosmos. Consequently, there have been a lot of studies about its relation with mathematics, stars, religious and ritual importance, among others. Nevertheless, little has been said about its internal structure; for example, why are these 20 signs? Why has this order? In this presentation we want to suggest that the answer to these kinds of questions implicate certain logic that can be deduced from the landscape of central valleys and lagoons of Mexico.

Awe, Jaime J. (Institute of Archaeology and History)

[151] *Coming of Age: Belizean Archaeology in the 2nd Millennium*

The last decade, Belizean archaeology has undergone significant transformations. Foremost among these changes was the dissolution of the previous Department of Archaeology and its replacement by a new Institute of Archaeology within the National Institute of Culture and History. Other transformations include the human resources of the institution, increased scientific research activity by foreigners and Belizeans, and considerable development in archaeo-tourism. Despite these achievements, Belize, like its neighbors, continues to face many challenges its cultural resource management. This paper discusses these challenges, highlights archaeological research issues, collaborative projects, and dissemination of knowledge is produced by anthropologists of Mundo Maya nations.

Awe, Jaime J. (Institute of Archaeology, Belize)

[141] *BVAR and the WBRCP in the Development of Maya Cave Archaeology*

The Belize Valley Archaeological Reconnaissance and the Western Belize Regional Cave Project together form the largest and longest lasting cave research project in Maya archaeology. During more than a decade, more than 20 caves have been surveyed and a host of theoretical issues addressed. The annual field reports, master's theses, doctoral dissertations, and published articles provide one of the largest corpuses of cave data. Perhaps most noteworthy, the projects have formed the foundation of cave archaeology by training a disproportionately large percentage of all the cave archaeologists now working in the field.

Awe, Jaime J. [202] *see Garber, James; [202]* *see Brown, M. Kathryn; [202]* *see Schwarcz, Henry*

Aylward, Dan [65] *see Herrmann, Jason*

Baadsgaard, Aubrey (University of Pennsylvania)

[133] *Reengaging with the Material Culture of Death*

The material objects of death are considered reflections of the deceased's identity or the result of society's proscribed mortuary ritual. From the perspective of materiality, however, death's objects are more than static signs, but active in their own right constitutive of and participating in social life and having real and tangible reasons, causes, and effects. These new insights are applied to the objects of dress from graves in Early Dynastic Mesopotamia to demonstrate that dress is more than society's covering of the dead, but the means for creating and sustaining its relationships and social beings, both living and dead.

Babiarz, Jennifer (University of Texas at Austin)

[104] *"...In Consequence of My Intentions...": The Lives of Enslaved African Americans on Wye Hall Plantation*

During the 2004 and 2005 field seasons, archaeologists and field school students from the Archaeology in Annapolis program and the University of Maryland, led by Jennifer Babiarz, worked at William Paca's Wye Hall plantation on the Eastern Shore of Maryland. Over 100 enslaved African Americans lived and worked on the plantation during the late 18th and 19th centuries. An exploration of the archaeological remains of these enslaved men, women, and children's work, personal, and family lives was the focus of this research, which aims to further the recognition of the historical presence of African Americans on Maryland's Eastern Shore.

Bachand, Bruce R. (University of Arizona)

[14] *Bayesian Refinement of a Stratified Sequence of Radiometric Dates from Punta de Chimino, Guatemala*

This paper presents results of a Bayesian statistical analysis of Punta de Chimino's Protoclassic Acropolis sequence. The principal of prior knowledge is mentioned. The stratigraphic contexts and radiometric samples are briefly described. The main Bayesian model and its sub-models are discussed and the pre and post-analysis results compared. The Punta de Chimino case illustrates how careful incorporation of prior knowledge enables us to achieve finer temporal resolution with sites or time periods lacking precise calendrical measures.

Backhouse, Paul (Museum of Texas Tech University/Bournemouth University)

[210] *The Quest for Fire: State Level Databases and Secondary Data as the Basis for Meaningful Research*

Maintaining a distinction between contract and research based archaeology impedes the development of data structures that facilitate regional programs of research. Records from diverse forms of archaeological research are becoming increasingly available electronically through state and national level databases. The design of research questions which can tease out meaningful inferences from these vast resources and act as a baseline for new investigations is becoming increasingly relevant to modern archaeological practice. A case study is presented that demonstrates the utility of CRM dominated state-maintained datasets in identifying hunter-gatherer fire technology on the Southern High Plains of Texas and New Mexico.

Backhouse, Paul N. [155] see Backhouse, Tara J.

Backhouse, Tara J. (Museum of Texas Tech University), Backhouse, Paul N. (Museum of Texas Tech University), Willett, Sarah (Museum of Texas Tech University) and Johnson, Eileen (Museum of Texas Tech University)

[155] *Endurance in the Canyon: Assessing Preservation at a Multi-Component Site on the Southern High Plains*

Preservation decisions often have to be made regarding the long-term status of deeply buried sites. However, the opportunity to evaluate these decisions practically, decades later, is rare. The Nash site, on the Southern High Plains, is one site where re-investigation permitted the assessment of a well-stratified site after an intervening period of 30 years since impact by dredging and impoundment. The current condition of the site generated challenges in both recovery and conservation of material. Renewed fieldwork at the Nash site highlights the need to evaluate preservation options while critically considering the effects of geomorphic, taphonomic, and cultural processes.

Baer, Sarah [155] see Reed, Karen; [204] see Guy Hays, Heidi

Bailey, Douglass W (Cardiff University)

[12] *Archaeologies of Visual Culture -- Visual Cultures of Archaeology*

The trans-disciplinary approach of visual culture studies offers archaeologists a powerful set of investigative and interpretive concepts and ways of thinking not only about the past but also about how we represent the past in the present. In this paper, I discuss some of the most applicable conceits, mechanisms and concepts of visual culture (e.g., the politics of vision and spectatorship, the ambiguities of three-dimensional form, the rhetoric of the visual, repetition) and I provide examples from the pre- and proto-historic European past. The discussion has relevance across chronological, cultural and geographic boundaries.

Bailey, Geoff (University of York)

[22] *Sea Crossings and Use of Islands Before the Period of Modern Sea Level: From the Far North to the Farasans*

The timing of first island use represents a complex interplay between two sets of factors: the relationship between offshore distance and island size, and hence between the technological capacity for sea crossings and the viability of an island economy; and the interplay between 'push' factors — populations compelled to use islands by circumstances beyond their control, and 'pull' factors — the inherent attractions of island environments. This paper will consider

the problems of identifying such patterns in the context of sea-level driven changes in palaeogeography, using examples ranging from the North Sea to the southern Red Sea.

Bailey, Geoff (University of York) [197] *Discussant*

Bailey, Susanna (Washington University in St. Louis), Kelly, John (Washington University in St. Louis) and Stoltman, James (University of Wisconsin–Madison)
[60] *Historical Context of Shell-Tempered Ceramics in the American Bottom*

The first use of shell as temper in the American Bottom region occurs sporadically during the Late Woodland period. After a brief hiatus shell tempered ceramics reappear in the region during the late Emergent Mississippian period from sources in southeastern Missouri and northeastern Arkansas. Shell rapidly becomes the dominant ceramic temper in the Cahokia area by the onset of the Mississippian Period, with some regional variation in the frequency, as another carbonate temper, limestone persists. This research focuses on the possible ways in which shell was adopted as a tempering agent and the variability in its use once adopted.

Bair, Daniel (Brigham Young University) and Terry, Richard (Brigham Young University)
[161] *The Dirt on Ancient Maya Market Activities: A Geochemical Study of Plaza Types at Seibal, Guatemala*

Ancient markets are difficult to identify as most utilitarian items and consumables were perishable. Our objective was to use geochemical analyses of extractable phosphorus and metallic residues in soils to distinguish market plazas from other types of plazas at the ancient Maya city of Seibal, Guatemala. Geochemical techniques in conjunction with locational and archaeological data have identified a marketplace at Chunchucmil, Mexico. We will report the results of extractable phosphate and metals from plazas A, C, and E at Seibal.

Bair, Daniel [161] see Terry, Richard

Baird, Melissa F. (University of Oregon)

[155] *The Cultural Landscapes of Northwestern Mongolia: Analysis, Preservation, and Management*

The cultural landscape of the Mongolian Altai includes extensive surface remains—petroglyphs, burial and ritual mounds, altars, standing stones, and carved image stones—that together represent an impressive archive of data about North Asian sociopolitical structures, symbolic systems, and cultural practices spanning 14,000 years. This paper examines current approaches for the study, interpretation, management, and protection of the region, including a discussion of the current UNESCO World Heritage initiative to preserve the cultural heritage and “unique cultural landscape” of the high Altai Mountains.

Baitzel, Sarah I. (UCSD), Boswell, Alicia (UCSD) and Goldstein, Paul (UCSD)

[83] *Body Preparation and Mortuary Practices at the Rio Muerto M70B Site, Moquegua, Peru*

The paper will discuss body treatment and interment practices evident from the burials excavated at the Rio Muerto M70B cemetery site during the 2006 season in Moquegua, Peru. Burial treatment will be considered in light of age and sex demographics of the cemetery, cultural body modification, taphonomic processes, and modes of interment in terms of position and orientation of burials, clothing, and binding of the dead. These patterns may be compared and contrasted with those of other Tiwanaku cemeteries in Moquegua, and throughout the Tiwanaku sphere.

Baitzel, Sarah I. [83] see Green, Ulrike M.

Baker, Barry [37] see Shaffer, Brian

Baker, Jonathan (University of Tennessee)

[114] *Prehistoric Bone Grease Production in the Upper Midwest: A Review of the Evidence and Its Implications*

Faunal assemblages from Archaic and Woodland period rockshelters in Wisconsin and Iowa provide evidence for bone grease production in association with intensive fall/winter deer harvests. It is suggested that grease production was an attempt to secure vital winter fat stores in an environment where lipids and carbohydrates are seasonally restricted. New data

from Oneota assemblages suggest a more sporadic pattern of grease manufacture that may reflect opportunistic dietary inclusions or acute resource stress. Archaeological correlates of bone grease production, overall extraction efficiency, and the relevance of grease manufacture in documenting resource stress and changes in diet breadth are briefly discussed.

Baker, Kristin (Howard University), Knight, Chinyere (Howard University), Flanigan, Darcie (Harvard University), Richbow, Linsey (Howard University) and Taylor, Christine (University of Southern Maine)

[6] *Camping Out: Apache and Buffalo Soldier Occupations of Pine Springs*

For the past three years Howard University undergraduates and high school students from the Mescalero Apache Reservation and other areas have investigated Pine Springs Camp, a multi-component site on the eastern slope of the Guadalupe Mountains. Research has revealed several different military occupations, including a subsidiary camp area most likely used by a particular 10th Cavalry, or Buffalo Soldier, unit. Evidence for multiple Apache occupations has also been found. This poster will explore the different ways that the Buffalo Soldiers and the Apache set up their camps and used the resources available to them.

Baker, Larry L. (Salmon Ruins/SJCMA) and Estrada, Orlando J. (BHP Billiton - NM Coal)

[155] *Investigations Into the Effect of Subsidence on Cultural Resources at the San Juan Mine, San Juan County, New Mexico*

Underground, longwall mining has been identified by BHP Billiton - NM Coal at the San Juan Mine located near Kirtland, San Juan County, New Mexico. As a result of extracting the coal seam, subsidence occurs at the ground surface. Concerns related to the effects of subsidence on cultural resources have prompted BHP to support investigations into how the surface manifestations of underground mining might impact cultural deposits and features. A plan was developed, which has evolved into a phased approach, for understanding this unique phenomenon. The phased approach, monitoring program, and continuing investigations are detailed in this report.

Baker, Lori [3] see Usher, Bethany

Baker Brite, Elizabeth (UCLA) and Smith, Monica L.

[125] *Excavations at the Burnt Corn Plaza Pueblo, New Mexico*

The site of Burnt Corn (LA 359) is the central anchor of the Tano Origins Project in the Galisteo Basin of northern New Mexico. In 2002 and 2005, excavations addressed questions of settlement duration and abandonment. The plaza pueblo had less evidence of burning compared to outlying roomblocks. However, excavations of two rooms at the plaza pueblo showed that the rooms were carefully cleaned and sealed prior to abandonment. The well-preserved adobe walls and floors were buried in a mix of fill and roof fall, and dendrochronology enables us to date the construction event to the late 1200's A.D.

Balasse, Marie (CNRS)

[207] *Tracing Herding Patterns at Ayn Abu Nukhayla through Stable Isotope Analysis of Faunal Remains*

A model pattern of transhumance for the inhabitants of Ayn Abu Nukhayla is examined through a stable isotope study of the remains of domestic and wild species. Given the differences in local (site setting) and upland (proposed dry season grazing) geologic substrates and photosynthetic pathways (C-3 & C-4) of indigenous forage plants, the Sr and ¹³C signatures derived from bone/teeth samples provide a means of tracing Neolithic herding practices.

Balcarcel, Beatriz (Mirador Basin Project / FARES), Hansen, Richard D. (Idaho State University / FARES), Novak, Shannon (Syracuse University) and Kollmann, Dana (Towson University)

[35] *A Royal Tomb in the Site of Tintal and the Kan Title in the Mirador Basin*

The large Preclassic site of Tintal is located on the southwest side of the Mirador Basin, Peten. A massive carved stone monument had been found at the base of a large triadic structure in the civic center of the site. Subsequently, a royal tomb with numerous interments was found at the base of the stela revealing mosaic fragments of royal jewels worn in the headdress of kings. The incised glyphs implied that the deceased was a "kan ahaw" or "Snake

Lord" and additional research has revealed important iconographic, epigraphic, political, economic and ideological data.

Balcarcel, Beatriz [35] *see* Lopez, Francisco

Baldia, Christel (Archaeological Textile Consulting, Inc.), Jakes, Kathryn A. (The Ohio State University) and Baldia, Maximilian O. (The Comparative Archaeology Web)

[192] *Prehistoric Colorant Analysis: a Multidisciplinary Approach*

This research focuses on analytical methods to "read" archaeological textiles especially with respect to color even if this color is no longer visible with the unaided eye based on differences in chemical signature. Using forensic techniques in addition to traditional textile analysis, information about colorant use and textile technology in prehistory can be gleaned. Textiles from Seip Mound in southern Ohio are used as an example, and Hopewellian use of pigment and dye to decorate their textiles is demonstrated.

Baldia, Maximilian O. [192] *see* Baldia, Christel

Baldwin, Anne (Española Ranger District, Santa Fe National Forest) and Schub, Lisa (Española Ranger District, Santa Fe National Forest)

[138] *Salt and Mud: Lithic Procurement in the Salitral Area near Pederal, Northern New Mexico*

Recent investigations conducted by the Santa Fe National Forest suggests the complex Middle and Late Archaic patterns of resource procurement and transhumant use involved extensive use of the mesas and valleys south of the Rio Chama and along the northern edge of the Jemez Mountains. Quarry areas adjacent to Cerro Pederal, a well-known chert source and Polvadera, a high-quality obsidian locale are reviewed. Distant locales producing smaller amounts of basalt and quartzite found in the assemblages are also examined. These discussions are placed within the context of past research and new work conducted further north near Chama, NM.

Baldwin, Lisa (Northern Arizona University)

[40] *Historic Graffiti: An Untapped Source of Information in the Management of Prehistoric Cultural Resources*

Historic graffiti provide an important information source that allows archaeologists to track historic use and visitor impacts on fragile prehistoric archaeological sites. This paper presents research at Walnut Canyon National Monument, a locality with unique alcove cliff dwellings. During the 1880's, Walnut Canyon became a national and local point of interest with thousands of visitors, many of whom inscribed their names and dates on the ruins. The goals of the project included establishing standardized procedures for recording inscriptions and tracing the authors to find new or additional information in order to document the changes that have occurred over the last century.

Balkansky, Andrew and Croissier, Michelle

[107] *Multicrafting and Complexity in Early Oaxacan Villages*

The authors discuss household craft specialization in prehispanic Oaxaca, but emphasize its earliest manifestations circa 1000 BC at the site of Tayata. Multicrafting at Tayata (including shell ornaments, pottery, obsidian blades, and chipped stone) was present in most excavated households, but the precise configurations and intensities of production varied with relative status and participation in regional exchange networks. One general conclusion is that economic interdependence among households at both local and larger scales is fundamental to understanding the earliest Oaxacan villages as well as continuities with their descendants.

Baltali, Sevil (University of Virginia)

[101] *Culture Contact, Cultural Difference and Boundaries: A Case from Northern Mesopotamia*

Ancient northern Mesopotamia reveals the presence of southern Uruk-style material cultural elements along with indigenous styles in fourth Millennium B.C. I focus on the ways northern Mesopotamian societies constructed 'cultural difference' through analyzing the meanings of southern-style elements within northern contexts. I investigate the culture-internal symbolic divisions of 'cultural difference' through diachronic contextual examination of material culture in order to understand how people in the past themselves constructed cultural boundaries. I

further argue that an investigation of culturally particular ideas of "own" and "other" should involve a relationship between analytic and folk categories of cultural boundaries.

Baltus, Melissa (University of Illinois-U/C) and Alt, Susan (Indiana University)

[212] *Diversity and Complexity: The Building(s) of a Polity*

Cahokia was not just exponentially larger than other Mississippian polities, it was also the location of a more diverse and complex built environment. During the Lohmann phase, new kinds of buildings appeared, like permanent sweat-lodges, council houses, elite residences and temples. These new buildings were not just at Cahokia, but appeared in patterned ways at nodal sites across the greater Cahokian landscape. These new kinds of buildings only lasted from the Lohmann through the Stirling phase. In this paper we analyze the linkages between architecture and the social and political environment of the rise and decline of the Cahokian polity.

Bamforth, Douglas (U of Colorado, Boulder)

[165] *Data or Dogma: How Different Were Paleoindian Ways of Life on the Plains?*

Paleoindian archaeology has long asserted that there is a dramatic break between Early Holocene and later ways of life on the Plains. However, it has rarely documented empirically that such a break actually exists. This paper briefly considers Paleoindian and later bison hunting, settlement patterns, and flaked stone technology with this in mind. Differences are evident in these domains of behavior, but these are far less pronounced than the literature suggests.

Bane, Barbara (Northern Arizona University)

[41] *Explaining Great Houses: Expanding the Archaeological Record at Chaco Canyon with Comparative Rock Art Analysis*

A century of excavation and research studies have used a wide variety of archaeological data to explore the role of great houses in the larger context of Chacoan social and political organization. Chaco Canyon rock art is virtually absent from those research efforts despite the presence of thousands of prehistoric images lining the cliff walls and boulders behind great houses and small sites. This paper suggests that, far from being a marginal resource, comparative statistical analysis of great house rock art can determine new information about great house functions, users, and affiliations.

Barba, Luis (UNAM), Guzzy, Gabriela (UNAM) and Jaime-Riveron, Olaf (University of Kentucky)

[74] *Mineralogical and Geochemical Studies of the Prehispanic Mesoamerican Jades in Mexico: A Transdisciplinary Project*

In this paper we will show the outline of a new transdisciplinary project conducted by a selected group of researchers from different institutions. This project will contribute to the analysis of greenstones in ancient Mesoamerica with a geoarchaeological interface, combining anthropological and geological methodologies. One of the advantages of the project is the implementation of non-destructive techniques already installed in Mexican laboratories for the generation of databases of characterization and provenance of raw materials and archaeological pieces with the participation of archaeologists for explaining cultural meanings. The purpose of the project is to provide a reliable database to Mesoamerican archaeological projects and museums.

Barber, Jennifer [6] see Morgan, Vera

Barber, Michael (Virginia Department of Historic Resources)

[142] *The Current State of Virginia Archaeology: Beyond 2007*

With the 400th anniversary events associated with the founding of Jamestown, the first permanent English-speaking settlement in North America, 2007 will prove an exciting time for Virginia archaeology. New exhibits have been built, a plethora of events planned. The question then becomes, "What does the future hold for 2008?" An informal evaluation of possibilities suggests a number of opportunities for the future of the Commonwealth's archaeology.

Barber, Sarah (Queens College) and Joyce, Arthur (University of Colorado at Boulder)
 [168] *Caught Between Community and Polity: the Formative-to-Classic Transition on Pacific Coastal Oaxaca*

We explore the role of social tensions in the collapse of the first centralized polity in the lower Rio Verde Valley, Oaxaca. Throughout the Formative, local communities remained a primary locus of social identity. Our research shows that by the Terminal Formative, regional political authorities sought to engage followers in large-scale social formations. Local elites and non-elites, however, continued to assert local autonomy and social ties. We argue that tensions between local and regional scales of social interaction undermined regional political stability and resulted in the dissolution of the polity at A.D. 250. We consider similar processes in highland Oaxaca.

Barbosa, Maria [43] see *Gaspar, Maria Dulce*

Barela, Tim (Washington State University), Weber, Steve (Washington State University) and Lehman, Heather (University of Washington)
 [188] *Agriculture and the Indus Civilization: Modeling the Importance of a Dual Cropping Strategy at Harappa*

The importance of a dual-cropping system that takes advantage of both of the summer monsoons (kharif) and winter rains (rabi) is still not well understood for the Indus civilization. This paper examines the statistical relationship of food grains recovered from Harappa to better understand the impact of a dual-cropping strategy and how it evolved at one site within this civilization.

Barker, Alex (University of Missouri) [153] *Discussant*

Barker, Andrew [4] see *Welch, Ransley C.*

Barker, Graeme [45] see *Levine, Marsha*

Barker, Pat (Nevada Rock Art Foundation)

[192] *Archaic Woven Sandals as a Boundary Marker between the Great Basin and Southwest Culture Areas*

Prehistoric culture areas are defined by consensus around relevant attributes from sites in the core of the area. Prehistorians agree on the relevance of those attributes at the core. This consensus decreases towards the periphery because single artifact shapes cross and blur culture area boundaries. Interloping artifacts are physically identical in both areas but have different names in each. Interloping lithic tools, ceramics, and basketry blur the boundary between the Great Basin and the Southwest. However, this is not true of archaic woven sandals, where they may define an absolute technological boundary between the archaic Great Basin and the Southwest.

Barkwill Love, Lori

[125] *Galisteo Black-on-White: A Study from Burnt Corn Pueblo*

In the mid-thirteenth and early fourteenth centuries, the Galisteo Basin saw a substantial population increase and during this time period, Galisteo Black-on-white began production in the area. Throughout the fourteenth century Galisteo B/W was the prevailing B/W type found in the area and was a common trade ware in the Northern Rio Grande region. This poster analyzes Galisteo B/W sherds found at Burnt Corn Pueblo, focusing on the characteristics of the pottery as well as the distribution. In addition, comparisons will be made between Galisteo B/W and Santa Fe B/W found at Burnt Corn Pueblo.

Barlow, K. Renee (Utah Museum of Natural History)

[182] *Defensive Maize Storage on the Northern Colorado Plateau: the Fremont Granaries of Range Creek*

Fremont storage tactics between AD 700 and 1300 on the northern Colorado Plateau included large storerooms at residential sites, small hidden chambers in rockshelters, and groups of large masonry and adobe structures cantilevered over cliff faces high on canyon walls above farming areas. Evidence of prehistoric storage facilities from Range Creek are presented, and their implications for modeling spatial and temporal variation in residential mobility, maize farming and resource defense are discussed.

Barnes, Edwin (University of California, San Diego), Oriol, Raquel (Kenyon College) and Hirai, Corinne (Kenyon College)

[147] *Changing Spaces: Construction and Remodeling of Elite Structures at El Cafetal, El Paraíso Valley, Honduras*

The main ceremonial structures of the El Cafetal site core were the focus of extensive remodeling throughout the Classic period. In one instance the substructure of Structure 1, the largest building at the site, was raised more than 3 m in height, suggesting a massive investment of labor and building materials. In another case, Structure 8, an administrative space or throne room, was re-oriented 180°, creating new spatial arrangements within the center. These spatial modifications appear to have coincided with shifts in the political fortunes of El Cafetal paramounts, possibly reflecting changes in the ability of locals to exercise authority.

Barnes, Robin (Gault Project)

[190] *Gault Resource Diversity: The Paleoenvironmental Conditions in the Balcones Canyonlands*

The Gault site is on the Edwards Plateau, near the Balcones Escarpment. South of the Gault site, a diverse ecological zone called the Balcones Canyonlands has been defined along the eastern and southern edges of the Plateau. The Balcones Canyonlands has a wide diversity of resources in close proximity along steep-sided canyons formed by high gradient streams. Due to resource similarities between the Balcones Canyonlands proper and the adjacent, although geologically distinct, setting of the site, I propose that extending the boundary of the Balcones Canyonlands northwards is useful in assessing the prehistoric record.

Barnhart, Edwin L. (Maya Exploration Center), Powell, Christopher (Maya Exploration Center), Mendez, Alonso (Maya Exploration Center) and Karasik, Carol (Maya Exploration Center)

[143] *Solar Alignments in Palenque's Temple of the Sun*

Since 2001, the authors have been taking sunrise photographs within Palenque's Temple of the Sun during equinoxes, solstices, and zenith passages. What they have revealed is that on those dates beams of sunlight crosscut the structure's interior architecture, narrowing as they pass through columns, medial walls, and doorways, until they are ultimately thin rays of light striking directly into the temple's interior corners. Named the Temple of the Sun years ago due to the iconography on its interior panel, the observations reported in this paper clearly support its association to the sun.

Barreda Murillo, Luis (Universidad Nacional de San Antonio Abad de Cuzco)

[76] *Arquitectura del Poder*

La arquitectura Inka siempre ha reflejado la supremacía del poder a través de la monumentalidad. La monumentalidad del centro ceremonial de Saqsaywaman que representa al dios Rayo, considerado por los andinos como el supremo Dios poderoso, que ordena la presencia de la lluvia, este Dios, requirió de la representación a través de la construcción arquitectónica, que produzca impresionante sensación de respeto y poder de la Religión Inka capaz de emprender obras de esta naturaleza, que sobrepasan a cualquier escala humana.

Barrera, Jimmy (Texas Tech University)

[47] *Tracking Shoreline Change Using Archaeology: Erosion at El Copano, Copano Bay, South Texas*

Archaeological sites located along the shoreline of Copano Bay are in need of immediate research and preservation measures before they disappear. The principal site used in this project is the small historic port of El Cópamo (1780–1880) located along the Western shore of Copano Bay. A calculation for the rate of shoreline erosion over time is generated using maps, photos, aerials, records and oral interviews. These findings indicate rapid shoreline erosion occurring over a short period of time at sites such as El Cópamo. This calculation of shoreline erosion can be applied to other endangered shoreline sites.

Barrett, Jason (TxDOT-ENV)

[14] *Other Peoples' Stone: the Politics of Late Classic Maya Resource Use in Northwestern Belize*

Regional patterns in the consumption of local and imported resources altered dramatically with

the transition to the Late Classic Period at several sites in northwestern Belize. Archaeological data from the production and use of stone tools at the sites of La Milpa, Blue Creek, Nojol Nah, Bedrock, and Bajo Vista in northwestern Belize are used to support the argument that the area experienced a growing sense of regionalism beginning in the late sixth century. Local and extra-regional influences are examined to better contextualize the transition from the Early Classic period, and implications for the region's political structure are considered.

Barrett, Thomas (Community College of Baltimore County/Megacorp CRC)

[140] *The Mesoamerican Obsidian Industry: Production versus Consumption and the Case for an Integrated Approach*

The economics of Mesoamerican obsidian was of long-standing interest to Robert. Specifically, he helped pioneer a model for the ancient craft industry that focused on the dynamics of production and distribution within complex prehispanic society. In my own research, I sought to develop measures of consumption to complement these patterns, and help explain observable changes in the archaeological record as well as understand the fundamental politico-economic context for the obsidian trade. On this topic of obsidian 'supply versus demand', we differed considerably. This paper utilizes data from the Tuxtla region, but ultimately seeks applicability to lithic analyses in any context.

Barrick, Lona (Chicksaw Nation) [118] Discussant

Barrientos, Gustavo [100] see Goñi, Rafael

Barrientos, Tomas (Universidad del Valle), Demarest, Arthur (Vanderbilt University) and Jackson, Sarah (University of New Hampshire)

[26] *Politics, Economy, and Hegemony at a Classic Maya Center: The Royal Palace, Sub-Royal Elite Complexes and Workshops at Cancuen*

The archaeological investigations at Cancuen have demonstrated the role of its royal palace and other elite buildings as instruments of power, legitimation and alliance. They helped the ruler Taj Chan Ahk to create a new policy and control the Pasión River in the late eighth century. Distribution patterns of subroyal palaces reflect the political and economic strategies used to manage household artisans production of exotic goods. The design of the royal palace also shows the use of patronage systems and alliance to distribute these goods to the kingdoms of the western Maya lowlands.

Barrientos, Tomas [26] see Demarest, Arthur; [26] see Wolf, Marc; [26] see Suasnavar, Jose

Barrier, Casey R. (University of Alabama)

[12] *Surplus Production, Food Storage, and "Oversized" Jars at Moundville*

Theories of the development of complex societies equate the production and control of surpluses with centralized political economies. Indeed, most descriptions of Mississippian chiefdoms – from earlier redistribution models to more recent models based on tributary relations – assume the control of surpluses shifted from domestic producers to chiefs at the beginning of the Mississippian period. New evidence of oversized storage vessels at Moundville, however, suggests that surpluses remained within domestic, residential groups throughout the site's period as a populated, civic-ceremonial center. The role of an economically autonomous population during the coalescence and construction of the Moundville site will be discussed.

Barrios, Edy (Universidad de San Carlos), Quintanilla, Claudia (Universidad de San Carlos), Wolf, Marc (Vanderbilt University) and Fahsen, Federico (Universidad Francisco Manoquís)

[26] *The Upper Pasión Kingdoms of the Ruta Maya: Riverine Centers and International Intrusions*

The Pasión River was the major Classic Maya communication and transport route of the western lowlands. The Upper Pasión itself was central in PreClassic and Classic period exchange systems and history. Yet evidence prior to 1999 from Seibal in the Peten to the Verapaz highlands had consisted of only three stelae at Tres Islas. Investigations and survey there and at the new larger site of Raudal now indicate the nature of interregional interaction along this great trade route. This evidence is correlated with historical texts indicates the role of these kingdoms in conflict and control of the western Maya lowlands.

Barse, William P. (Smithsonian Institution/URS Corp)**[160] *Ronquin and Its Vessel Shapes***

Rouse suggested that the pre-Araquin portion of the Ronquin midden could be subdivided into two separate occupations, a lower unit lacking Barrancoid traits such as ring bases, flanges and modeling and an upper unit where such traits are common. Initial analysis suggests that this subdivision does not hold; Ronquin is a coherent assemblage associated with a well-defined paleosol. This paper reviews Ronquin vessel shapes housed at Yale, presenting an analysis in the context of related assemblages from the Atures Rapids area of the Orinoco River.

Bartelink, Eric (California State University, Chico), Wiersema, Jason and Pevny, Charlotte**[89] *Clovis Feature Identification at the Gault Site, Texas***

Although no cultural features were identified during excavation in the Lindsey Pit, preliminary statistical analysis revealed concentrations of burned macrodebitage and microdebitage from both Clovis strata (Units 3a and 3b). An effort was made to determine the nature of these concentrations, and if their distribution is, in fact, nonrandom and related to potential Clovis features such as hearths. Burned macrodebitage and microdebitage were analyzed in conjunction with charred and calcined bone. Spatial data of burned and unburned materials from all portions of the artifact assemblage were then analyzed to determine if tools and bone may relate to activities organized around hearths.

Bartelle, Barney [146] see Vellanoweth, René**Bartley, Elizabeth A. (CERHAS, University of Cincinnati) and Hancock, John E (CERHAS, University of Cincinnati)****[13] *A Question of Accuracy***

Visual treatments in archaeology have many roles: illustration, documentation, conjecture, visualization, evocation, even inspiration. Each implies distinct meanings, contexts, aims, and audiences. Illustrations of archaeological data are delimited by what is dimensionally, scientifically verifiable. But this is merely a beginning, just as the remains themselves are merely fragments—traces of a world where lives took place and meanings were experienced. Works of architecture work in such a world; and so 'accuracy' is problematized: is it 'accurate' to the fragments, the works, the experience, or the audience? Our paper considers these opportunities for multiple 'accuracies' in our Ohio Valley 'Earthworks' project.

Barton, Michael (Arizona State University), Garcia, Oretó (Universitat de Valencia) and MacMinn-Barton, Margaret (Arizona State University)**[84] *Alt del Punxó: Results of Multistage Fieldwork, Remote Sensing, and GIS***

The eastern Spanish site of Alt del Punxó demonstrates the potential value of a multistage fieldwork design that incorporates remote sensing and on-site GIS. Magnetometry, coring, mechanical trenching, and hand excavation were recursively linked during the course of fieldwork, so that information derived from complementary data recovery protocols could guide subsequent work. This allowed a very small field crew to record information about the complex spatial organization of the site across an extensive area. As a result, the olive grove of Punxó revealed an unprecedented occupational sequence extending from the beginning of the Holocene through Roman times.

Barton, Michael [101] see Ullah, Isaac; [38] see Allen, Eowyn**Bar-Yosef, Ofer [20] see Yuan, Jiaorong****Bar-Yosef Mayer, Daniella E.****[207] *Shell Beads of Ayn Abu Nukhayla***

Recent excavations at the PPNB site of Ayn Abu Nukhayla yielded 888 shells, including complete shells, broken ones and shell beads and ornaments. This rich assemblage comprised of over 30 genera and over 60 species, most of which originate in the Red Sea (or Indo-Pacific) and only two species are Mediterranean. Both species diversity and the typology of the beads are very reminiscent of shell assemblages discovered in southern Sinai and the southern Negev. The shells, and especially the Mediterranean species, are clearly a part of a regional exchange network.

Bass, Bryon [155] *see Wesson, Alex*

Bateman, Mark [34] *see Wilder, Michael*

Batun, A. Ivan (University of Florida)

[189] *Buena Vista, Cozumel: Re-evaluating the Port of Trade Model*

The port of trade model was postulated to interpret the function of all sites in Cozumel Island as components of a single port of trade unit centered in the capital site of San Gervasio with some others secondary sites functioning as storage centers. Recent settlement pattern research conducted in the site of Buena Vista previously interpreted as the main storage center in Cozumel provides evidence of a complex agrarian site. The applicability of the port of trade model for the whole Island, is evaluated in light of this new data and other information from previous archaeological projects conducted in Cozumel.

Bauer, Alexander (Princeton University) [53] *Discussant*

Bauer, Andrew (University of Chicago)

[95] *Iron Age Politics of Difference and Their Potential Environmental Consequences: A Case Study of Soil Erosion in Northern Karnataka, India*

The archaeological record of the South Indian Iron Age attests to the emergence of pronounced social differentiation. Concurrently, data suggest the establishment of new modes of labor mobilization and public consumption, such as feasting. Here, I review evidence for socio-political and economic practices during the period to contextualize a multi-spectral remote sensing analysis of "freshly" exposed rock and remaining soil on residual hills around several Iron Age habitation sites in northern Karnataka (India). In sum, I suggest how subsistence activities associated with Iron Age politics of difference potentially increased rates of soil erosion and shaped environmental histories more generally.

Bauer, Brian (University of Illinois at Chicago) [88] *Discussant*

Bauer, Brian (University of Illinois at Chicago) and Araújo Silva, Miriam (Cuzco, Peru)

[216] *The Middle Horizon in Cuzco: New Perspectives*

The first systematic survey of the Lucre Basin (Dept. of Cuzco, Peru) was completed in 2006. The survey, which documented more than 160 archaeological sites, provides a new regional perspective for the impact of the Wari in the basin and has important implications for understanding Wari influence in the Cuzco region as a whole. In this paper, the researchers present a summary of their research findings and discuss the social organization of the area before, during and immediately after the Wari entered the Cuzco region.

Bauermeister, Ann (NPS, Midwest Archeological Center)

[31] *The Role of Geophysics in Conserving Threatened Archeological Resources at a Hopewell Site in Ross County, Ohio*

Excavations were conducted at Hopewell site 33RO1059 to conserve site resources threatened by erosion. Geophysics was integral to this project from site identification to testing of site features. Geophysical data were utilized to guide excavations, which included removing the plow zone from a 1600 m² area, targeted because it contained geophysical anomalies indicative of cultural features. This approach facilitated anomaly source identification and allowed for additional geophysical surveys of the same area, without the plow zone. Features were encountered, as anticipated from the geophysical data, and researchers can now analyze data collected with and without the upper stratum, knowing what was, in fact revealed.

Baugh, Timothy (Chickasaw Nation)

[140] *A Macroregional Study of Obsidian*

This paper will examine the distribution of obsidian across the southern Plains both temporally and spatially. During the Archaic and Late Prehistoric a surprising amount of obsidian has been sourced to Obsidian Cliff, Wyoming and Malad, Idaho. During the protohistoric period, sources in north-central New Mexico play a more prominent role. Certain precautions are necessary in these types of studies. For example, isolated Mesoamerican volcanic glasses may be the result of material circulated by Spanish expeditions rather than actual trade. Furthermore, the use of visual identification of obsidian and the study of a single commodity should be approached cautiously.

Baughner, Sherene (Cornell University)

[170] *Partnering With the Public: Cornell University's Archaeological Outreach in Central New York*

Buried only a foot beneath the "natural" landscape in Robert Treman State Park is the remains of the 19th century hamlet of Enfield Falls. Since 1998, students from Cornell have been excavating the hamlet. Archaeologists, students, New York State Park staff, and members of the Friends of Robert H. Treman State Park work as partners in bringing the history of this community to the public. Our joint outreach includes tours of the excavations, public lectures, a permanent archaeological exhibit within the historic mill, outdoor archaeological exhibits, and an archaeological component in the park's visitor orientation film.

Baxter, Erin (Crow Canyon Archaeological Center), Merewether, Jamie (Crow Canyon Archaeological Center) and Till, Jonathan (Crow Canyon Archaeological Center)

[75] *Snapshot of a Chaco-Era Pueblo in Southwestern Colorado: Examining the Relationships between a Great House and Its Community*

Albert Porter Pueblo is a multi-component site, occupied from the 7th through the 13th centuries. This paper will focus on two contemporaneous contexts on the site: a multi-storied great house; and a number of residential pueblos surrounding the great house. Our paper investigates differences and similarities between these contexts using preliminary pottery data. This snapshot of life during the late AD 1000 and early 1100s provides a backdrop for us to address questions about distinctions in site function, social organization, activity areas, and abandonment.

Bayliss, Alex [25] *see Whittle, Alasdair*

Bayman, James M. (University of Hawaii)

[167] *The Technological Consequences of Colonialism in 19th Century Hawaii*

Interpretations of European and American contact with Oceania often highlight the rapid changes that took place in the technologies and practices of traditional societies. In the Hawaiian Islands, for example, many scholars have assumed that stone adzes were quickly replaced with metal adzes, and that such change was an inevitable consequence of a more efficient western technology. The timing and pace of this particular technological change is put into a comparative perspective by reviewing archaeological, documentary, and photographic information on the rate at which clothing and architecture with Euro-American characteristics were adopted by indigenous Hawaiians.

Bayman, James [51] *Discussant*; [201] *see Orr, Maria*

Beach, Timothy (Georgetown University), Luzzadder-Beach, Sheryl (George Mason University) and Dunning, Nicholas (University of Cincinnati)

[145] *Human and Natural Mechanisms of Wetland Change in the Maya Lowlands*

We use extensive water and soils testing to understand aggradation in two broad agricultural zones of the ancient Maya Lowlands. Depressions here were buried by 1–2 m from about 1000 BC to the Classic Period (AD 250–900). But there were several distinct drivers of aggradation: in upland bajos by accelerated soil erosion and possibly climatic instability, and in coastal plain wetland fields by a large flood and a rise in a water table saturated with calcium and sulfate ions. This latter mechanism is a rarer geomorphic process and an environmental change that occurred across periods of intensive Maya land use.

Beach, Timothy [168] *see Dunning, Nicholas*; [206] *see Luzzadder-Beach, Sheryl*

Beale, Nicholas (University of Oklahoma)

[138] *Archaic Projectile Points and Cultural Differences in the Southern Southwest*

To assess the possibility of regional cultural differences between the Tucson Basin, the San Simon drainage, and Cerro Juanaqueña in Chihuahua during the Late Archaic period, this study investigates San Pedro projectile points. Because of their wide distribution, the morphological and stylistic attributes of these points are optimal for examining regional differences and similarities among Late Archaic southwestern groups. By selecting these areas with different subsistence strategies, morphological and hence stylistic differentiation of San Pedro points between the regions should become more evident.

Beaubien, Harriet F. (Rae) (Smithsonian Institution-MCI), Karas, Basiliki Vicky (Smithsonian Institution-MCI) and Fitzhugh, William W. (Smithsonian Institution-NMNH)
[169] *3D Scanning for Field Documentation of Mongolia's Deer Stone Monuments*

3D scanning is increasingly recognized as a powerful documentation method, with a variety of research, preservation and public outreach uses for the accurate topographic and dimensional digital records produced. The availability of portable systems, designed and marketed for heritage applications, extends its use to the field, as illustrated by a project to document Bronze Age carved "deer stone" monuments, found in remote locations across the northern Mongolian steppe. This paper describes the scanning, post-processing and model-making aspects of this project, within the context of its larger archaeological and conservation goals.

Beauchesne, Patrick [3] *see Wheeler, Sandra*

Beaver, John (National Museum of the American Indian)

[119] *Intangible Tangibles: The Importance of Community-Based Collaborative Efforts*
When anthropologists and archaeologists speak of preserving the past for the future, whose pasts and futures are they addressing? The 18 years following the passage federally mandated repatriation legislations has seen a rise in sustained collaborative efforts between museums, anthropologists and Indigenous communities. This paper will discuss how such sustained collaborative efforts do not compromise the pre-supposed integrities of -etic and objectivities, but rather how such collaborations promote the fostering of educational environments and relationships that provide a foundation for applied practices that result in meaningful cultural exchanges and contextual, tangible outcomes.

Beaver, John [119] *see Lippert, Dorothy*

Beaver, Joseph E. (University of Arizona)

[207] *Architectural Design and Construction at PPNB 'Ayn 'Abu Nukhayla, Jordan*
Four seasons of investigation at the Pre-Pottery Neolithic B site of Ayn Abu Nukhayla in the southern Jordanian desert have exposed a series of structures far more substantial than expected, given that habitation appears likely to have been seasonal in this extreme environment. This paper describes the site's architectural remains, making both intra-site and inter-site comparisons of structure designs. Additionally, variation in construction techniques among the structures at Ayn Abu Nukhayla is examined for its potential contribution to understanding construction and/or occupational sequences, social continuity, and technological development.

Bechberger, Jillian (Colorado State University) and Todd, Lawrence (Colorado State University)

[34] *Coupling Biological Activity and Geomorphic Processes in Archaeological Site Formation*
In archaeology, burrowing organisms are associated with site disturbance, particularly the loss of stratigraphic integrity. While capable of artifact translocation, fossorial activity, coupled with geomorphic processes, can also preserve archaeological resources. Additionally, since suitable habitat for subsurface dwellers is bound by specific ecological parameters, the intensity of former occupation can indicate past environmental conditions. At a high altitude site in Wyoming, sediment displaced by *Thomomys talpoides*, the pocket gopher, is redistributed into alpine sag ponds, burying cultural material. Research begun in 2006 examines the impact of pocket gopher activity in conjunction with physical processes of sedimentation on archaeological site context.

Beck, Lane (Arizona State Museum)

[115] *Interacting with the Dead*
Interactions with the dead vary among different societies. In some cultures interaction is spiritual and in others interactions may be physical. Mortuary analysis provides a tool for investigating the nature of cultural interactions with the dead.

Beck, Margaret (UCLA)

[163] *Late Prehistoric Farmers and Foragers in the Sonoran Desert: Hohokam and Patayan Interaction in the Papaguería of Southwestern Arizona*

By A.D. 700, both sedentary Hohokam agriculturalists and more mobile Lowland Patayan groups occupied the western Hohokam frontier near Gila Bend, Arizona. Ceramic distributions, compositional analyses, and other lines of evidence suggest overlapping territories and frequent interaction during the period A.D. 700–1100. This might be expected, given worldwide patterns of interaction and interdependence between groups with visibly different settlement patterns and economies. In this case, good Hohokam-Patayan relationships may be related to the eastward movement of some Patayan people and goods after A.D. 1000, where they were incorporated into Hohokam society during the Classic Period.

Beck, Robin (University of Oklahoma)

[12] *Reconciling House and Chieftdom in Mississippian Society*

Since the 1970's, the chieftdom concept has dominated discussion of political and economic organization within Mississippian societies. While recognizing the significant role that this concept has played in our understanding of Mississippian towns and polities, recent studies suggest that the institutional foundations of these societies encompassed a greater range of variation than is subsumed by the chieftdom concept. The concept of the social house (or maison), as defined by Claude Lévi-Strauss, offers a different lens through which to view the institutional organization of Mississippian polities. This paper suggests a path for reconciling house and chieftdom in the context of the Mississippian Southeast.

Beck, Robin [19] see Moore, David

Becker, Kenneth (Statistical Research, Inc.), Sewell, Kristin (Statistical Research, Inc.) and Stanton, Patrick (Statistical Research, Inc.)

[213] *Dove Cemetery: Culture and Identity Change at the Edge of Westward Expansion*

Study of nineteenth century frontier cemeteries like Dove Cemetery in San Luis Obispo County, California gave archaeologists the opportunity to reconstruct a frontier community that had largely escaped the historical record. Using osteological data, mortuary analysis, and the textual record the archaeologists at Statistical Research, Inc. were able to better understand the complex processes of community building, the negotiation of socioeconomic and ethnic disparities, and the cultural juggling that occurred during the transition from the Mexican Rancho period to the American period in early California history.

Becker, Marshall (Univ. of Pennsylvania)

[161] *Maya Markets: Delineation of the Plaza Plan 9 Architectural Assemblage and Its Implications for Culture Change*

The map of Tikal, Peten yielded information indicating a number of regular and predictable architectural groupings, each reflecting a specific Plaza Plan (PP). These distinct architectural grammars, useful in predicting cognitive aspects within Tikal, have parallel groupings elsewhere in the Maya lowlands and beyond. One of these groupings at Tikal, PP9, has versions at some other sites. The presence of a large, centralized market defines complex society, and thus can be predicted to correlate with cities that served as "state" capitals. Architectural patterning within PP9 groups may reveal cultural affiliations and dynamics of change during and after the Classic Period.

Bedingfield, Krista [66] see Crumley, Norma

Beekman, Christopher (University of Colorado at Denver)

[168] *Transition and Trajectory: The Late Formative to Classic Shift in the Highland Lakes District of Central Jalisco*

Recent excavations at Teuchitlan tradition sites in the highland lakes district of Jalisco have shifted the most active periods of trade in exotic goods, intensified agriculture, tomb construction, and public architectural investment backwards into the Late Formative. But beginning around A.D. 200, there is a shift in new construction away from large public architecture in the largest centers to smaller buildings in small to medium sized communities. The interpretation of this and other changes is anything but straightforward, and both stabilization and decentralization are possibilities to be evaluated.

Begay, Richard (Agua Caliente Band of Cahuilla Indians)

[122] *An Ethnohistoric Overview of the Marine Corp Air Ground Combat Center, Twenty-Nine Palms, CA*

Native peoples have a long history of the Marine Corp Ground Combat Center as evidenced by the archaeological record. This poster will examine the settlement of the area by native peoples, their land use patterns, access to resources, and the subsequent abandonment of the area because of intrusions of non-native people, disease and other pressures.

Begay, Richard (Agua Caliente Band of Cahuilla Indians) [8] Discussant**Beisaw, April (Binghamton University)**

[142] *Evaluating Occupational Continuity through Taphonomic Analysis*

Seven of the over 100 burials at the Engelbert Site contain the remains of more than one individual. These double burials are clustered in an area interpreted as a Susquehannock cemetery. Reanalysis of the cemetery has revealed evidence that other Late Woodland cultures also used this area and that the double burials may contain individuals that were not interred at the same time. Taphonomic analysis of burial and non-burial contexts, and their faunal assemblages, seeks to evaluate the contemporaneity of these individuals and assess their potential to be evidence of a cultural link between Iroquois, Susquehannock, and Monongahela cultures.

Beitel, Michael (Cuzco Archaeology Institute)

[186] *Evidence of Lucre Water Ritual*

A recently discovered Lucre style paqcha at the archaeological site of Chokepukio provides insight into the Late Intermediate Period's influence on the rise of Inca water worship.

Belardi, Juan Bautista [100] see Goñi, Rafael**Belfast, Jesse [104] see Newlan, Ralph****Bélisle, Véronique (University of Michigan), Covey, R. Alan (Southern Methodist University) and Delgado González, Carlos**

[216] *Early Intermediate Period and Middle Horizon interaction in the Xaquixaguana Plain, Cusco*

A recent survey in the Xaquixaguana Plain in the Cusco region of Peru identified several Early Intermediate (AD 200–600) and Middle Horizon (AD 600–1000) sites. Surface pottery at these sites is local and Cusco-related; Wari ceramics were scarce. Excavations at the largest of these sites, Ak'awillay, confirm the rarity of Wari and Wari-related material culture. This work sheds new light on the interaction between the villagers of the Xaquixaguana Plain, the people of the Cusco Valley, and the Wari of the Lucre Basin during the Early Intermediate period and the Middle Horizon.

Belknap, Daniel [142] see Leach, Peter**Bell, Christine (University of South Florida), Doering, Travis (University of South Florida) and Collins, Lori (University of South Florida)**

[5] *Seeing Things Never Before Seen: High Definition Documentation Survey (HDDS) for Archaeology and Heritage Management*

A revolution in archaeological mapping technology is poised to make traditional methods obsolete. Cutting edge procedures can address age-old problems of site documentation for the purpose of solving 21st century challenges of conservation and preservation. New integrative techniques that combine different types of 3D laser scanners, Global Positioning Systems, and conventional surveying methods with sophisticated software applications are allowing archaeologists and researchers to see things never before seen. Case studies from the authors' HDDS projects in North America, the Bahamas and Mesoamerica are used to highlight the numerous applications in archaeology.

Bell, Ellen (Ellen E. Bell / Kenyon College), Canuto, Marcello (Yale University), Geller, Pamela (American University), Sullivan, Michael (American University) and Lemus, Manuel Aroldo (Colegio de Educación Secundaria de El Paraíso, Departamento de Copan, Honduras)

[85] *Community Responsive Archaeology in the El Paraíso Valley, Honduras*

Typically, archaeologists fail to recognize the relevance of their research to the local communities in which they work. For both pragmatic and ideological reasons, the El Paraíso Regional Archaeological Project (PAREP) has worked closely with community members to develop a program of community-responsive archaeology. The project has offered public presentations and site tours, collaborated with town leaders to foster responsible development, and formed a student group dedicated to learning about, protecting, and preserving the community's archaeological heritage. We examine our current strategies and assess their effects, outlining in broad strokes the goals and parameters of a community-responsive archaeological project.

Bell, Ellen E. [147] see *Canuto, Marcello A.*

Bell, Julie (Mesa Verde National Park)

[185] *From Mud Stuffing to Social and Learned Behavior: The Evolution of Conservation Techniques within the National Park Service*

Preservation of archaeological resources managed by the National Park Service has evolved from conservation practices aimed at simply stabilizing standing architecture, to thorough documentation designed to better understand the built environment. This type of documentation provides the impetus for research and interpretation of the underlying organizational, behavioral and symbolic nature of structures. Architecture not only emulates social structure, but actively participates in maintaining it by directing movement through a site. The Archaeological Site Conservation Program at Mesa Verde National Park has established a documentation system of non-invasive techniques aimed at identifying site-wide social movement.

Bell, Julie [91] see *Francisco, Liz*

Bell, Matthew , Lipo, Carl (California State University Long Beach) and Hunt, Terry (University of Hawaii at Manoa)

[92] *Aerial Photography of Surface Features on Rapa Nui (Easter Island)*

Rapa Nui's open landscape and abundance of surface features make it an ideal candidate for aerial photography. Platforms such as kites and balloons provide low cost and easily deployable techniques for taking planimetric photographs that can be used to supplement or even make plan view maps of structures, or create photo mosaics of extended areas. These platforms are an expedient way to provide high-resolution data in a culturally sensitive and non-destructive approach.

Bellifemine, Viviana [186] see *Andrushko, Valerie*

Bello, Charles (Cultural Resource Consulting Group), Dillian, Carolyn (Princeton University) and Shackley, M. Steven (University of California, Berkeley)

[174] *Continental Exchange on a Personal Scale: Documenting Long-Distance Movement of Prehistoric Materials*

Continuing research into the possibility of super-long distance exchange of obsidian materials has revealed additional archaeological specimens bolstering theories of exchange across the North American continent. A collection of obsidian artifacts from East Coast archaeological sites has been analyzed using X-ray fluorescence to reveal West Coast geologic provenance. Increasing numbers of specimens with well-documented archaeological provenience suggest that super-long distance exchange existed prehistorically. Though transport existed on a continental scale, we argue the mechanism for exchange happened on a personal scale through hand-to-hand and person-to-person interaction.

Bellorado, Benjamin

[38] *Breaking Down the Models: Reconstructing the Relationships Between Prehistoric Settlement Distribution and Maize Agriculture in the Prehistoric Southwest*

This presentation investigates the interrelationship between agriculture and prehistoric

settlement patterns throughout the Upper Animas River drainage. This analysis draws together archaeological data, experimental agriculture, paleoclimatic reconstructions, and settlement distributions in the Durango District of southwestern Colorado. Between A.D. 650–850 populations in the Upper Animas began to settle in villages of increasing size for the first time in their history. Concurrently, a complex suite of runoff and dryland subsistence agricultural techniques were developed from Ak'chin farming strategies. This research models the changes in Ancestral Puebloan lifeways that occurred, and outlines some of the social processes that took place.

Bement, Leland (University of Oklahoma)

[154] *Sinkhole Cemeteries: Ritual Use of Natural Karst Features in Texas*

The limestone regions of Texas contain numerous vertical shaft karst features containing prehistoric human remains. These natural passages to the underworld served as convenient body repositories in areas where soil depth precluded other burial means. But more than this, these features were attributed sacred status, accompanied by rituals, and set apart from the mundane activities of everyday life. Two such sites, Seminole Sink and Bering Sinkhole, are discussed in relationship to nearby habitation sites and their history of use.

Bement, Leland [165] see Carter, Brian

Bender, Susan (Skidmore College) and Moore, Lora

[94] *Thermal Alteration of Petrified Wood at an Early Archaic Site in South Park, Colorado*
Heat pretreatment of lithic raw materials is a well-documented phenomenon. While previous research has centered on chert and novaculite, petrified wood has remained uninvestigated as a thermally alterable source material. This analysis documents macroscopic changes in petrified wood caused by the experimental heat treatment of samples taken from quarry sources in South Park, Colorado, and demonstrates alterations similar to other silica. This information is then used to enhance interpretation of one Early Archaic site in South Park, 5PA2332, whose assemblage is dominated by petrified wood.

Benedetti, Michael [95] see Haws, Jonathan

Benfer, Robert (University of Missouri-Columbia) and Ojeda, Bernardino (Retired)

[43] *A Preceramic Astronomical Instrument: The Solstice Light Chamber from Buena Vista, Chillón Valley, Perú*

I describe a stone walled chamber at the site of Buena Vista that opens to precisely the azimuth and elevation angle necessary to capture the light of the morning summer solstice sunrise. Solstitial and equinoxial alignments from the same and related sites are presented elsewhere. The structure that accepts the first summer solstice rays was constructed so that it blocks another solstice marker, a statue of a Menacing Disk that faces the winter solstice sunset. The disk is precision dated securely to 2,130 cal. B.C. Niched walls, dating a few hundred years later, may be associated with the chamber's construction.

Bengtsson, Lisbet (Göteborg University, Sweden)

[9] *Administrative Centres on the Borders of the Inka Empire?*

An interesting site was found in an area rarely visited by outsiders, high on the eastern slopes of the Andes, in the Puno department of Peru. The site seems to have escaped scholarly attention until now. It contains several standard features of an Inka administrative centre, with large, open spaces, several buildings, and a stone-paved road. The major hall is 50 m long, with 57 niches, 2 windows and 5 regularly spaced doorways. The location of such major buildings in what is considered a remote area raises questions about the Inka economy and links to the east.

Benitez, Leonardo

[137] *Mountains, Sunken Courts, and Dark Cloud Constellations: Archaeoastronomy at Khonkho Wankane and Tiwanaku*

This paper examines the Late Formative sunken court at Khonkho Wankane. After a statistical analysis and reconstructed viewsheds, this research proposes that the construction of the Khonkho sunken court enabled celebrants to associate ritual activity with Andean dark-cloud constellations and two prominent peaks of the landscape. Drawing from previous research at

the Tiwanaku sunken court, we can begin to piece together a Late Formative ideology centered on prominent mountains and the night sky. Furthermore, taking into consideration the archaeological discoveries from this past season at Khonkho, this research concludes with a hypothetical explanation regarding the chosen location for the site.

Bense, Judy (University of West Florida) [84] *Discussant*

Benson, Buck (Idaho State University), Maschner, Herbert (Idaho State University) and Harmon, Frank (Idaho State University)

[128] *Sourcing Basalt on the Western Alaska Peninsula: A Study of Tool/Stone Source Variability through Photon Activation Analysis*

Over the past 5000+ years of human occupation on the western Alaska Peninsula, nearly 99% of the primary stone exploited for the production of tools is basalt. The basalt is produced by nine volcanoes within the research area, presenting the possibility of multiple sources for tool stone acquisition. The locations of these quarries remain unknown. To address the problem of locating and distinguishing between sources we employed photon activation in connection with gravity analysis and distance decay modeling. These methods make it possible to triangulate the approximate location of the quarries and assist in the understanding of human interactions throughout the region.

Benson, Buck [128] *see Maschner, Herbert*

Benson, Larry (USGS/NRP)

[181] *Possible Impacts of Early-Eleventh-, Middle-Twelfth-, and Late-Thirteenth-Century Droughts on Western Native Americans and the Mississippian Cahokians*

Three intense and persistent droughts impacted some prehistorical Native American cultures in the early-eleventh, middle-twelfth and late-thirteenth centuries, including the Anasazi, Fremont, Lovelock, and Mississippian (Cahokian) cultures. Tree-ring-based reconstructions of precipitation and temperature indicate that warm drought periods occurred between A.D. 990 and 1060, A.D. 1135 and 1170, and A.D. 1276 and 1297. These droughts occurred during minima in the Pacific Decadal Oscillation and may have been associated with positive values of the Atlantic Multidecadal Oscillation. Each of the Native American cultures relied on precipitation-dependent resources which were negatively impacted by multidecadal drought.

Benton, J [129] *see Thompson, M. Scott*

Berdan, Frances (CSU San Bernardino), Stark, Edward and Sahagun, Jeffrey

[107] *Production and Use of Adhesives in Aztec Mexico: The Domestic Context*

The ancient Mexicans used a variety of natural materials as adhesives, including orchids, copal, pine resin, acacia, and beeswax. They applied these adhesives to projects ranging from repairs of ordinary pottery to the fashioning of exquisite mosaics with fine stones and shimmering feathers. This paper explores the documentary, artifactual, and experimental record in arguing for household level production of adhesives as they were applied to the manufacture of elaborate mosaics. The interdependent nature of this production process is also revealed, in that a diversity of skilled domestic specialists, in sequence, was required to prepare the final elite-destined mosaics.

Bergh, Sarah (University of Georgia)

[182] *The Archaeology of Barrack Areas on Hadrian's Wall: Establishing the Identity of Soldiers Living at the Milecastles*

A re-examination of the features and artifact assemblages from barrack areas, dating to the second through fourth centuries A.D., along Hadrian's Wall in northern England, suggests that men stationed at the milecastles and at the larger, auxiliary forts had access to a similar range of goods. Sparse occupation layers and smaller artifact assemblages from the milecastles imply that men lived there on a temporary basis, possibly on detachment from nearby forts. Data drawn from published reports were available for seven of the sixteen forts and seven of the approximately seventy-six milecastles.

Bergin, Sean (Arizona State University), Henry, Donald (University of Tulsa) and Kadowaki, Seiji (University of Toronto)

[207] *The Development of Occupational Histories at Ayn Abu Nukhayla, an 8,500 Old Early Neolithic Settlement in Southern Jordan*

The occupational history of a domestic structure is a key aspect for the development of site chronology and intra-site spatial analyses. The definition of formal occupational floors, informal task areas and fill contexts is of paramount importance to such a goal. This paper explores the use of artifact frequencies and architectural evidence as a means for understanding the occupational history of semi-subterranean structures. This approach provides important insight into the dynamic use of structures amid periods of occupation and abandonment.

Berman, Mary Jane (Miami University)

[71] *Gifted Isles: the Role of Trade and Exchange in Lucayan Prehistory*

When the Lucayan met Columbus, they offered cotton, parrots, javelins, food, and water. A few Lucayan wore gold ornaments, which they said came from the south. Their willingness to provide hospitality and goods and the presence of exotic materials suggests a familiarity with non-local people and an active long-distance trading system between the Bahamas and the Greater Antilles, which archaeologists now know consisted of ceramics, greenstone, quartz, chert, and other non-local stones. The role of these foreign objects in Lucayan culture will be discussed; models that explain their presence: direct procurement, ceremonial exchange, trade partners, and tribute will be evaluated.

Bermann, Marc (Univ. of Pittsburgh) [83] Discussant

Bernard, Julianne (UCLA)

[146] *Changing Contents and Contexts of Exchange in the Historic era California Interior*

For native people living in more remote portions of California, one of the most tangible outcomes of the colonial presence was its impact on indigenous trade systems. Extant exchange networks were complicated by the introduction of new objects of both European and indigenous origins, declines in the production of some traditional items, and notable shifts in identity and socio-political alliances. These and other factors undoubtedly affected the way native people assigned both ideological and economic value to trade objects. This paper considers changes in the origins, types, and quantities of trade items used at three south central California interior sites.

Bernard, Julianne [112] see Noah, Anna C.

Bernardini, Wes (University of Redlands) and Norris, Stephen (University of Redlands)

[96] *3D Visualization of Archaeological Sites: Applications for Public Outreach*

Archaeologists often struggle to convey to non-specialists the excitement and value of archaeological sites, which can appear as little more than mounds of earth and stone. Finding ways to make archaeological resources relevant beyond the discipline is increasingly important as public funding sources are threatened and other interest groups vie for control of the past. This poster describes new software tools that make it easy to create detailed, three-dimensional models of archaeological sites. An example from the American Southwest illustrates how 3D models of ancestral Hopi villages have opened up common ground between academic research and tribal preservation programs.

Bernbeck, Reinhard (Department of Anthropology, Binghamton University)

[193] *Structural Violence in Archaeology*

I draw on Johan Galtung's notion of structural violence to outline the nature of international inequalities within professional archaeology. I contend that archaeologists from non-western, "peripheral" countries are not integrated into western-controlled, international research communities. Rather, the process is dominated by indoctrination and the selection of those who are deemed sufficiently co-opted. These structures ensure that the western archaeological community does not lose its grip on the production of theories and methods, but also that the archaeological resources in the center, especially the U.S., do not become an investigative interest of "peripheral" archaeologists.

Berón, Mónica (Conicet-UBA-UNCPBA), Luna, Leandro (Conicet-UBA) and Aranda, Claudia (Museo Etnografico)

[59] *Burial 41: A Bond between Dog and Man among Hunter-Gatherers of La Pampa (Argentina)*

A burial corresponding to hunter-gatherers of Dry Pampas is reported. It's the disposal of a subadult accompanied with a complete specimen of *Canis familiaris*. This burial corresponds to a prehispanic cemetery located in the Lihué Calel National Park, La Pampa province (Argentina). It was used along 700 years during the last part of Late Holocene, and at least 144 people were inhumated in the 23% of the total surface. It is the first register of dog in prehispanic hunters of this region. The burial is strongly ritualized, as the child, provided with a necklace, and the dog are carefully confronted.

Berrier, Margaret [41] see Mark, Robert; [41] see Billo, Evelyn

Berry, Claudia F. [201] see Berry, Michael

Berry, Kimberly (Boston University)

[206] *Proximate Outfields or Distant 'Dooryard' Gardens?: Exploring the Fertile Islands Bordering the Ancient Maya Village of K'axob, Belize*

K'axob, a Maya agricultural village on the eastern shoreline of Pulltrouser Swamp in northern Belize, almost certainly owed its longevity to a complex and evolving relationship between wetland and settlement. Late Formative cultivation strategies exploiting the benefits of a perennial wetland permitted community success and fostered continuing adaptation to climatological, environmental, and landscape change through the Classic period. Excavations reveal that K'axob's farmers modified the swamp's edge—creating, maintaining, and cultivating raised fields for a millennium. This paper examines recovered artifacts (including chert tools, obsidian blades, and worked shell) to demonstrate the importance of these fields to the community.

Berry, Michael (Bureau of Reclamation) and Berry, Claudia F.

[201] *The Northern Fremont Culture: A NAGPRA Affiliation Study*

The Bureau of Reclamation has funded a NAGPRA affiliation study for skeletal remains and associated funerary offerings recovered through excavation of Fremont culture sites located primarily in the Uintah Basin of northeastern Utah and the Great Basin region of northwestern Utah. The ten claimant tribes include five Numic speaking groups, whose historic range was roughly coterminous with that of the prehistoric Fremont, and five modern Puebloan groups from New Mexico and Arizona. An in-depth assessment of multiple lines of evidence yields equivocal results. It appears that the Numic speaking groups can be eliminated from consideration as descendants of the Fremont. An argument can be made for common Fremont and Anasazi origins but the nexus between Fremont and the modern Pueblos, separated in time by over seven centuries, cannot be demonstrated with any semblance of specificity. It is quite possible that the field of archaeology, in its current state, lacks the theoretical and methodological underpinning to address, with credibility, the cultural, linguistic, and biological connectivity between modern tribal entities and prehistoric groups known only from material remains.

Berryman, Carrie Anne (Vanderbilt University), Blom, Deborah E. (University of Vermont) and Tykot, Robert H. (University of South Florida)

[137] *Paleodietary Insight into the Rise of the State in the Southern Titicaca Basin: The View from Khonkho Wankane*

Research in the Southern Titicaca Basin has revealed that the site of Khonkho Wankane was an important regional ritual-political center during the Late Formative. However, by the Middle Horizon, the site was in decline, corresponding to the rise of the Tiwanaku state in the adjacent valley. Examination of Formative and Middle Horizon social organization is essential to understanding the socio-political environment that supported these changes. This paper presents results from dental and isotopic analyses documenting patterns of dietary resource distribution within different segments of society at Khonkho Wankane, Tiwanaku, and Katari valley sites during this critical period of social change.

Bertrando, Ethan (California Army National Guard)[113] *Beyond Section 106: Camp Roberts' Contribution to Southern Salinan Prehistory*

Driven by NHPA mandates, Camp Roberts began addressing archaeological resources in 1987. When Camp Roberts began these studies nothing was known archaeologically about the prehistory of the Southern Salinan Tribe. Today, over thirty archaeological sites have been excavated revealing a rich prehistory for the region. This paper presents an overview of the archaeological program at Camp Roberts and what it has contributed to our understanding of Salinan prehistory. As the spirit of the law intended, NHPA directed projects can and should provide valuable information to both the general public and the academic community not just compliance with legal requirements.

Bettinger, Robert (University of California–Davis)[79] *North American and South American Hunter-Gatherers: Borders Don't Matter*

If the subject is hunter-gatherers, borders don't matter. The possibility that South American hunter-gatherers are miscast by North American models is merely an opportunity to sharpen our understanding of both. Note there is little reason to expect South American hunter-gatherers will match those of North America more closely than those living elsewhere around the globe. Evolutionary theory implies that hunter-gatherer systems can be quite similar and yet develop quite differently owing to historical contingencies. Still, the wisest course is to push our comparisons until we know we have different systems or different historically contingent trajectories.

Betts, Matthew [128] see Maschner, Herbert**Betts, Matthew W. (Idaho State University) and Tews, Amber**[128] *Six Thousand Years of Aleut Economic and Ecosystem Change on Sanak Island, Alaska*

Recent excavations of multiple midden deposits on Sanak Island, Alaska, provide a high resolution picture of Aleut economic change spanning 6000 years. Using a variety of equitability, diversity, and abundance indices, we track changes in 1) the kinds of resources exploited, 2) the breadth of taxa exploited, and 3) their relative abundance. We evaluate this record from the perspective of the local ecosystem, and preliminarily explore how these economic shifts may have been influenced by, and perhaps fundamentally caused, changes in the local ecological community.

Betty, Gerald [47] see Gillaspie, Lindsay**Bevan, Bruce (Geosight)**[31] *Geophysical Maps of Excavation Profiles*

These maps can reveal features that are behind the excavated surface or that are invisible to the eye. The diffuse character of some stratigraphic boundaries may be quantified. These high-resolution surveys may be done with normal geophysical instruments.

Bever, Michael (University of Texas at Austin)[165] *Geophysical Survey and Test Excavation at McNeill Ranch, a Deeply Buried Late Paleoindian Site on the Texas Coastal Plain*

Though Paleoindian diagnostics are common on the Texas Coastal Plain, few have been found in a secure site context, probably because many Paleoindian sites in the area are deeply buried beneath Holocene deposits. Consequently, little is known of the Paleoindian occupation there. McNeill Ranch is one such site, with nearly three meters of deposits spanning the Late Paleoindian through Late Prehistoric periods. This paper presents the results of exploratory archaeological and geophysical work designed to locate and assess the integrity of the Paleoindian deposits at the site, and place the site in a broader regional framework of Paleoindian research.

Bevitt, C. Tod [39] see Hoard, Robert**Bey, George (Millsaps College)**[200] *Of Trash and Treasure: The role of Memory in Understanding Ancient Maya Palaces*

The evolution of the Yaxche Group at Kiuc, Yucatan, presents an opportunity to consider a range of ways memory might have shaped the lives of its users. The study of such ancient

Maya architectural assemblages, typically called Palaces, suggests memory influenced the location and types of structures that were built and modified over time as well as how spaces and buildings were used by the inhabitants. Despite the complexity posed by contexts like the Yaxche Group it is also possible to envision a typology of memory which helps organize such an analysis and better evaluate its utility.

Bey, George [182] *see Bond-Freeman, Tara*

Beyer, Lisa (University of South Florida)

[94] *Experimental Archaeology: a Preliminary Study in Obsidian Usewear Analysis*
Obsidian was an extensively exploited lithic resource during the Neolithic period and traded widely by the people living in southern Italy, however, relatively little is known as to its actual use. This poster will illustrate the initial results of experimental usewear analyses performed on obsidian acquired directly from the major source of prehistoric workable quality obsidian on the island of Lipari, Italy. This study will test the assumption of whether or not obsidian was a viable lithic material for use in a variety of utilitarian tasks or was limited as to its effectiveness.

Bezerra, Marcia (Universidade Católica de Goiás/Brasil)

[177] *Cultural Diversity as Rhetoric: Reflections on Heritage Education in Brazil*
Heritage Education projects (HE) contributes to the valorization of the cultural heritage, to the legitimization of identities, to the strengthening of the sense of citizenship, and to the perception of the 'other.' But have these projects been able to reach such objectives? Are they worrying about exposing conflicts or merely with the display of distinct cultural manifestations? Are they perpetuating the idea of the supremacy of one group over the other "contributors" to the nation? The analysis of HE projects within CRM programs in Brazil will contribute for the answering of some of these questions and bring about several others.

Bicho, Nuno (Universidade do Algarve)

[23] *A Tale of Two Seas: Upper Paleolithic Ecology in Vale Boi, Southwestern Algarve (Portugal)*

Upper Paleolithic ecology in Iberia is known mainly from a few confined areas: Portuguese Estremadura, Northern and Mediterranean Spain. The cultural traits from each area seem to stand in isolation and little research has been done in the intervening lands. The area between Gibraltar and Lisbon was represented by a particularly large gap in Upper Paleolithic occupation. This gap has been filled with the discovery of the rock-shelter of Vale Boi, Algarve (southern Portugal). The site presents a long chronological sequence from Early Gravettian through late Magdalenian. This paper will focus on the striking combination of cultural traits present in Vale Boi, coming from the Mediterranean and Atlantic areas during the Gravettian and Solutrean phases, suggesting that Vale Boi lay at the crossroads of two rather different ecological and cultural worlds—the Atlantic shore and the Mediterranean Spanish coast.

Bicho, Nuno [95] *see Haws, Jonathan*

Biehl, Peter F. (University of Cambridge)

[53] *Applying Andrew Sherratt's Concept of Long-Term Change to the South-Eastern European Neolithic and Copper Age*

In his seminal paper, "Reviving the Grand Narrative: Archaeology and Long-Term Change," Andrew Sherratt laid out his 'interactionist' approach to the study of long-term change in archaeology by emphasizing the importance of social interaction and cultural encounter as well as consumption. In this paper, I will reconsider Sherratt's work on long-term change and will apply it to the south-eastern European Neolithic and Copper Age. I will focus on his concepts of communication and exchange and demonstrate their importance for a better understanding of the constitutive changes during the 6th and 5th millennium BC.

Bill, Cassandra R. (Middle American Research Institute), Levan, Larry (Yale University) and McFarlane, William J. (Johnson County Community College)

[147] *Local Traditions, Imported Ceramics, and Lithic Artifacts in the El Paraíso Valley, Honduras, during the Classic Period*

Type-Variety-Mode analysis of the ceramic assemblage combines with microprobe analysis to confirm that the centers of the El Paraíso valley made use of both a locally made ceramic assemblage and a significant amount of pottery imported from Copan. Curiously, over 70% of

the utilitarian pottery at the site of El Paraíso appears to have been imported from Copan. Lithic artifacts also point to intriguing differences between these two Late Classic centers. These findings support architectural, sculptural, and spatial data that suggest El Paraíso was an outpost of Copan designed to extend its control into the region.

Bill, Cassandra R. [147] *see Cagnato, Clarissa*

Billeck, William (Smithsonian) and Yellowman, Sr., Gordon (Cheyenne and Arapaho Tribes of Oklahoma)

[48] *Beyond Repatriation: Forging New Relationships Between Museums and Native Americans*

One of the hopes of the drafters of the repatriation legislation was that the laws would lead to greater consensus and collaboration between museum staff and Native Americans. Repatriation has fostered relationships between the Cheyenne and Arapaho Tribes of Oklahoma and the Smithsonian's National Museum of Natural History on issues of traditional care, cooperative agreements on collections, deposition of records into the museum, and museum assistance to the Cheyenne in the evaluation of repatriation cases.

Billman, Brian (UNC–Chapel Hill) and Ringberg, Jennifer (UNC–Chapel Hill)

[205] *House of the Living, House of the Dead: Excavation of a Royal Residence at Cerro Leon, Peru (AD 1–200)*

Analysis of room function and the spatial organization of Compound 1, a large residential structure at Cerro Leon, revealed that 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. Cerro Leon was the paramount site in a cluster of sites occupied by highland immigrants to the middle Moche Valley, ca. AD 1–200. Within this community, Compound 1 was the largest residence and was probably occupied by the paramount ruling family.

Billman, Brian [65] *see Fariss, Barker*

Billo, Evelyn (Rupestrian CyberServices), Mark, Robert (Rupestrian CyberServices) and Berrier, Margaret (Sanity Silversmithing)

[41] *Newly Discovered Hunter's Shelter, SE New Mexico: Archaic or Late Prehistoric Pictographs?*

A small (4m by 4m), high cliff-side limestone shelter with three significant red pictograph panels was discovered in 2005. The Hunter's Shelter contains a centrally located standing deer or elk, a rare butchering scene of a similar animal, and a complex panel of small figures (each a few centimeters or less). This unique scene appears to depict hunters holding curved sticks (one holding a rabbit), nets, rabbits, and dogs. The images have similarities to the Red Linear Style found in the Lower Pecos River rock art region of Texas as well as to late prehistoric sites in Southern Colorado.

Billo, Evelyn [41] *see Mark, Robert*

Billsbarrow, Matthew (Arizona SHPO)

[84] *Advancing Remote Sensing Technology in the Discovery, Analysis, and Preservation of Cultural Resources Symposium*

Conserving heritage sites for future generations to study, appreciate and decide upon is the primary goal of historic preservation. Remote-sensing techniques allow the present generation of archaeologists to investigate and make decisions about such sites in a non-destructive manner. This paper examines how state and federal agencies incorporate remote-sensing studies into project-specific and long-term planning efforts relating to Sections 106 and 110 of the National Historic Preservation Act and the factors affecting the adoption of these techniques.

Binning, Jeanne Day (California Department of Transportation (Caltrans))

[94] *Meaningful Quantification in Debitage Analysis: An Example*

Approaches to the analysis ofdebitage are sometimes purposely arbitrary in what they

quantify because the unbiased selection of attributes to measure is viewed as objective. The selection of what to measure has also been governed by what is easy to measure accurately and consistently. An understanding of reduction technology, it is argued, is critical to selecting those aspects of debitage that should be quantified and evaluated to determine the answers to certain research questions. Using biface reduction, this poster demonstrates that informed measurement produces results that are superior to those based in measurements that are arbitrarily and/or easily performed.

Bishop, Ronald [189] see *Reents-Budet, Dorie*; **[26]** see *Sears, Erin*; **[46]** see *Blackman, M. James*

Bishop, Ronald L. (Smithsonian Institution), Blackman, M. James (Smithsonian Institution), Hansen, Richard D. (Idaho State University / FARES), Reents-Budet, Dorie (Mint Museum, Charlottesville, NC / Smithsonian Institution) and Sears, Erin L. (University of Kentucky)

[35] *Ceramic Paste Variability in the Mirador Basin: A Regional Perspective*

For more than 20 years pottery from the Mirador Basin, Guatemala, has been subjected to chemical analysis by neutron activation as new materials or questions emerged. In the interim the data set has grown to several hundred paste analyses. In this paper we offer an overview of some of the major compositional patterns present in the data set. Both Preclassic and Classic period ceramics are considered and are discussed relative to similar analyses carried out on ceramics from near by sites, such as Calakmul, thereby placing the Basin in a regional as well as compositional perspective.

Bishop, Ronald L. (Smithsonian Institution) [139] *Discussant*; **[162]** *Discussant*; see *Carlson, Shawn B.*

Biskowski, Martin (CSU Sacramento) and Watson, Karen (CSU Sacramento)

[194] *The Changing Patterns of Maize Preparation in Central Mexico*

Evidence of maize preparation in the Teotihuacan Valley, Mexico, shows at least two major shifts consistent with greater levels of intensification. However, the complexity of synchronic variability in maize preparation there obscures diachronic patterns, and for certain periods the available evidence remains too sparse for safe characterization. To clarify how maize preparation changed this paper considers the results of recent analyses of grinding tools from other parts of the Basin of Mexico and nearby regions of northern Tlaxcala and Hidalgo and attempts to clarify how maize preparation changed over time in Central Mexico.

Bisson, Michael [23] see *Burke, Ariane*

Black, Stephen (Texas Archeological Research Laboratory, UT Austin) and Dial, Susan (Texas Archeological Research Laboratory, UT Austin)

[96] *Texas Beyond History*

Texas Beyond History (TBH) is a unique public education website synthesizing and sharing the 13,500-year cultural heritage of Texas with the world. Created by the Texas Archeological Research Laboratory at the University of Texas (Austin), the "virtual museum" features geographically-driven online "exhibits" with illustrated human-interest stories highlighting cultural treasures from archeological and historical sites across the state. Within the website's many "wings," 85 exhibits target five audiences: general public, college students, K-12 teachers, schoolchildren, and researchers. Over 100 contributors and 15 institutional partners from organizations across the state provide content and expertise to the project.

Black, Stephen L. (The University of Texas, Austin)

[1] *A Virtual Bridge from the Profession to the World: TexasBeyondHistory.net*

The collaboration of dozens of organizations, agencies and institutions, and over one hundred individual professionals, archeologists prime among them, has resulted in a remarkable virtual museum that bridges the chasm between the restricted domains of scholars, technicians, and bureaucrats and the wider world. Texas Beyond History is created by the Texas Archeological Research Laboratory at the University of Texas (Austin) and features geographically-driven online exhibits with illustrated human-interest stories highlighting treasures and knowledge from archaeological and historical sites across the state. Eighty-five online exhibits target five audiences: general public, college students, K-12 teachers, schoolchildren, and researchers.

Blackman, James [189] *see* Reents-Budet, Dorie; [97] *see* Fournier, Patricia

Blackman, M. James (NMNH Smithsonian Institution), Bishop, Ronald (NMNH Smithsonian Institution) and Fournier, Patricia (INAH MEXICO)

[46] *Compositional Characterization of Colonial Oaxaca Tin Opacified and Lead-Glazed Earthenwares*

The Spanish conquest and colonization of New Spain caused many changes in the indigenous ways of life, including ceramic technology and style. To monitor some of these changes, we have undertaken an extensive program of chemical characterization of tin opacified and lead glazed earthenwares, distinctive patterns of ceramic paste and glaze recipes to determine what pottery was made at what location, and to characterize the changes in manufacture that reflect different economic and social changes that occurred in the northern Spanish-Mexican frontier. In this paper we focus on glazeware production in Oaxaca, viewing it relative to other identifiable sources in New Spain.

Blackman, M. James (NMNH Smithsonian Institution) [139] *Discussant*; [26] *see* Sears, Erin; [35] *see* Bishop, Ronald L.; [54] *see* Carlson, Shawn B.

Blackmore, Chelsea (University of California, Riverside)

[205] *Ritual Life in a Domestic Setting: Household Excavations at the Northeast Group, Chan, Belize*

This paper will examine archaeological definitions of sacred/profane and how it is used within Maya household archaeology. Linguistically and ethnographically, houses and architectural features, such as hearths are described as representations of the Maya Universe.

Archaeologically however, such features are interpreted in strictly utilitarian terms.

Excavations in 2005 at the Northeast neighborhood group, part of the site of Chan, Belize, identified a stone-lined hearth and possible ritual deposit in association with the household's kitchen. The recovery of both ritual and domestic features within the same setting suggest that archaeological definitions of sacred/profane are considerably more complex than previously imagined.

Blackwell, B.A.B. [134] *see* Blickstein, Joel

Blackwell, Bonnie A.B. (Dept. of Chemistry, Williams College), Skinner, A.R. (Dept. of Chemistry, Williams College), Nuzad, A.H. (RFK Research Institute), Long, R.A. (RFK Research Institute) and Gong, J.J.J. (RFK

[174] *ESR Dating the Lake Deposits at Midauwara, Western Egypt*

In western Egypt, Wadi Midauwara drains the escarpment face of the Libyan Plateau east of Kharga Oasis. Perched above the modern wadi, spring and lacustrine carbonate deposits record several more humid intervals during the Pleistocene, when wetlands, ponds, and streams provided a water supply for human occupation. Finds there include Earlier Stone Age, Middle Stone Age, and prehistoric Holocene artefacts. Standard ESR analysis was used to date freshwater *Melanoides truncata* (mollusc) shells found in the spring-deposited tufas and lacustrine silts at five locations around Midauwara. Neutron activation analyses on associated bulk sediment was used to calculate the external dose rates.

Blair, Elliot (American Museum of Natural History) and Sanger, Matthew (American Museum of Natural History)

[104] *Mortuary Modeling: A GIS Reconstruction of the Santa Catalina Cemetery, St. Catherines Island, GA*

Current research at the American Museum of Natural History involves the analysis of the cemetery from 16/17th century Mission Santa Catalina de Guale, St. Catherines Island, GA. This analysis requires the correlation of ten years of site records, maps, and photographs generated by two separate teams of excavators. This paper will present an interactive, three-dimensional, GIS model of the cemetery—including hundreds of thousands of artifacts, 431 burials, and hundreds of architectural features. Additionally, the 70,000 beads excavated from the site will be used to demonstrate the potential of GIS for dynamic distributional and associational intra-site analyses.

Blair, Elliot [208] *see Sanger, Matthew*

Blaisdell-Sloan, Kira [19] *see Sheptak, Rus*

Blake, Michael (University of British Columbia)

[178] *Canajaste: A Postclassic Maya Colony Besieged*

Canajaste, a Late Postclassic Maya settlement located on the Lagartero River in Chiapas, Mexico, is marked by a 200 m-long stone wall cutting off the site center from the surrounding countryside. This imposing feature suggests that the town's inhabitants were preoccupied with defense. Excavated buildings in the town center revealed evidence of multiple burnings, indicating repeated attacks. Hundreds of obsidian arrow points found at the site reinforce this interpretation. In the absence of ethnohistoric documents, the archaeological record suggests that this site was located in a contested frontier zone—probably representing the colonial expansion of a neighboring state.

Blakelock, Eleanor [134] *see Robinson, Samantha*

Blankenship, Sarah (University of Tennessee), Simek, Jan (University of Tennessee) and Cressler, Alan (USGS)

[154] *The Sky Above, the Mud Below: Landscapes of Mississippian Rock Art*

Archaeologists have long acknowledged that late prehistoric people in the Southeast recognized a three-tiered interconnected cosmos that juxtaposed a celestial upper world with a subterranean underworld. However, because of a longstanding excavation emphasis on dramatic and easy to find surface sites, the nature of underworld (cave) use and its relation to surface sites has not been determined. Through chemical analysis of prehistoric pigments used in rock art, we can establish direct relationships between surface and subterranean sites, indicating that Mississippian rituals were themselves multi-tiered, embedding ceremonial resource procurement in geographically dispersed activities that occurred in open and in cave contexts.

Blankenship, Sarah [154] *see Simek, Jan; [61]* *see Weinand, Daniel C.*

Blanton, Richard

[152] *Collective Action and Inequality in the Evolution of Complex Societies*

While no known complex society is socially egalitarian, it is still the case to fully understand the evolution of inequality we must address the expression of egalitarian behavior that, for example, can limit the agency of a governing elite. Anthropological archaeology, with its focus on processes bringing about domination and political centralization, has failed to accomplish this. I suggest that the rational choice theory of collective action is a potentially useful explanatory framework that will help us move in new theoretical directions.

Blanton, Richard [219] *see Fargher, Lane*

Bleed, Peter (University of Nebraska–Lincoln) [209] *Discussant*

Blevins, Kristie [94] *see Hoover, Anna*

Blick, Jeffrey (Georgia College & State University)

[71] *The Role and Nature of the Sea Turtle in Lucayan Subsistence: Recent Results from Archaeology, Stable Isotope Analysis, and DNA*

Excavations at North Storr's Lake, San Salvador, Bahamas, yielded 1300 fragments of Cheloniidae representing axial and appendicular skeleton. Utilizing archaeological, historical, and ethnographic records, the role of the sea turtle in Lucayan culture is investigated. Zooarchaeologists typically categorize sea turtle to the family level, but this raises the issue of which Cheloniidae is represented in the archaeological deposits: green turtle is culturally preferred; loggerhead has been recovered elsewhere on San Salvador; hawksbills inhabit the waters of San Salvador today. Recent stable isotope and DNA analyses reveal the identity of the archaeological sea turtle recovered from North Storr's Lake.

Blickstein, Joel (RFK Research Institute), Leung, J. (RFK Research Institute), Blackwell, B.A.B. (Dept. of Chemistry, Williams College), Pinto Iloa, A.C. (Instituto de Historia, Dpto. de Prehistoria) and Lord, C. (Dept. of Chemistry, Williams College)

[134] *ESR Dating the Mousterian Layers at Sopena, Northern Spain*

In Asturias, Sopena rockshelter contains at least 15 distinct archaeological levels. Rich in both lithics and well-preserved fauna, the site contains Quina Mousterian artefacts in the lower layers, overlain by early Upper Paleolithic ending with Gravettian in the top layers. Calibrated AMS 14C dates on teeth for the upper layers ranged from 28.9 ± 0.2 to 38.8 ± 0.7 ky BP, and 43.1 ± 0.7 ky BP for the uppermost Mousterian. Standard ESR ages using volumetrically averaged geochemistry to assess external dose rates for ungulate teeth indicate that the Mousterian layers were all deposited during OIS 3 and 4.

Blitz, John (University of Alabama)

[212] *The Termination of Mound X at Moundville*

Mounds commemorated and sanctified a social segment's place at Mississippian centers. The plan of Moundville's mound-plaza group is said to reflect the ranked social order of a rapidly planned community. Mound X lies just outside this formal arrangement and predates it. Mound X was terminated and abandoned when a palisade was built over it at the time the mound-plaza group was established. If the built environment formalized a social segment's place in the community, then the Mound X termination appears to be a rejection of membership. Efforts to memorialize group claims through mound building could be challenged and erased.

Blom, Deborah E. [137] see Berryman, Carrie Anne

Blom, Deborah E. (University of Vermont) and Knudson, Kelly J. (Arizona State University)

[83] *Relationships between Tiwanaku Mortuary Behavior and Geographic Origins at Chen Chen (Moquegua, Peru)*

In the Moquegua Valley of southern Peru, there is a clear correlation between Tiwanaku mortuary identity and biological origins in the Tiwanaku heartland in the individuals buried in the Middle Horizon cemetery of Chen Chen. Here, we focus on Tiwanaku mortuary identity at Chen Chen and the relationship between mortuary behavior and geographic origins, as determined by strontium and oxygen isotope analyses. Interestingly, first-generation migrants to Chen Chen, most notably from the Lake Titicaca Basin, are not distinguished through their mortuary treatment. The implications of these data for our understanding of Tiwanaku identity will be discussed.

Boada, Ana Maria (University of Pittsburgh)

[206] *Intensive Agriculture and the Onset of Political Social in the Sabana de Bogotá*

The purpose of this paper is to evaluate the role intensive agriculture played in the development of social hierarchy of Muisca societies of the Sabana de Bogotá, Colombia. The technology of raised fields is utilized to demonstrate intensive agriculture. The ideas to be tested are that intensification of agriculture of maize was developed to solve problems of population pressure. In this scenario the technology of raised fields developed either to provide a surplus appropriated by emergent elites or to be used by wealthy families to create more wealth to attract followers.

Boaretto, E. [20] see Yuan, Jiaorong

Bober, Rebecca

[176] *Comparative Analysis of Lower Paleolithic lithic Material from the Kem Kem Basin of Morocco and the Sahara of Southern Algeria*

Typological and geological research has focused on lower Paleolithic bifaces and other tools in a surface collection from the Kem Kem Basin of Morocco. Comparative material consists of a highly weathered assemblage of similar tool types from the Sahara of southern Algeria. Exploratory data analysis helps to highlight the similarities between the two collections as well as examine possible collector bias. Geologic maps provide information about raw material sources which can aid in answering larger questions of early mobility patterns in northwest Africa.

Boehm, Andrew (Iowa State University) and Hill, Matthew (Iowa State University)

[4] *Experimental Breakage of Bison, Elk, and Deer Long Bones*

Inspired by a lack of detailed middle range information on breakage of bison, elk (wapiti), and white-tailed deer long bones, we conducted a comprehensive experimental project designed to shed light on "cold" marrow extraction and zooarchaeological measures of processing intensity, including fragment length, fragment circumference, NISP:MNE, and NISP impacted. Separately, these measures are not especially robust indicators of processing intensity, but together they can be informative, provided that other aspects of taphonomic history are known. Inter-element and inter-taxa differences must be taken into consideration.

Bogaard, Amy [217] *see* Twiss, Katheryn

Bogan, Arthur (NC Museum of Natural Sciences) and Layzer, James (USGS/Tennessee Tech University)

[114] *Revisiting the Cumberlandian Unionid Fauna (Mollusca: Bivalvia): The Archaeological Evidence*

Ortmann defined the Cumberlandian fauna, an endemic freshwater mussel fauna, as restricted to the Tennessee River above Muscle Shoals, the Duck River and the Cumberland River above Clarksville. Published archaeological records of this freshwater bivalve fauna extend from Muscle Shoals to the Clinch and Holston Rivers in the Tennessee River basin and in the middle section of the Cumberland River basin. Recent collections from archaeological shell middens along the lower Tennessee and Cumberland rivers are used to document the former distribution of this fauna. The result is an expansion of the downstream distributional limits of the Cumberlandian fauna.

Bogucki, Peter (Princeton University)

[53] *How Wealth Happened in Neolithic Europe*

The economic prehistory of central Europe was one of Andrew Sherratt's special interests. This paper will explore the interaction of three key economic factors – animal traction (capital investment), metals (durable goods), and watercraft (critical infrastructure) – to understand the emergence of household wealth and social differentiation. The case is made that animal traction was the "killer app" (in modern computer jargon) of the Secondary Products Revolution that transformed household economies during the fourth millennium B.C. in central Europe.

Boisvert, Richard (NH Div. of Historical Resources) and Shoberg, Marilyn (U of Texas–Austin)

[44] *Use-Wear analysis of a suite of Paleoindian tools from the Potter Site (27-CO-60), Randolph, NH*

Excavations in 2004 and 2005 recovered a series of 18 scraping tools and tool fragments from a four square meter block in a Paleoindian site in northern NH. Half of the specimens exhibited use-wear, although only four could be ascribed to use on a specific material, wood. Variation in the morphology and condition of the tools, in concert with the apparent consistency of use on a single material suggests the manufacture, use and refurbishing of a specialized toolkit.

Boldsen, Jesper [3] *see* Usher, Bethany

Boldt, Jessica (University of Missouri)

[32] *Rock Art of Cerro del Diablo, Northern Chihuahua*

Cerro del Diablo, near the town of Janos in northern Chihuahua, is well known as one of the most extensive rock art sites in the area. Previous analysis of the images indicates that it is an Apache site. However, research from the 2006 field season suggests this may be only part of the picture. Stylistic comparison of the rock art found at Cerro del Diablo to that of other known sites in Northern Chihuahua and the American Southwest indicates the site may have been used by several different cultures over a broad span of time.

Boldt, Jessica [32] *see* Jones, Teresa M.

Bollans, Abbie (University of Oklahoma)

[64] *Prehistoric Ethnobotany of the Pueblo Alto Trash Mound, Chaco Canyon*

Plant propagules and wood remains from forty flotation samples excavated from six stratigraphic columns within the trash mound at Pueblo Alto were analyzed to examine

changes in plant preference, procurement and processing practices at the site from approximately A.D. 1040–1100. In addition, special note was made of any evidence of anthropogenic changes in the local environment as demonstrated by differences in the amounts and types of plant remains. Investigations of flotation samples from the trash mound at Pueblo Alto indicate differences in economic and ritual activities involving plants as well as fluctuations in environmental conditions over time.

Bollong, Charles [4] *see* Burnett, Paul

Bollong, Chuck [34] *see* Eckerle, William; [4] *see* Slessman, Scott

Boltt, Robert (University of Hawaii)

[22] *Is there a "Voyaging" Period in the East Polynesian Archaeological Sequence?*

This paper examines the earliest securely dated archaeological sites in East Polynesia in terms of a proposed voyaging model that makes a strong distinction between initial discovery and permanent settlement. It uses a combination of archaeological data, linguistics, and oral traditions about the colonization of islands in an effort to clarify the settlement process. Could the earliest sites, which contain mostly midden and few artifacts, be representative of the tail end of a "Voyaging" period when natural resources were being exploited and permanent settlement was rare? Are only the later artifact-rich layers representative of permanent settlement sites?

Bollwerk, Elizabeth (University of Virginia)

[148] *Negotiating with Nicotiana: An Investigation of the Role of Tobacco and Pipes in Native/European Relations in the Mid-Atlantic*

The presence of tobacco smoking pipes on 17th-18th-century native and European archaeological sites in the Middle Atlantic region suggests that they were a significant commodity for both groups. Drawing from historic sources and an analysis of 200 pipe fragments from sites throughout the Middle Atlantic region, I explore the ways 18th-century Native Americans used tobacco and smoking pipes to negotiate their relationships with Europeans, while simultaneously making a place for themselves in the market economy. It also considers what the disappearance of native pipes post-1750 reveals about Native efforts to maintain their identity during this period.

Bolnick, Deborah (University of Texas at Austin)

[49] *Migration and Social Structure among the Hopewell: Insights from Ancient DNA*

For more than a century, archaeologists have studied the cultural and skeletal remains of the prehistoric Native Americans known as the "Hopewell Moundbuilders". While much of the Hopewell phenomenon is well understood, questions remain about the genetic makeup, burial practices, and social structure of Hopewell communities. To help answer these questions, I extracted mitochondrial DNA (mtDNA) from the skeletal remains of 39 individuals buried at the Pete Klunk Mound Group in Illinois. Comparisons with mtDNA from the Hopewell Mound Group in Ohio also suggest that migration and gene flow accompanied the cultural exchange between Hopewell communities in Illinois and Ohio.

Bond-Freeman, Tara (Southern Methodist University), Sampson, Garth (Southern Methodist University) and Bey, George (Millsaps College)

[182] *The Middle Preclassic Settlement at Ek Balam, Yucatán, Mexico*

Extensive testing to bedrock suggests that the founding settlement below this Classic Maya polity was one of widely dispersed pairs of low, slightly stepped, stucco-floored platforms. Each pair contains a residential unit plus a lower, companion platform with multiple floors but no domestic trash. Ceramic assemblage composition differs consistently between paired platforms, and there are also contrasts in Balam Complex ceramics between the pairs. In the Late Balam subphase, Ek Balam appears to have declined, while a small satellite settlement at Xuilub expanded vigorously.

Bon-Harper, Sara (Monticello) and Wheeler, Derek (Monticello)

[6] *Two Sides to the Mountain: Intent and Experience of Landscape on the Monticello Plantation*

A dualism exists between the historic experience of landscape elements and the intentions

behind their design. Where Jefferson's intentionality is visible in extant architectural and landscape elements, archaeology allows us to witness the experience of individuals negotiating components of that built environment. The leveling of Monticello Mountain, the construction of flanking dependencies, and the placement of outlying quarters and roads are all examples of anthropogenic ordering of the landscape. Data from recent excavations around the Monticello mansion and from archaeological survey are used to evaluate the use of these elements on an individual and plantation scale.

Bonine, Mindy (SWCA)

[54] *A Comparative Analysis of Two Spanish Colonial Rancho Sites in Central and South Texas*

The Spanish Colonial period in Texas lasted several centuries, but it was not until the eighteenth century that a third enterprise was added to the more traditional mission and presidio combination. Ranchos, an establishment engaged in livestock production using unimproved range pastures as grazing land for domesticated cattle, horses, sheep, and goats, first appeared around the San Antonio missions. Later, settlers and entrepreneurs devoted large tracts of land to the effort. This presentation compares large-scale settlement at a mission rancho, Rancho de las Cabras, to a smaller civilian rancho associated with the Nuevo Santander colony along the Rio Grande.

Bonstead, Leah (Public Lands Institute-Lake Mead) and Velasquez, Steph (Public Lands Institute-Lake Mead)

[106] *A Study of Habitation Sites on the Southern Shivwits Plateau, Mohave County, Arizona*

The Shivwits Plateau of northwestern Arizona was populated by the Virgin Anasazi from AD 200 to 1200. While the Virgin Anasazi have been studied extensively in the Moapa Valley at Lost City, and their presence examined on other plateaus, their residence on the Shivwits Plateau is not as well known. This study takes a closer look at habitation sites with structural remains through study of both individual site assemblages and GIS analysis to examine site size, location, density, proximity to potential water sources, and arable farmland. The purpose of this study is to identify areas for future research.

Boomert, Arie [22] see Hofman, Corinne

Borejsza, Aleksander (University of California, Los Angeles), Frederick, Charles (University of Texas, Austin) and Morett Alatorre, Luis (Museo Nacional de Agricultura, Chapingo)

[145] *After us the Flood: The Intensity and Long-Term Impact of Formative Agriculture in Mesoamerica*

The complexity of Formative societies is often used to hypothesize the existence of labor-intensive agroecosystems, fine-tuned to be both productive and sustainable. Research on alluvial sequences in Tlaxcala and the Basin of Mexico and on buried irrigation canals in Morelos documents more extensive systems, with swiddens on unmodified slopes and canals aimed at capturing summer floods. The relative abundance of farmland sustained such practices throughout the period. Contour terraces and canals capable of diverting and distributing the scant baseflow developed much later, in part as an adaptation to the severely degraded landscape left behind by Formative farmers.

Boren, Roger [73] see Williams, Mary Melissa

Borgstede, Greg (Pennsylvania) and Sharer, Robert (Pennsylvania)

[168] *The Terminal Preclassic in the Maya Highlands*

The Classic period in the Guatemalan highlands has long been relatively unstudied to the earlier Preclassic and the later ethnohistorically tied Postclassic. Recent research has shown, however, that the Classic period shows a complex society of well-developed, interacting polities. This paper examines the evidence for developmental continuity from the Terminal Preclassic to Classic period, focusing on the western and northern highlands. The authors revisit arguments for the role of the highlands in the development of lowland polities, and stress the idea that highland polities were more than contributors/controllers of raw materials for developing lowland elites.

Boric, Dusan (University of Cambridge)[68] *House Afterlife: Residential Burials in the Meso-Neolithic Danube Gorges*

The paper focuses on archaeological examples of a continuing social construction of a particular "house" space in its "afterlife," i.e. after the end of its "domestic" phase. The use of ideal type categories, such as domestic vs. mortuary, sacred/ritual vs. profane, to describe qualities of a particular space undermines the transformative, polysemic and indeterminate aspects of human action in its capacity to accomplish a spectrum of relations around a space. The paper looks at the range of burial practices and acts of structured deposition connected with the architecture of the Meso-Neolithic settlements of Lepenski Vir and Vlasac in north-east Serbia.

Borrero, Luis (CONICET) [79] Discussant; [56] see Martin, Fabiana Maria

Bos, Kirsti [36] see Poinar, Hendrik

Bosquet, Dominique [39] see Golitko, Mark

Boswell, Alicia [65] see Fariss, Barker; [83] see Baitzel, Sarah I.

Botic, Cheri (Smithsonian Institution, National Museum of Natural History) and Hollinger, R. Eric (Smithsonian Institution, National Museum of Natural history)

[48] *Tracing Families through Time: Lineal Descendants and Repatriation*

The return of ancestors to their lineal descendants may be the most important and meaningful work carried out under repatriation legislation. Therefore, potential lineal descendant claims are given priority over those of the culturally affiliated group and considerable efforts are made to link possible lineal descendants with their ancestor. Examples from recent cases addressed by the National Museum of Natural History illustrate some of the complexities and sensitivities encountered in this work.

Boudreaux, Jennifer [113] see Latham, Mark

Boulanger, Matthew [30] see Stevenson, Christopher M.

Boulanger, Matthew T. (Archaeometry Laboratory, Missouri University Research Reactor) and Glascock, Michael D. (Archaeometry Laboratory, Missouri University Research Reactor)

[61] *Petrographic and Geochemical Analyses of Copper Age Pottery from Central Europe*

Ceramic classification in Central Europe, particularly of the Copper Age, is traditionally based on vessel form and decoration. Vessel morphologies are seen as index fossils correlated to culture areas. Though useful in some contexts, this typo-chronology has resulted in confusion over an array of archaeological cultures that overlap in space and time. Petrographic and geochemical analyses of Copper Age pottery are used to refine ceramic classifications and identify technological aspects of pottery manufacture. The combination of multiple approaches to ceramic analysis produces a more holistic understanding of Copper Age Europe and allows archaeologists to explore previously unexamined research questions.

Bousman, Britt (Texas State University), Brink, James (National Museum, South Africa), Tooth, Stephen (University of Wales–Aberystwyth), Oksanen, Eric (Texas State University) and Meier, Holly (Texas State University)

[56] *Middle and Later Stone Age Occupations in a Late Pleistocene Terrace at Erfkroon, South Africa*

Recent excavations at Erfkroon document MSA and LSA components spanning the last 160kyrs. Erfkroon consists of a number of dispersed occupations in a donga (gully) complex that is actively eroding Late Pleistocene terraces on the Modder River in the western Free State. Abundant stone artifacts and well-preserved faunal remains within most of the seven major stratigraphic beds have the potential to provide important information regarding MSA and early LSA occupations as well as Quaternary stratigraphic, paleoenvironmental, and mammalian evolution. These data could shed new insights on the evolution of modern human behavior in the Late Pleistocene.

Bousman, C. Britt [197] *see Oksanen, Eric*

Boutain, Jeff (University of Hawaii at Manoa), Webb, David (University of Hawaii at Manoa) and Hunt, Terry (University of Hawaii at Manoa)

[92] *A Forest of Ashes: Paleoenvironmental Reconstruction on Easter Island Using Wood Charcoal Analysis*

Previous studies of the archaeobotanical record on Easter Island have lead to the discovery of locally extinct woody taxa. Continuing research which consists of large samples of wood charcoal for taxonomic identification will provide a quantifiable framework to study anthropogenic wood use over the course of deforestation. In this poster, we present results from a preliminary study of charcoal remains from an earth oven assemblage excavated at Maitakitemoa on the northwest coast of the assemblage excavated at Maitakitemoa on the northwest coast of the island. We highlight technical issues in identification and suggest avenues for future research.

Boutin, Alexis (University of Pennsylvania)

[115] *Osteobiographies of Life and Death from Ancient Alalakh*

Renewed excavations at Alalakh (Tell Atchana), a Bronze Age regional capital in southern Turkey, have exposed 64 human burials. These human skeletal remains and their spatial and material circumstances of burial represent an important contribution toward understanding the recursive relationship between mortuary practices and social identities in the ancient Near East. This integrated, fine-grained bioarchaeological inquiry prioritizes four axes of identity (age, sex, kinship, and health status), which are interpreted in light of abundant socio-historic contextual information from Alalakh and other contemporary sites. The results are detailed osteobiographies of the people who lived, worked, loved, and died at Alalakh.

Boutte, Kerry (Louisiana Dept. of Transportation & Development)

[42] *What's Outside the Right-of-Way? Cultural Resources and Archaeological Stewardship in Louisiana*

Various state Departments of Transportation (DOTs) have different approaches to how, and even if, cultural resources lying outside of a given project's right-of-way should be investigated. Who should bear the responsibility of preserving these resources can also be an issue. For Louisiana Department of Transportation and Development (LADOTD) projects, the study of cultural resources is restricted to those positioned within the existing or required right-of-way. This presentation will draw from comparative data from various other state DOTs and will discuss archaeological stewardship as it relates to LADOTD projects.

Boutton, Tom [159] *see Nordt, Lee*

Bovy, Kristine (University of Rhode Island)

[4] *Why So Many Wings?: A Re-Examination of Avian Skeletal Part Representation in the Northwest Coast, USA*

The abundance of bird wings in archaeological sites, relative to other elements, has long been noted in the Pacific Northwest and around the world. I re-examine this issue using data from three late Holocene sites with large numbers of bird bones: the Watmough Bay site on Lopez Island in the Gulf of Georgia (n = 7712), the Minard site on the southern Washington coast (n = 3498), and the Umpqua/Eden site on the south-central Oregon coast (n = 1611). I compare the skeletal part distribution at the three sites and identify patterns in the species and elements that are present.

Bowen, Jonathan (Ohio Historical Society)

[4] *Current Research at Feurt Village Site, Scioto County, Ohio*

Recent research has shown that the 14th century AD Feurt Village site in Scioto County, Ohio, contains a midden ring about 160 meters in diameter, surrounding a central plaza. One apparent shallow pithouse was encountered. While the faunal assemblage is quite diverse, the vast majority of meat consumed came from deer, elk, and bear. Corn dominates the botanical assemblage, with smaller amounts of beans and hickory nuts.

Bowers, Peter M. [30] *see Reuther, Joshua D.*

Bowser, Brenda (California State University–Fullerton)[178] *Female of the Species*

Voorhies and Martin published their groundbreaking book, *Female of the Species*, in 1975, challenging gender stereotypes in anthropology and foreshadowing the development of gender and feminist studies in anthropological archaeology. Likewise, Voorhies has challenged gender stereotypes throughout her professional life and advocated gender studies in her teaching. These influences on her students and colleagues are apparent in many ways, including my ethnoarchaeological research on women's and men's status and alliances in the Ecuadorian Amazon. In this paper, I focus on the materiality of women's status and the importance of their roles as political mediators, issues raised by Voorhies and Martin in 1975.

Boyd, Carolyn (SHUMLA School) and Prewitt, Elton (SHUMLA School)[41] *Field Methods in Rock Art Research*

While universities sometimes use rock art as a recruiting tool, focused classes on methods of research and analysis are lacking. Shumla School, in conjunction with Texas State University, offered a university-level class devoted to field methods in rock art research in 2006. Lectures, readings, and supervised field work were combined with developing a research design, intensive element analysis, computer image enhancement, and creation of scale renderings to provide students with an in-depth introduction to rock art research. This paper reviews the structure and activities used during this intensive 3-week mini-semester.

Boyd, Douglas k. (Prewitt and Associates, Inc.)[99] *What is Northern Toyah Phase? The Toyah Phenomenon on the Texas Southern Plains*

Bone-tempered pottery, Perdiz arrow points, and bison processing tools are hallmarks of the Toyah phase in central and south Texas between A.D. 1200 and 1600. But what do the northernmost Toyah-like remains found on the southern Llano Estacado represent? An expansion of Toyah culture tradition northward from their central Texas homeland? Or, adoption of Toyah material culture by Southern Plains groups? Did Toyah and other social groups maintain friendly relations and cooperate on communal bison hunting ventures on the Southern Plains? Current archeological evidence for northern Toyah is summarized, and thoughts on future archeological research needs are offered.

Boyer, Georgiana [33] see Neuzil, Anna**Boyle, Peter [33] see Neuzil, Anna****Boytner, Ran (UCLA)**[193] *The Empire Return: North American Archaeology abroad and the Pursuit of Objective Science*

While most North American archaeologists advocate objective, scientific research agendas that are derived from universalistic ideology, other voices—supported by organizations such as WAC—are advocating politicized regional archaeologies. This paper examines the tension between the two polarities, exploring the relationships between the positions in two different parts of the world. First, it will examine archaeological practice within the Israel-Palestine conflict, where violent actions make daily headlines. Second, it will investigate indigenous archaeology in southern Andes, where indigenous rights had been suppressed for over 500 years and a new resurrection of local pride and identity is taking place.

Boytner, Ran [115] see Lozada, Maria**Bozarth, Steven R. (University of Kansas)**[67] *Phytolith Analyses of the Mirador Basin*

Phytolith analyses conducted at the site of Nakbe, Peten, Guatemala, have revealed data relevant to the construction and use of artificial terrace constructions dating to the Middle and Late Preclassic periods. The recovery of phytolith data from ancient fields of imported muck suggest important strategies of excavations to assist in interpretative models for the origins and development of complex socio-economic behavior. Data suggest that the identities of specific crops and cultigens can be determined by focused excavation strategies and corresponding laboratory analyses which allow enhancement of subsistence models and explanatory processes.

Brackett, Claudia [39] *see* Lundin, Richard

Bradley, Bruce [190] *see* Hemmings, C. Andrew; [190] *see* Lohse, Jon C.

Brady, James E. (Cal State, Los Angeles)

[141] *Emerging from the Dark: Defining Cave Archaeology as a Field*

While the label cave archaeology appears to define the discipline in terms of the investigation of a particular type of geological feature, the field has an important role within larger theoretical debates in archaeology. Caves are simply the best context for studying certain aspects of Mesoamerican culture, particularly religion. Our unique data set allows cave archaeology to question basic assumptions about how religion is studied. Theoretically, we deal with religion in its most inclusive sense that always encompasses social, economic and political forces. A fundamental contribution of the last decade is the integration of cave data into surface archaeological concerns.

Brady, James E [141] *see* Cobb, Allan B.; [82] *Discussant*; [108] *see* Delgado, Arnulfo; [108] *see* Garza, Sergio

Braje, Todd [154] *see* Erlandson, Jon

Braje, Todd J. (University of Oregon), Gobalet, Kenneth W. (California State University at Bakersfield) and Gaeta, Jereme (California State University at Bakersfield)

[195] *Middle Holocene Fishing Strategies on the South Coast of San Miguel Island, California*
Channel Islands archaeologists have long investigated the substantial increase in marine fishing from the Early to Late Holocene. Zooarchaeological and artifactual data are available on the types of fishes exploited and the kinds of maritime technologies developed. Less well represented from this sequence, however, is zooarchaeological data from Middle Holocene sites. We present data from two Middle Holocene shell middens on the south coast of San Miguel Island. Our analysis helps elucidate changing subsistence patterns during this time period, linking the predominately shellfish harvesting of the Early Holocene and the marine fishing of the Late Holocene.

Brandt, Steven (University of Florida), Hildebrand, Elisabeth (Stony Brook University) and Fisher, Erich (University of Florida)

[100] *Southwestern Ethiopia as a Late Pleistocene Refugium: Recent Excavations at Moche Borago Cave*

Cold, arid conditions of OIS 4 and 2 may have led to discrete environmental refugia and severe hunter-gatherer population bottlenecks in northern/eastern Africa. Testing the hypothesis that highland southwestern Ethiopia was a major late Pleistocene hunter-gatherer refugium, we conducted surveys of caves and rockshelters in this region. Test excavations at Moche Borago cave, and subsequent preliminary analyses suggest a long, possibly continuous late MSA-LSA sequence indicative of innovations and adaptations to acute late/terminal Pleistocene paleoenvironmental fluctuations. We conclude that such refugium adaptations may have shaped social organizations necessary for later founder groups to successfully migrate across and out of Africa.

Brantingham, P. Jeffrey (UCLA)

[158] *Style, Function and Archaeological Site Formation Processes*

The Price Equation provides a basis to model exactly the evolution of any archaeological attribute in terms of payoff-correlated (functional) and payoff-uncorrelated (stylistic) processes. Under conditions of rapid sedimentation and low site disturbance it is possible to estimate with great precision and accuracy both the strength of selection and the influence of stochastic processes on evolutionary change. Such ideal sedimentary conditions rarely obtain, however. Simulations are used to investigate the influence of site formation processes including depositional time averaging and disturbance on our ability to quantify the processes of evolutionary change.

Braswell, Geoffrey (UCSD)

[219] *The Development of Market Economies in Terminal Classic Yucatan*

It is frequently asserted that the first fully commercialized market economy in ancient Mesoamerica developed in the Basin of Mexico during the Late Postclassic period. This paper

considers obsidian procurement and distribution data from important Terminal Classic cities of the northern Maya lowlands, and seeks to demonstrate a transformation from a partially commercialized to a fully commercialized economy at about A.D. 900.

Braswell, Geoffrey (UCSD) [162] *Discussant*

Bratten, John R. (University of West Florida)

[84] *Hurricanes and Mercury: The Use of Environmental Clues to Discover Pensacola's Shipwrecks*

Pensacola Bay and its adjoining waterways contain numerous shipwrecks and other cultural material related to Pensacola's maritime heritage. Maritime archaeologists have documented a Spanish colonization ship from 1559, a Spanish warship from 1705, a 1760s British patrol ship, an English lumber ship from 1882, and a historic marine railway. This paper will describe the remote sensing methods used to locate these vessels and features and how analysis of the local environment may point researchers in the direction of new shipwrecks.

Braun, David [191] *see Ndiema, Emmanuel*

Bray, Tamara (Wayne State University)

[9] *Material Metaphor and Imperial Art: A Cross-Media Analysis of Inca Iconography*

This paper explores the significance of imperial iconography across different categories of cultural production within an analytical framework that privileges the idea of cognition as fundamentally metaphorical and analogical. Through a cross-media analysis of Inca material culture, I show how "thinking through the body" illuminates our understanding of the products and imagery associated with the imperial Inca state. Focusing on one particularly prevalent design element within the imperial repertoire, I discuss the metaphorical linkages between this motif and the human body and consider how the contextual analysis of this motif furthers our understanding of Inca worldview.

Bray, Tamara (Wayne State University) [88] *Discussant*

Bremer, J. Michael (Santa Fe National Forest)

[138] *Surge and Purge: The Rise and Fall of Gallina Cultural Dynamics in North/Central New Mexico*

Between the 9th and 13th centuries in North Central New Mexico the Gallina Culture maintained lifeways developed from Anasazi cultural patterns associated with Pueblo I and Pueblo II. Architecture, settlement patterns, subsistence patterns, ceramics and lithic industries persisted unchanged for 400 years. Unlike the Middle and Upper San Juan Basin, the Gallina heartland witnessed a pattern of consistent cultural development without striking changes such as those witnessed during the Chacoan and later Mesa Verdean occupations. This paper explores the nature of Gallina cultural evolution from its origins in the Navajo Reservoir area to its decline near the Jemez Mountains.

Brennan, Ellen [185] *see Hough, Ian*

Brennan, Mary (University of Arkansas)

[171] *Modeling the Genealogical Landscape: Using GIS to Examine Kinship, Settlement, and Land Utilization in the Arkansas Ozarks*

Cultural landscapes created by historic settlement of the Arkansas Ozarks are opportunities to study interrelationships between people, social systems, and the landscape. Historical archaeology on forest lands in Arkansas has the potential to contribute much to the study of the communities who produced these landscapes. This paper discusses how GIS technology is used to examine kinship, settlement choice, and land utilization along Moccasin and Indian Creeks in Pope County, Arkansas in the late 19th and early 20th century.

Breslauer, Lori [48] *see Robbins, Helen*

Brewer-LaPorta, Dr. Margaret C. (SUNY Purchase and LaPorta and Associates, L.L.C.) and LaPorta, Philip C. (Graduate Center of CUNY and LaPorta and Associates, L.L.C., Geological Consultants)

[87] *Prehistoric Quarry Variation in Atectonic Terranes*

Field reconnaissance along the Kentucky-Tennessee border, in the southeastern United States, has revealed approximately two-dozen styles of prehistoric quarries. Compared to the severely tectonized Appalachian and Ouachita mountains girdling this region, these quarries occur in shallowly-dipping, unfolded Mississippian-age carbonates that were spared the complications of severe tectonic overprint. The controls on quarry architecture, extraction technology and chain of operation will be compared and contrasted for the various quarry types in an attempt to explain how quarries in a relatively atectonic zone can display such wide variability.

Brewington, Seth D. (The Graduate Center, CUNY), Hambrecht, George (The Graduate Center, CUNY), Harrison, Ramona (The Graduate Center, CUNY), McGovern, Thomas (Hunter College, CUNY) and Perdikaris, Sophia (Brooklyn College, CUNY)

[195] *Across the Grey Waters: Comparative Island Zooarchaeology in the North Atlantic*

Twelve hundred years ago an initially homogenous population and economy colonized the offshore islands of the North Atlantic. During the early Viking Age (AD 800–1000) European settlers and domestic mammals and crops expanded from the north temperate islands of the Shetlands and Faroes into boreal Iceland and arctic Greenland. While these different islands shared similar vegetation and landforms, they reacted very differently to the impacts of human activity and climate change. This presentation focuses upon new zooarchaeological research into the historical ecology of the Faroes, Iceland, and Greenland carried out by the North Atlantic Biocultural Organization (NABO) research cooperative.

Brickbauer, Krista (University of Minnesota–Twin Cities)

[12] *Of Marals and Men: A Modern Interpretation of Cervid Iconography Within the Eastern Scytho-Siberian Culture Sphere*

The analysis of the iconography of Late Bronze/ Early Iron Age nomadic pastoralists in Central Asia is a relatively under-developed line of academic inquiry. One of the greatest mysteries found in this culture sphere is the prevalence of deer representations in material culture. This paper attempts to posit a novel, post-processual theory of meaning for this symbol and establish a motive for its importance within this culture.

Bridges, Elizabeth (University of Michigan)

[135] *Imperial Interregional Politics Under Vijayanagara: Recent Research in the Keladi-Ikkeri Nayaka Zone, Karnataka, India*

In the eastern foothills of the Western Ghats lie Keladi and Ikkeri, once the early capitals of a nayaka rulership that originated under a charter from the Vijayanagara empire (c. 1340–1700 C.E.). Imperial interregional political and economic relationships are contested as ranging from mutually beneficial to problematic struggles of domination and resistance; in either case, a balance between interests was surely challenging to establish and maintain over time. This paper reports on current archaeological fieldwork being conducted in and around Keladi and Ikkeri and discusses how its relationship with central authority of the Vijayanagara Empire was materially organized and negotiated.

Brink, James [56] see Bousman, Britt

Britt, Kelly M. (Columbia University)

[111] *2007: A Technique Odyssey for Public Outreach in the Age of Multi-Media and Digital Technology*

Various techniques have been used in public archaeological programs: from more traditional approaches such as public lectures, workshops for volunteers, to more technologically advanced such power point presentations and simulated digs. However, at times we as archaeologists need to stop and ask: are these techniques effective? What other practices can we employ? This paper will highlight new methods used at different sites and institutions such as an online KEEP toolkit used in an outreach program geared toward teachers and students, to discuss advantages and drawbacks of these new methods of engagement and propose additional ideas for future use.

Briuer, Frederick (retired)

[164] *The First Decade of the Fort Hood Cultural Resource Management Program : Goals Accomplishments and Significant Events*

The initial efforts to establish a responsive archaeology program are described in terms of challenges, assets and unique opportunities. The management and research strategies employed were a cooperative effort involving many contributors. Significant accomplishments, such as early EO 11593 compliance and the resourceful use of new and emerging technologies, established Fort Hood as a pioneer in developing more efficient and resourceful management practices. The utility of these early developments actually transcended the Central Texas region and led to research and development with applications in other geographic regions. Examples of R&D that grew out of the Fort Hood experience are highlighted.

Brock, Stephen [126] *see Ausel, Erica*

Brodbeck, Mark (HDR, Inc.) and Herr, Sarah (Desert Archaeology, Inc.)

[72] *The Wide Ruins Archaeology Project: Defining a Sense of Place on the Upper Little Colorado River Landscape*

The Wide Ruins Wash area of northeastern Arizona is best known for the site of Kin Tiel, a thousand-room pueblo occupied in the thirteenth and fourteenth centuries. The Wide Ruins Archaeology project, sponsored by the Arizona Department of Transportation, conducted archaeological and ethnohistoric investigations at six sites, ranging in date from 1000 B.C. to A.D. 1150 within the boundaries of the present-day Wide Ruins community. This paper explores the development of a 'sense of place' at Wide Ruins, and its significance to prehistoric occupants and contemporary tribal members.

Bromley, Gordon [5] *see Rademaker, Kurt*

Broockmann, Daniel (University of Arizona)

[104] *Bones of the Tucson Presidio: A Subsistence Study of Spanish Colonization*

Excavations near the site of the Tucson presidio in downtown Tucson, Arizona recently focused on a midden deposited by the Spanish military garrison. Zooarchaeological analysis of these materials reveals a great deal about Spanish subsistence patterns in what was the Spanish colonial frontier. Preliminary analysis demonstrates that the majority of the meat consumed in the presidio was from Eurasian domesticates, focusing specifically on cattle (*Bos taurus*). There is also evidence of the troops stationed in the presidio supplementing this animal husbandry-based system with wild game.

Broodbank, Cyprian (University College London)

[53] *The Mediterranean and the Mediterranean World in the Age of Andrew Sherratt*

'Mediterranean archaeology' is a popular concept, but an holistic archaeology of the entire basin has proved hard to combine with large-scale narratives of change in and between surrounding regions. The central problem is how to integrate analysis of the Mediterranean as a specific ecological and cultural theatre with the basin's role as a vector for transmission. This paper examines the role of the Mediterranean in the thought of Childe and Sherratt (for both of whom the Mediterranean provided a crucial link between the Fertile Crescent and Europe), and compares this with recent ideas about the micro-dynamics of Mediterranean societies.

Broodbank, Cyprian (University College London) [22] *Discussant*

Brooker, Colin [71] *see Poplin, Eric*

Brosowske, Scott [31] *see Maki, David*

Browder, Jennifer (Cal. State. Univ., Northridge)

[198] *Ritual in Writing at Tepantitla*

The corpus of glyphs from Portico 2 within the apartment compound Tepantitla at Teotihuacan is one of the largest samples of Teotihuacan writing found at the site. In part, these glyphs describe ritual activities portrayed among the figures of the Portico 2 murals. The Portico 2 glyphs further our understanding of the significance of these important murals. The

interpretation of the glyphs supports the idea that the Tepantitla compound was a place of ritual and may have functioned as a House of Song.

Brown, David O. (Anthony & Brown Consulting), Fredlund, Glen G. (University of Wisconsin Milwaukee) and Neck, Raymond W. (Houston Museum of Natural Science)

[159] *Molluscan Fauna and Holocene Paleoclimatic Reconstruction in South-Central Texas*
Analysis of molluscan fauna from the Richard Beene Site (41 BX831) provides important data on past environments along the Medina River south of San Antonio. A total of 56 terrestrial gastropods from the modern surface and 11 stratigraphic contexts at the site reveal little consistent variation in $\delta^{18}O$, while $\delta^{13}C$ variability suggests warmer and/or drier than modern conditions during the Upper Leon Creek and Medina periods and cooler conditions during the Early Holocene Perez period. The 35 mussels examined indicate extreme $\delta^{18}O$ values from the Lower Leon Creek period, around 4135 BP, that could reflect a cooler environment than today.

Brown, David O. [76] see Anthony, Dana

Brown, James [11] see Kelly, John

Brown, Larry [169] see Tchakirides, Tiffany

Brown, Linda (The George Washington University)

[180] *The Agency of Stones and Bones: Hunting Shrines around Lake Atitlán, Guatemala*
During 19th and early 20th centuries, Maya hunters routinely negotiated with the Animal Guardian who physically inhabited certain rock outcrops and small caves around Lake Atitlán. The active relationship between hunters and Animal Guardian had direct archaeological implications. Specifically, certain bones of wild animals were not discarded in household middens but were "handed over" to the Animal Guardian at animated places in the landscape, resulting in the formation of often impressive fauna caches. Once deposited, the Animal Guardian counted the bones to assure that the correct number of individuals was killed, and skeletal remains were reanimated to create new animals.

Brown, Linda [178] see Emery, Kitty

Brown, M. Kathryn (University of Texas at Arlington) and Awe, Jaime J. (Institute of Archaeology, Belize)

[202] *Preclassic Maya Iconography: A View from the Belize River Valley*
Iconographic evidence suggests that the Early and Middle Preclassic Maya were part of a larger pan-Mesoamerican symbol system which depicted ideological concepts pertaining to the social order of the society. It appears objects depicting early symbolic information were used to legitimize unequal status within the community. Early symbolic expressions from the Belize River Valley were depicted on a variety of portable mediums including ceramic vessels, figurines, roller seals, shell, and greenstone. A diachronic examination suggests changes in the symbolic information depicted as well as the mediums of depiction, corresponding with clear evidence of change within the Maya Preclassic social/political system.

Brubaker, Robert (Yale University)

[135] *Pursuing Urban Developments: Research on Masonry Architecture at Vijayanagara*
Along with writing, urbanism and state level organization are among the most commonly cited concomitants of civilization. Despite the frequency with which they co-occur, however, historical and temporal variation in the forms of cities and states complicates the tasks of identifying the most important features of each and understanding the relationships between settlement and political organization. In this paper I explore how the investigation of processes of urbanization may contribute to better understandings of cities, states and the relationships that link them through an examination of the temporal development of masonry architecture at the South Indian imperial capital of Vijayanagara.

Brumfiel, Elizabeth (Northwestern University)

[194] *Commoner Demand as an Economic Force in Postclassic Central Mexico*
Many models of inter-regional interaction in Postclassic Mexico emphasize elite interaction. However, Early-Middle Postclassic households in Xaltocan, Mexico, yield high quantities of decorated ceramics, much of it imported from distant sources in the Basin of Mexico and

beyond. Why did commoner consumption increase at Postclassic Xaltocan, and what impact might this increase have had on regional systems of production and exchange? How widespread were these trends in Central Mexico and beyond?

[107] *Discussant*; [161] *Discussant*

Bruner, David (University of Houston), McDavid, Carol (University of Houston) and Marcom, Robert (University of Houston)

[80] *Urban Archaeology and the pressures of gentrification: Negotiating "Freedom" in Freedmen's Town, Houston*

This paper will describe efforts to conduct community-based archaeology in Freedmen's Town, a National Register-designated African American neighborhood in Houston, Texas. This research is situated within the competing definitions of what constitutes "community development", as used by preservationists, descendants, developers, new residents, the larger community, and politicians. Property rights compete with the rights of indigenous residents to determine what their neighborhood is (and will become) and archaeology is deployed by various stakeholders in different ways. Early findings from excavation, aboveground, and public archaeology research will be discussed in the context of this constantly shifting political, social and physical scene.

Bruner, Kale (University of Kansas)

[94] *Refitting Vindija Cave: Vertical Movement of Upper and Middle Paleolithic Artifacts and Consideration for Post-Depositional Processes on Assemblage Composition*

Vindija Cave in northwest Croatia contains cultural deposits and hominid remains of considerable significance for research concerning the Middle to Upper Paleolithic transition in Europe. Systematic refitting of the chipped stone assemblages within and between stratigraphic levels at Vindija Cave was carried out and six percent of the total chipped stone assemblage was successfully refit. The vertical distribution of refitting artifacts throughout the Upper and Middle Paleolithic deposits demonstrates that post-depositional movement has occurred between stratigraphic levels. Refitting data underscores the importance of further considerations for the role post-depositional processes may have had on the cultural assemblages at this site.

Bruning, Susan B. (Southern Methodist University)

[1] *Texas Archaeology and the Law*

Bordering the American Southwest, Mexico, and the Gulf of Mexico, Texas embodies an archaeological record spread over a vast landscape—within its borders and along its coast—that is impacted by a complex matrix of state, federal, and international legal structures. This paper summarizes key state laws that impact on Texas archaeology and highlights some comparative aspects of federal, foreign, and international legal issues that confront archaeologists working in Texas today.

Bruning, Susan [48] see Sieg, Lauren; [90] see Duff, Andrew; [153] Discussant

Bruno, Maria (Washington University in St. Louis)

[65] *Plant Diversity and Formative Period Agriculture in the Southern Lake Titicaca Basin, Bolivia*

Village life in the Lake Titicaca Basin of the Andes developed during the Formative period (1500 B.C.–A.D. 500). To understand the role of agricultural production and its development over this long period, I examined carbonized plant remains from three sites on the Taraco Peninsula, Bolivia. Patterns of cultivated plants are steady through time, but there is a drastic increase in the diversity of non-cultivated species between the Middle Formative (800 – 250 B.C.) and Late Formative I (A.D. 250 – 300) periods. This increase is interpreted as greater disturbance of the landscape for agricultural production, and increased grazing by domesticated camelids.

Bruwelheide, Karin [36] see Reinhard, Karl

Bryant, Vaughn [36] see Poinar, Hendrik

Bryant, Vaughn M. (Texas A&M University)[36] *Being Miscellaneous: Life as a Paleoethnobotanist*

A half century ago, Volney Jones said that as a paleoethnobotanist he always felt miscellaneous, never fully accepted as either a botanist or an anthropologist. For many of us, this remains true. Academic training requires a heavy dose of botany, preferably as a doctoral major. However, those who have followed this path have often had to "sell themselves" for their talents other than paleoethnobotany. Only later can most of them reveal their true research interests. Ironically, today many archaeologists need ancient plant remains analyzed, but often they rely on ill-trained personnel because there are too few trained specialists.

Bryson, Reid (University of Wisconsin–Madison), Wright, Rita (New York University) and Schuldenrein, Joseph (Georchaeology Research Associates)[145] *Archaeoclimatology: Applications of a Century-Resolution, Site-Specific, Climate Model to Indus Culture History*

People live in places not large areas. Cultures usually span a few centuries. To relate human activity and climate historically, one must do so with a site-specific, high time-resolution viewpoint. Environmental proxies usually do not have appropriate time resolution, and are generalized to large areas. Almost all climate models used for past climates do not have adequate time or space resolution. They are limited at reproducing the present climate. A climate model has been developed for archaeological studies, that is site-specific and high-resolution. Examples which can be verified with field data will be given for the Harappa region.

Bryson, Reid [100] *see* Varney, R.A.; [117] *see* Schuldenrein, Joseph; [145] *see* Anderson, Patricia C.; [145] *see* Gear, W. Michael

Buccellati, Federico A. (University of Tuebingen)[187] *Stratigraphy and the Dynamic Build-Up of the Record*

A hands-on presentation of the operations for producing the publication of the Global Record. Beginning with direct field and lab observations it ends with a highly hyperlinked publication. The result is a tool used in the field to shape the day-to-day strategy. Employing specific test cases from the excavations of Urkesh, some select types of input are chosen to illustrate how specific stratigraphic observations are coded. How they are run is illustrated through programs that integrate the most atomistic details into broader syntheses – including indices and frequencies. The final product also can be integrated into 3-D and GIS representations.

Buccellati, Giorgio (Cotsen Institute of Archaeology UCLA)[187] *Theoretical Principles and Website Applications*

The success of a properly digital archaeological analysis depends on the rigor and coherence of the pertinent theoretical presuppositions. They constitute a closed "grammatical" system whereby each element is endowed, implicitly, with multiple tags. The application of programs makes explicit the full web of paradigmatic connections that these tags imply, and it automatically creates a fully hyperlinked browser edition. Each time a program is run, it updates the very same presentation that constitutes the core of the final publication. The minutest detail is thus immediately accessible and is at the same time embedded in a variety of synthetic tabulations.

Buccellati, Giorgio (Cotsen Institute of Archaeology UCLA) [172] *Discussant*

Buchanan, Briggs (University of British Columbia) and Collard, Mark (University of British Columbia)[158] *Investigating the Peopling of North America through Cladistic Analyses of Early Paleoindian Projectile Points*

The colonization of North America remains a controversial topic. There is widespread agreement that Clovis and related cultures of the Early Paleoindian period represent the first well-documented indications of human occupation, but considerable differences of opinion exist regarding the origins of these cultures. Here, we report the results of a study in which characters derived from a continent-wide sample of Early Paleoindian projectile points were analyzed using cladistics in order to assess competing models of colonization and adaptation. The analyses indicate that a northern entry of populations best accounts for the observed pattern of structure in the data.

Buchanan, Briggs [158] *see Collard, Mark*

Buikstra, Jane (Arizona State University/CAA) [196] *Discussant*; [83] *Discussant*; [36] *see Reinhard, Karl*

Burchell, Meghan (McMaster University) and Natalie, Brewster (McMaster University)
[4] *Faunal Indicators of Site Occupation and Marine Resource Use at the Dundas Island Group, British Columbia*

This study assesses the feasibility of using multiple faunal indicators to determine the intensity and nature of site occupation in the Dundas Island Group, British Columbia. We examine the relationship between fish and shellfish remains and compare the degree of shell crushing and the abundance of fish remains to determine differences in the intensity of site occupation and the nature of the local and regional fishing economy. These results are compared to general observations of site size, location, duration of occupation, and surface features.

Burchell, Meghan [62] *see Kingston, Andrew*

Burdin, Sheldon [197] *see Jefferies, Richard*

Burger, Richard [174] *see Turner, Bethany*

Burgett, Jessica and Hammerstedt, Scott (University of Tennessee)

[215] *People, Pots, Production, and Power: Insights from Collections in the American Southwest and Southeast*

The use of existing collections is increasingly important to archaeologists as practical, financial, political, and preservation concerns limit new excavations. These collections often sit unused and unanalyzed in museums and other repositories. In this paper, we outline ways in which we use existing collections in our studies. Research on collections from Fort Bliss, Texas, Di Peso's work at Paquimé, Chihuahua, Mexico, and WPA material housed at the University of Kentucky is discussed. We outline two collections-based projects, one focusing on the distribution of ceramics in the Southwest and the other on mobilization of labor by Mississippian elites.

Burgett Jolie, Ruth [192] *see Jolie, Edward*

Burke, Ariane (Université de Montréal), GILBERT, Louis (Université de Montréal), PARSLOW, Carla (University of Toronto), MEIGNEN, Lilianne (C.N.R.S. (Valbonne)) and BISSON, Michael (McGill University)

[23] *The Sado River Drainage Survey*

The Sado river was once a major communication axis between the agricultural heartland of Baixa Alentejo (southern Alentejo, Portugal) and the Atlantic coast. Modern agricultural practices and recent droughts have created a situation favourable for archaeological survey. The Sado River Drainage Survey was established in 2005 to systematically survey the region around the Sado river for evidence of Palaeolithic occupation. Preliminary results, indicating the presence of a Middle Palaeolithic industry based on locally available jasper, are presented.

Burke, Ariane [45] *see Ebert, David*

Burkholder, Jo Ellen (University of Wisconsin-Whitewater)

[81] *Maybe I am Crazy: Mental Health in the Midst of the Insanity of Grad School*

Few people finish a Ph.D. without episodes of extreme stress and the atmosphere of grad school in general can feel out of control at times. Yet, graduate students do sometimes experience the onset of real mental illness and figuring out what to do about it can be difficult. With anonymous help from people who have coped with mental illness in graduate school and beyond, this paper explores what these people wished they had known when they were in graduate school and offers hope for those of us who sometimes think we might be crazy.

Burks, Jarrod (Ohio Valley Archaeology, Inc.)

[31] *Magnetic Anomaly Verification (Ground Truthing) on Prehistoric Sites in Ohio*

Ohio archaeological sites are near ideal for magnetic gradient surveys. In the last five years

Ohio Valley Archaeology, Inc. surveys covering about 40 ha across dozens of sites have located hundreds of prehistoric (6000 B.P.–400 B.P.) features, including earthworks, pit features, postholes, and earth ovens. In this poster I synthesize these results and present some common patterns in the magnetic signatures of Ohio's archaeological features. Not surprisingly, certain feature classes are more readily detected and generally can be identified even without verification. Also discussed are ways to improve the utility of surveys, and observations on what makes these archaeological features magnetic.

Burnett, Paul (SWCA Environmental Consultants), Bollong, Charles (SWCA Environmental Consultants) and Slessman, Scott (SWCA Environmental Consultants)
[4] *Intensive Late Prehistoric Butchery of Multiple Elk Carcasses in Southern Wyoming: The Joe Miller Site (48AB18)*

Excavation of 25 m² in 1980 and 73 m² in 2006 have revealed an extensive Late Prehistoric deposit of intensively butchered elk (*Cervus elaphus*) remains at the Joe Miller site in southern Wyoming. Minor amounts of other fauna are present, but elk dominate the assemblage. This poster defines (i) species composition, (ii) element frequencies, and (iii) a pattern of extreme marrow extraction at this site. Archaeofaunal assemblages dominated by elk are previously undocumented in the northern plains and adjacent mountains. Additionally, this level of processing is very rarely observed. Both aspects lend regional significance to this site.

Burnett, Paul [34] see *Eckerle, William*; [4] see *Slessman, Scott*

Burnett, Scott (Arizona State University) and Lerner, Shereen (Mesa Community College)

[96] *Aliens, Lost Continents, and Curses: Confronting Pseudoscience in Archaeology*
Archaeologists are frequently challenged by inaccurate pseudoscientific representations of the past. In an effort to determine the efficacy of teaching strategies that address the nature of science and pseudoscience, we conducted a survey of college students enrolled in 8 sections (pre-test n = 258) of Old and New World Archaeology. Specifically we compared pre and post-test responses indicating student levels of support on scientific, pseudoscientific, cultural, and religious topics. Our results indicate that students receiving specific instruction contrasting scientific and pseudoscientific methodologies are better able to critically evaluate such topics, with the greatest change occurring when students received additional information debunking specific misrepresentations.

Bush, Jason W. (Center for Big Bend Studies, Sul Ross State University)

[73] *Archaeological Reconnaissance in the Glass Mountains, Texas: A Preliminary Appraisal of Burned Rock Middens in a Semi-Arid Environment*

Reconnaissance in the Glass Mountains, an archaeologically little-known area of the Texas Trans-Pecos, documented 23 sites containing burned rock middens. These features are morphologically diverse, exhibiting a fusion of characteristics that, in terms of geographical distribution in the region, are typically exclusive of each other. Is this variability indicative of subsistence strategies unique to the greater Tran-Pecos region? What role did these middens serve in forager subsistence in a semi-arid environment? Placing these features in their environmental context at the meso-scale will allow for coarse-grained hypotheses about their role/roles in subsistence to be evaluated.

Bush, Leslie (Macrobotanical Analysis) and Munson, Patrick (Indiana University)

[10] *Look What the Cat Brought In: Burs as Seasonal Indicators on Archaeological Sites in Temperate Eastern North America*

We presume that burs, having little or no economic value, were inadvertently introduced to sites as adherents to the fur of prey animals and to clothing, and their presence reflects the immediate disposal of a nuisance plant. To determine what species might be expected and their seasons of occurrence, we collected over a four year period all burs adhering to a longhaired indoor-outdoor cat and to the clothing of the cat's owner. The study area is in the rural hill country of south-central Indiana. These data provide a framework for understanding burs as seasonal indicators.

Bustard, Wendy (Chaco Culture NHP) [8] *Discussant*

Butler, Margaret (Stanford University)

[133] *"I Think This is the Beginning of a Beautiful Friendship": Correspondence Analysis and Cohesion (Network) Analysis in Archaeology*

A regional study of death-ritual, an anthropologically attested negotiation of community-based identities and cultural ideologies, enables correlation of socio-cultural changes and interactions within and across relevant communities. Exploratory methods, such as correspondence analysis, allow the archaeologist to move between theory and data in a relatively non-biased way, figuring out what are the best questions to ask of the data. In addition, a relatively new network analysis technique called cohesion analysis facilitates determination of what explains emergent clusters of grave goods. An understanding of what variables determine homogeneity, heterogeneity, and change helps the archaeologist to assess data both quantitatively and qualitatively.

Butler, Virginia L. (Portland State University) [195] Discussant

Butman, Elizabeth [5] see Cassedy, Daniel

Buvit, Ian (Washington State University) and Elkins, Melissa (Washington State University)

[90] *Recent Excavations at Cerro Pomo, a Focal Pueblo II Site in West-Central New Mexico*
Archaeologists from Washington State University carried out excavations at Cerro Pomo, a Pueblo II great house, in 2005 and 2006. The site includes a large circular depression and thick midden adjacent to a multi-room rubble mound. Goals for the 2006 fieldwork were to precisely define the lateral extent of the room block, to examine construction attributes for characteristically Chacoan features, to collect samples for dating, and to identify the function of the pit feature. Here we describe preliminary results of the 2006 excavations and briefly discuss the site in the context of the greater Chacoan sphere of influence.

Buvit, Ian [34] see Terry, Karisa

Buzon, Michele [17] see Conlee, Christina

Buzon, Michele R. (University of Calgary), Conlee, Christina A. (Texas State University), Simonetti, Antonio (University of Alberta) and Creaser, Robert A. (University of Alberta)
[62] *87Sr/86Sr Isotope Analysis of Human Remains from the site of La Tiza, Peru (AD 1–1500)*

This study examines human migration at the site of La Tiza, located near Nasca, Peru. The human remains (N=8) found at this site date to the Nasca 5 period, early Middle Horizon period, and the Late Intermediate Period. Using 87Sr/86Sr isotope analysis we investigate if the burials (including two likely decapitated males) were from the local area. Preliminary analysis suggests that one decapitated burial as well as other individuals may have not have been from La Tiza. Tracing human mobility in these burials provides an opportunity to further explore the practice of trophy head taking and migration in the region.

Byczkiewicz, Donna (San Diego State University)

[111] *Emerging Multimedia Technologies and Resources for Archaeology: An Overview and Demonstration of Programs/Techniques to Enhance Public Education and Interaction*

Archaeologists have begun to harness the cutting-edge power of multimedia computer programs that are rapidly recreating our world with interactive web sites and rich media content like QTVR, 3-D reconstructions, streaming videos and Podcasting. This presentation will survey multimedia genres—interactive content, animation, video and audio—which are most conducive to engaging the public in archaeological topics. This presentation will also discuss the various ways in which these media promise to enhance and transform public education and engagement with audiences. The use of multimedia creates highly lucrative possibilities for increasing public education and support, and funding for archaeology.

Byerly, Ryan (Southern Methodist University)

[165] *Dental Palaeopathology in Northern Plains Bison: Prey Health and Predator Success*

The subsistence success of prehistoric Great Plains hunter-gatherers who regularly utilized bison would have relied on detailed knowledge of their seasonal health (e.g. Frison 2004),

which is governed in part by dental constitution. Here, dental pathologies in bison from several Northern Plains bonebeds are summarized to illuminate the general health of hunted animals from the late Glacial to early Holocene. These data are used to explore current archaeological models of human bison-based subsistence strategies.

Byers, David (University of Utah) and Ugan, Andrew

[4] *Geotemporal Trends in Proboscidean and Human Population Histories during the Late Pleistocene*

This poster documents geotemporal trends in proboscidean and archaeological radiocarbon dates from Europe, Siberia, and North America, in order to examine how fluctuations in the two taxa are related. While the geographic ranges of both species overlap across the terminal Pleistocene of the Old World, these groups exhibit a fair degree of segregation. Fluctuations in the frequencies of these taxa appear uncorrelated before the LGM, after which both increase as climatic ameliorated. Mammoth extinctions only occur well after this period, consistent with the premise that human impacts on proboscidean populations occurred during the sharp climatic shifts of the Pleistocene-Holocene transition.

Byers, David [64] *see Smith, Craig S.*

Byers, Johnny [4] *see Wolverton, Steve*

Byland, Bruce (Lehman College, CUNY)

[46] *Reconciling Disparate Evidence: Mixtec Historical Codices and Archaeology: The Case of Hill of the Wasp*

Mixtec Historical Codices are a source of political and social information about Mixtec communities in pre-Columbian times. Several groups have worked to reconcile codical information with archaeological evidence. These efforts have come to differing conclusions about identification of some sites and the scale of interaction among them. This paper considers varying interpretations of the place sign known as "Mountain that Opens – Bee" or "Hill of the Wasp" and attempts to identify the strengths and weaknesses of each alternative. The goal is to recognize each approach's limitations, and to reconcile the documents with the archaeological record as much as possible.

Byrd, John (JPAC/CIL) and Holland, Thomas (JPAC/CIL)

[48] *Repatriation of US Servicemen: Policy and Practice*

The US government seeks fullest possible accounting of servicemen missing from current and past conflicts. Several agencies are tasked with locating and recovering missing personnel. Most unaccounted-for servicemen are missing from conflicts such as World War II, and the Korean and Vietnam wars. While priority is return of personnel being held against their will, the process usually involves recovery and repatriation of remains, individual identification, and final disposition of remains at the direction of next of kin. This mission is characterized by cutting edge forensic science and military tradition and symbolism honoring the sacrifices of the deceased and their families.

Byrd, John [48] *see Ousley, Stephen*

Byrne, Roger (University of California, Berkeley) and Wahl, David (United States Geological Survey)

[86] *Agricultural Expansion and Contraction in Lowland Mesoamerica: Climate Change and Human Impacts*

An important question facing paleoecologists and prehistorians in Lowland Mesoamerica is to what extent agricultural expansions and contractions were caused by climate change. For example, Hodell and his colleagues concluded that drought was responsible for the Late Classic Collapse; Webster, in contrast, stressed the importance of non-climatic factors, such as overpopulation, environmental degradation, and warfare. Here we present paleolimnological evidence from Veracruz and the northern Peten of Guatemala which indicates that climate change did have an important impact on agricultural activity in Lowland Mesoamerica, although not in the way that Hodell and his colleagues suggested.

Byrnes, Allison (Mercyhurst Archaeological Institute)

[164] *The 41CV115A Lithic Assemblage: Late Prehistoric and Archaic Occupations of a Rockshelter on Fort Hood*

Excavations conducted by Mercyhurst Archaeological Institute at the 41CV115A rockshelter site have yielded a substantial lithic inventory attributed to Late Prehistoric and Archaic period populations. This paper provides a characterization of the flaked stone assemblage with particular respect to site use and the effects of raw material abundance on prehistoric technological organization.

Cable, Charlotte (Michigan State University) [153] Discussant**Cabo-Pérez, Luis (Mercyhurst College), Dirkmaat, Dennis (Mercyhurst College) and Adovasio, James (Mercyhurst College)**

[102] *Forensic Anthropology and the Recovery of the Outdoor Scene: Can Forensic Archaeology Operate as a Stand-Alone Discipline?*

The role of archaeology in crime scene investigations will be reviewed in this presentation. Examples from typical forensic cases conducted over the last 20 years by the authors will serve to illustrate the key conceptual, legal and methodological differences between archaeological and forensic contexts. It will be argued that, while forensic archaeology must be an essential component of forensic science curricula, and professionals with strong archaeology backgrounds must be incorporated into forensic teams processing outdoor crime scenes, the future of forensic archaeology as a distinct discipline, and of forensic archaeologists as professionals, operating independently of forensic anthropology, is questionable.

Cabo-Pérez, Luis [48] see Dirkmaat, Dennis**Cabrera, Ruben [178] see Hosler, Dorothy****Cagnato, Clarissa (Clarissa Cagnato/Yale University), Dresch, Patrick, Geller, Pamela L. (American University) and Bill, Cassandra R. (Middle American Research Institute)**

[147] *El Guayabal and Las Orquídeas: The El Paraíso Valley as a Regional Center in the Preclassic*

Investigations at El Guayabal and Las Orquídeas in the El Paraíso valley confirm the time depth and extent of the valley's settlement. Ceramic analysis indicates both sites were strongly tied to the ceramic traditions of the region and confirms valley occupation dating to as early as the Middle Preclassic. It appears that the Preclassic period was dominated by El Guayabal—a site that includes the largest earthen structure in the Copan region. However, Late Preclassic settlement in the valley was also characterized by smaller sites, like Las Orquídeas, similar to sites located throughout the southeastern Maya area.

Callaghan, Michael (Vanderbilt University), Estrada-Belli, Francisco (Vanderbilt University) and Nievens, Nina (Tulane University)

[149] *Terminal Preclassic Ceramics and Prestige Technology in the Holmul Region, Guatemala*

Since their initial discovery in 1911, Terminal Preclassic orange gloss ceramics have been the subject of much debate concerning the nature of the rise of Classic-period Maya civilization. This paper will seek to understand the production and exchange of Terminal Preclassic orange gloss ware as an attempt by local elites to create allies and maintain legitimacy in a time of political turmoil in the Holmul Region. The gloss surface-finish technique will be understood as a form of "prestige technology" that was perhaps initially controlled by elites for use in the creation of a new ceramic prestige economy.

Callaghan, Richard (University of Calgary)

[22] *On the Question of the Absence of Archaic Age Sites on Jamaica*

Archaic age sites are found on the Caribbean islands of Cuba, Hispaniola, Puerto Rico, and as far east as Antigua. Some of these sites are as early as the fourth millennium BC. However, to date no sites of this period have been found on Jamaica despite attempts to locate them. The earliest known human occupations date to around AD 500 with sites containing Ostionoid ceramics. The reasons why Archaic peoples did not occupy Jamaica or reasons why their

sites have eluded archaeologists are explored. Specifically, environmental factors such as navigational difficulties, hurricane activity, and sea level changes are considered.

Calligaro, Thomas [74] see *Tenorio Castelleros, Dolores*

Callum, Kathleen (USDA NRCS)

[104] *Geography of the Agrarian Frenchtown Experience in Eastern Washington*

The geography of rural agricultural "Frenchtowns" can be viewed at three scales: individual family, community, and the relationship of one settlement to another. This paper utilizes two early 1800's agrarian in Eastern Washington, one in the Colville River valley and the other in near Walla Walla, to illustrate sense of space. Frenchtown geography is rooted in relationships and environmental context. This cultural landscape study relies on General Land Office maps, historic photographs, written documents, oral history, and other archival sources. The resultant perspective can guide USDA Natural Resource Conservation Service's NEPA and NHPA cultural resource compliance.

Calvin, Inga (University of Colorado at Boulder)

[75] *Say What? An Analysis of Pseudo-Glyphs Painted on Late Classic Maya Pottery from Guatemala*

Decipherment of Maya hieroglyphs on pottery has revealed information regarding shape and contents, as well as occasionally providing the owner's name. Unexamined, however, has been the role of polychrome pottery bearing pseudo-glyphs—elements that mimic writing but do not form coherent phrases. Although pseudo-glyphs are recovered from middens and fill, the burials of Maya elites also contain many pseudo-glyph decorated vessels. Legible writing was not the only criterion employed in deciding which objects to include as grave goods. Archaeological provenience, iconographic motifs and resource costs identify pseudo-glyph bearing vessels as a valued component of Maya culture.

Cameron, Catherine (University of Colorado) [181] *Discussant*

Cameron, Catherine (University of Colorado) and Duff, Andrew (Washington State University)

[90] *History Matters: Chaco, Village Formation, and Migration in the Northern Southwest*

Two processes characterize the post-Chacoan Southwest: aggregation into large towns and depopulation of large regions. Environmental and social factors have been argued to account for these developments, but these have neglected another important determinant—history. We argue that aggregation and depopulation are partly the result of historical developments surrounding the expansion and collapse of the Chaco regional system and that later developments in the northern San Juan and Zuni regions—the northern and southern frontiers of the Chaco world—are profitably understood through the comparative lens of their respective histories.

Cameron, Catherine [131] see *Nelson, Margaret*

Camp, Anna (University of Nevada, Reno)

[110] *Before Burning Man: A Look at Land-Use Patterns of Paleoindians in the Lahontan Basin*

My research has focused on Paleoindians, their use of the landscape and patterns that are revealed in the archaeological record. New data on Paleoindian land-use in the Black Rock Desert of northwestern Nevada, has contributed to this knowledge. During the field seasons from 2004 to 2006, many Paleoindian sites were discovered. These stemmed point sites contain a variety of tools revealing a reoccupation of certain areas over thousands of years. Analysis of these associated variables and lithic sourcing will improve our knowledge of this period and human behavior in this unique environment.

Campbell, J. Michael (Mercyhurst College)

[164] *Analysis of Molluscan and Macrobotanical Remains at a Fort Hood Rockshelter Site in Reference to Modern Ecological Studies*

Macrobotanical materials recovered from rockshelter 41CV115 suggest that prehistoric inhabitants may have preferred oak as a fuel between 820 ± 40 and 1260 ± 50 BP, unlike less selective more recent inhabitants. Subtle compositional shifts in land snail and mussel remains

among various levels of the test pits are consistent with regional changes in vegetation and climate posited for the last 1,100 years. Studies of the modern snail fauna of Fort Hood indicate that water transport of empty snail shells and shade seeking behavior of live animals can account for high concentrations of Rhabdous snail shells in rockshelters.

Campbell, Jennifer (University of Toronto)

[135] *Space Syntax and Planning Analysis as Applied to Gor Khuttree Caravanserai, Peshawar, Pakistan*

This paper focuses on the archaeological study of standing architecture and reviews the detailed architectural, space syntax, and planning analysis of Gor Khuttree serai in Peshawar, Pakistan. Serai architecture is characterized by the repetition of a limited number of morphological forms. Using space analysis, in combination with detailed architectural recording, the interplay of function and form can be addressed. Also discussed are methodological issues arising from the transfer of an analytical technique, refined in the United Kingdom, to an area of the world where the potential of detailed architectural analysis to inform archaeological research is only beginning to be realized.

Campbell, Kendall (University of Florida)

[100] *Understanding the Impacts of Paleo-Tsunami on Cupisnique Culture and Its Relevance to the Late Initial Period in Peru*

Paleo-tsunami struck the north coast of Peru sometime near the end of the Cupisnique apogee. Archaeological excavations from a Cupisnique ceremonial center north of Huaca Prieta indicate that this tsunami marks the end of Cupisnique occupation in the area. Ongoing research addresses whether this abandonment by Cupisnique populations was the direct consequence of the tsunami event and whether this event marks the "collapse" of the Cupisnique on the coast of Peru. This paper describes the archaeological correlates of paleo-tsunami and explores the broader cultural significance of this event to our understanding of the late Initial Period on the North Coast.

Campbell, Rod (Harvard University)

[69] *Shang Sacrifice: Hierarchies of Being and the Moral Economy of the Shang World Order*

Frequently lumped together under the heading of "human sacrifice", Late Shang (ca. 1250–1050 B.C.) practices of captive and retainer sacrifice betray very different logics. In the first case, they involved a logic of punishment, with captives reduced to the status of livestock and sacrificed for the sustenance of the ancestors. In the second case, they followed a logic of obligation, with retainers voluntarily or involuntarily following their patrons to service in death. Yet these differences belie a common participation in a social economy of kinship and violence structuring and structured through hierarchies of being that underlay the Shang world order.

Campbell, Stuart [217] see Kansa, Sarah Whitche

Canarte, Pablo [65] see Rivera, Mario

Cannon, Amanda [146] see Vellanoweth, René

Cannon, Aubrey (McMaster University)

[115] *Collective Grave Construction and Hunter-Gatherer Interaction*

The integrative role of lavish burial in other socioeconomic contexts suggests a similar role among hunter-gatherers. Although interpreted as indicators of wealth and status difference, opulent burials from Upper Palaeolithic Europe and the Archaic Northeast and Northwest Coast of North America are more characteristic of contingent collective constructions than individual social displays. This is evident in their rarity, scalar distinction, aggregate structure, and focus on individuals of varied age and gender. Circumstances, such as increased regional population density, requiring accommodation among autonomous groups may account for the emergence of burial as an integrating ritual event.

Cannon, Aubrey [62] see Kingston, Andrew

Cannon, Kenneth (Midwest Archaeological Center)

[114] *Bringing the Holocene Record to Bear on Bison Ecology in the Greater Yellowstone Ecosystem*

Bison ecology is an important management issue in the Greater Yellowstone Ecosystem (GYE), and across North America. However, much of what is known is based on historic and modern records. The purpose of this research is to develop a longer-term historical perspective on the mammalian community of the GYE, a goal emphasized in recent National Research Council publications. The lack of our knowledge of the mammalian community is notable considering all that is known concerning the glacial, climate, and vegetative history. For this paper I will focus on the results of stable isotope analysis of modern and archeological bison teeth.

Cannon, Mike (California State University, Long Beach)

[158] *Modeling the Tradeoff between Foraging and Farming*

This paper discusses a model that builds on previous evolutionary ecology-based considerations of factors related to variability in the importance of farming vs. foraging. This model is more explicit about the activities involved in agriculture, modeling the costs and benefits of harvest-producing activities and post-harvest processing activities separately. The model also enables a consideration of the roles that both mean productive efficiency and variability in production might play in the evolution of agricultural economies. Model predictions are evaluated against archaeological data from the American Southwest to clarify the factors that underlay increases in the importance of agriculture in this region.

Canuto, Marcello [85] see Bell, Ellen

Canuto, Marcello A. (Marcello A. Canuto/Yale University) and Bell, Ellen E. (Kenyon College)

[147] *The El Paraíso Valley: Gateway to the Southeast Maya Area*

Research in the El Paraíso Valley confirms that it served as vital route of access, trade, and communication within the southeast Maya area. During the Late Classic, the valley came under Copan's political hegemony. The twin Late Classic centers of El Cafetal and El Paraíso formed vital nodes within Copan's network of interaction. We explore Copan's administrative strategies, suggesting that El Paraíso was established by Copan to extend its control into the region, while El Cafetal was a local center derived from the valley's long history of local settlement beginning in the Middle Preclassic period.

Canuto, Marcello A. [147] see Escobar Morales, Santiago

Cap, Bernadette (University of Wisconsin–Madison)

[161] *Ancient Maya Marketplace and/or Ceremonial Plaza?: Distinguishing the Function of a Central Group Plaza at Chan, Belize*

Recent attempts to identify the location of ancient Maya marketplaces have focused on exploring plaza areas in site centers that were accessible to the majority of a site's inhabitants. Historic data indicate that this type of plaza was used for single or multiple purposes such as economic transactions, political meetings, or religious ceremonies. Based on macro- and microartifact analysis, architectural data, and soil chemical studies I suggest that the western plaza of the central architectural group at the site of Chan, Belize may be an example of a central group plaza where both economic and ritual activities took place.

Capone, Patricia [48] see Loren, Diana

Caporale, Salvatore [100] see Varney, R.A.

Caporaso, Alicia (University of Rhode Island)

[171] *The Necessary versus Aesthetic: Georgian Control of the Formal Cultural Landscape at Hampton National Historic Site*

Georgian structural and landscape architecture is known for its focus on formal design and symmetry, with the aesthetic viewshed as important as the functional characteristics of its features. The most successful architects achieved this balance of appearance versus reality allowing the estate masters control of what they, their guests, and their workers could and could not see and what impression these cultural landscapes would leave on their viewers.

This study uses GIS techniques to analyze these planned viewsheds on the Ridgley plantation and in turn, what they may indicate about these purposefully designed cultural and divisional landscapes.

Carbajal S., Barbara (PUCP (Pontificia Universidad Catolica), Lima, Peru), Green, Ulrike M. (UC San Diego), Palacios F., Patricia (Museo Contisuyo, Moquegua) and Goldstein, Paul S. (UC San Diego)

[83] *Tiwanaku offerings and offering practices at the Río Muerto M70 site, Moquegua, Peru*
Tiwanaku mortuary practice at the Río Muerto (M70B) cemetery left us ceramic, basketry, botanical and other offerings that differ in form, function and context from those of the better known burials of the Chen Chen style. The distribution of this material includes surface tomb offerings, in addition to within-tomb offerings, indicating distinctive ritual processes related to both interment and perhaps later commemorative events. We argue that these represent mortuary practices that are unique to the Omo Style occupation of the site.

Carballo, David (Center for US – Mexico Studies, UCSD)

[194] *Interregional Contacts, Teotihuacano Expansion, and the Formative to Classic Period Transition in Northern Tlaxcala*

During the Late Formative to Early Classic transition communities in northern Tlaxcala witnessed heightened economic and religious integration, followed by a dramatic reconfiguration of lifeways associated with Teotihuacano urbanization and political expansion. Their inhabitants were active participants in the exchanges in goods and ideas that were channeled through the region, a natural corridor of communication. Better resolution into these social processes is provided using several lines of new evidence, including GIS analyses, iconography, and the household economies and eventual abandonment of La Laguna, the dominant center in the region prior to Teotihuacano expansion.

Carballo, David [200] see Lesure, Richard

Carballo, Jennifer [200] see Lesure, Richard

Caretta, Nicolas (CCSyH-UASLP), van 't Hooft, Anuschka (CCSyH-UASLP), Herlihy, Peter (University of Kansas) and Aguilar, Miguel (CCSyH-UASLP)

[18] *Participatory Research Mapping to Identify, Register and Survey Archaeological Remnants in the Huasteca Region, Eastern San Luis Potosí, Mexico*

This paper presents a proposal to identify, register, and survey archaeological remnants in the lowlands of the Huasteca Region, San Luis Potosí, Mexico. The promising results that can be achieved through the instrumentation of participatory research mapping (PRM) are shown here following Herlihy's et al. (2003) methodology. PRM involves the participation of local "ethno-researchers" to lead community map-making workshops that can produce community maps convertible into standard maps. The paper concludes that PRM opens a new, valuable research venue to identify, register, and survey archaeological remnants, for a rescue, conservation and management strategies for INAH and local people.

Carey, Heather (U.S. Forest Service) and McCorvie, Mary (U. S. Forest Service)

[81] *Student Career Experience Program: Preparing Students for Alternative Careers in Archaeology*

An increasing number of students are now entering graduate degree programs with the intention of pursuing a non-academic career in archaeology. Even as this phenomenon is becoming more widely accepted in academic settings, in preparation for an alternative career path students must often address problematic issues such as networking outside of academia, as well as become familiar with specific knowledge and skills necessary for certain non-academic jobs. One solution is participation in the federal Student Career Experience Program (SCEP), a unique partnership between student, agency, and academic institution which aids in the transition from student to professional status.

Carlson, Catherine (Simon Fraser University)

[148] *Secwepemc Identity in the Early Historic Period (1811–1840) on the Canadian Plateau*

This paper explores archaeological evidence for the maintenance of Secwepemc identity in the early historic period. The Secwepemc (Shuswap) people of the northern Plateau culture

area first encountered Europeans visiting Kamloops (British Columbia) in 1811. This region is the last frontier for European exploration and colonization of North America. Colonial relationships between Aboriginal peoples and fur traders were manifest in the social life and community activities of trade, subsistence and resource utilization, settlement patterns, and political alliances. Artifacts, subsistence remains, and architectural patterns provide key evidence for understanding Secwepemc identity and colonial relationships at the household and community level.

Carlson, Christopher (SWCA Environmental Consultants)

[33] *Data Recovery at LA 457, a Jornada Mogollon village site near Alamogordo, New Mexico*
SWCA Environmental Consultants conducted archaeological investigations at LA 457 in 2005 following trench-monitoring activities for a city waterline bisecting LA 457 for a distance of 752 meters. Data recovery revealed 34 features in archaeologically stratified alluvial-fan deposits, including six pit houses/surface rooms, 11 middens, eight hearth/ash stains, three extramural living surfaces, two roasting pits, and two storage pits—ranging from unspecified Late Archaic times through the El Paso phase. In addition to feature excavations, seven human burial loci containing the remains of at least 12 individuals were recovered, many of whom were interred next to pit houses.

Carlson, David (Texas A&M)

[164] *Estimating Historic and Prehistoric Population Levels at Fort Hood, Texas*
Historic population levels at Fort Hood, Texas can be estimated from U. S. Census records. These estimates allow evaluation of various methods of estimating population levels from historic archaeological data. Over 15 years, over 1100 historic sites have been recorded, covering 300 square miles. Six different methods were compared to the known population levels. Using simulated artifact assemblages to estimate beginning and ending dates of occupation for each site provides an impressive match to population levels. Applying the same procedure to the prehistoric sites provides information about changes in the density of prehistoric sites which may indicate population changes.

Carlson, David [89] see Shafer, Harry

Carlson, Lisabeth (Southeastern Archaeological Research) and Steadman, David W. (University of Florida)

[195] *Late Saladoid Faunal Exploitation at an Inland Site in Northwest Puerto Rico*
On the Tánamá River in northwestern Puerto Rico, fieldwork was completed at the Río Tánamá Site 2 (AR-39) by Southeastern Archaeological Research and the U.S. Army Corps of Engineers. This Cuevas Period village site represents a Late Saladoid population that settled an interior river valley. Although located 8 km inland, the faunal evidence from AR-39 argues for a continued reliance on the marine environment for subsistence. In addition, this site produced bones from extinct species of birds (flightless rail) and mammals (hutia, cave rat, and shrew) reflecting the impact of prehistoric human exploitation to vulnerable terrestrial species on islands.

Carlson, Lisabeth [71] see Keegan, William

Carlson, Shawn B. (Star of the Republic Museum), Bishop, Ronald L. (Smithsonian Institution) and Blackman, M. James (Smithsonian Institution)

[54] *Cultural Connections: Colonial Ceramics in Texas and Mexico*
Earlier studies of Spanish colonial ceramics from the Texas missions have demonstrated that seemingly identical wares were produced in different geographic locales. Compositional studies verified that some clays originated in Mexico while others came from throughout Texas. Now, a study of 600 sherds from 10 Texas missions has been completed using Native American wares, lead-glazed earthenwares, and Mexican majolicas. Cluster analyses, based on Instrumental Neutron Activation Analysis (INAA), have distinguished signature clays and helped differentiate between European-made wares, Mexican-made wares, and Texas-made wares. The results of this research suggest probable production centers and distribution patterns.

Carpenter, John (Centro INAH Sinaloa) and Sanchez, Guadalupe (Museo El Fuerte)[70] *Proyecto Arqueológico Norte de Sinaloa: Rutas de Intercambio*

The Proyecto Arqueológico Norte de Sinaloa was initiated by INAH in 2004 to provide the first systematic archaeological investigation of the region between the Río Mocorito and the Sonoran border. Preliminary results, including the discovery of the important Rincón de Buyubampo site, have stimulated research regarding regional interaction and integration, and to the long-distance exchange network between the Mesoamerican societies of West Mexico and northwest Mexico/southwest U.S. It is probably that the river systems of northern Sinaloa encompass a corridor that later become the caminos reales.

Carpenter, John [70] see Sanchez, Guadalupe

Carpenter, Tim (ArchaeoMetrics Inc.), Eerkens, Jelmer (UC Davis), Linares, Moises (Universidad Nacional Mayor de San Marcos) and Vaughn, Kevin (Purdue University)[17] *Obsidian Hydration on the South Coast of Peru: Prospects and Problems*

We examine the potential of obsidian hydration to date sites in the Nasca region of Peru. Using paired hydration and AMS dates from a stratified site at Upanca and obsidian collected from single-component sites we evaluate the feasibility of hydration as a region-wide dating technique and attempt to deduce a hydration rate for obsidian artifacts in the region. Finally, we examine hydration data from projectile points in an attempt to build a regional chronology of point types.

Carpenter, Tim [110] see Duke, Daron

Carpenter, Tina (Northern Arizona University)[41] *Hohokam Rock Art in the South Mountains, Phoenix, Arizona*

Although Hohokam rock art remains largely unstudied throughout southern Arizona, the importance of documenting and studying rock art becomes more apparent as rampant development threatens the fragile Hohokam rock art localities in the Sonoran Desert. This project incorporates traditional archaeological and rock art methods with landscape theory in the documentation and study of Hohokam rock art in two canyons in the South Mountains, located in metropolitan Phoenix, Arizona. Multiple data sets contribute to the interpretation of the layered landscapes, including ritual and social landscapes, in the South Mountains.

Carper, Raven (University of California, Davis)[50] *The "Silencio Arqueológico": Lithic Technology And Mid-Holocene Adaptations in Southern Mendoza, Argentina*

Excavations in southern Mendoza Province, Argentina indicate a dramatic reduction in site frequency during the mid-Holocene. Granting that paleoenvironmental reconstruction remains incomplete, the paucity of archaeological data between 7 and 4 KYBP is intriguing both as a possible response to increased regional aridity and in its resemblance to similar phenomena seen in the Great Basin and Great Plains of North America. The current study considers broad patterns of lithic technological organization in southern Mendoza. Preliminary work suggests changes in technology and raw material use through time, which trends may have implications for interpreting the purported mid-Holocene occupational hiatus.

Carr, Bob (Archaeological & Historical Conservancy), Ransom, Jeff (AHC) and Schaffer, William (AHC)[71] *Pilgrims in Paradise: Archaeological Investigations at Preacher's Cave, Eleuthera*

Archaeological investigations at Preacher's Cave have documented the first settlement of the Eleutherian Adventurers who were shipwrecked near this cave in 1649. Hundreds of artifacts and faunal bone associated with hearth features reveal the use of the cave for shelter and storage as well as a cemetery and church. Associated Lucayan material and features are also described.

Carr, Christopher (Arizona State University)[132] *Ritual Flamboyance as Competition: A Western Projection on Some Native Peoples' Paths to Social Complexity*

For societies of middling complexity, the archaeologically commonly drawn equation between flamboyance in rituals and competition among intrinsically self-interested individuals and

groups, as well as the popular view of competition as essential to developing social complexity, are called into question empirically. Known crosscultural variation in the degree to which the self is defined as an individual separable from society, and in the range of entities that are extended sentience (consciousness) and personhood (capable of social relations), as well as an illustration with the Scioto Hopewell artifactual and skeletal record, reveal the problems with the equation and suggest a broader, contextualizing, interpretive framework.

Carr, Christopher [204] *see Anderson, David*

Carr, Philip (University of South Alabama), Dumas, Ashley (University of Alabama), King, Howard (Alabama Archaeological Society) and Meredith, Steven (University of Alabama)

[123] *Looking for Common Ground in the Alabama Archaeological Society*

Membership of the Alabama Archaeological Society is declining and members are disgruntled. This past summer board members worked together to satisfy the diverse interests of the membership and especially appeal to surface collectors. A "rock trade fair" was held at which members brought geologic sources of stone from their area to share and stone tools were displayed. Attendees could participate in the field and lab with ongoing excavations. The meeting was successful by many standards, but some current members who might benefit most were absent. Additional effort is needed to increase membership in the society and find common ground.

Carr, Philip [177] *see Ivas, Alice*

Carrasco, David (Harvard University) [69] *Discussant*

Carrasco, Michael D. (University of Cincinnati, Art History) and Loyer, Anne

[13] *Unaahil B'aak: A Look at the Ancient Maya City of Palenque through the Digital Lens*

Through an interactive map, essays, and 3-D architectural models, Unaahil B'aak integrates various lines of data to present a multi-disciplinary website, which presents the dynamic relationship between dynastic politics, ritual, and artistic programs at the ancient Maya city of Palenque. This paper examines the use of new technologies for the presentation of archaeological data both to students and to the wider academic community. Specifically, it explores how digital technologies have made the combination of archaeological, art historical, and epigraphic materials possible in ways that transcend the limitations of other media and reflects on the scholarly ramification of these new possibilities.

Carrico, Richard (Jones and Stokes Associates)

[98] *Ethnohistory on the Border: The Prehispanic and Hispanic Period Tipai Villages of South Bay and San Diego*

The history of Alta California's native peoples in southern San Diego is a reflection of the multi-cultural nature of Spanish colonialism in Baja and Alta California. The native people (Kumeyaay/Tipai) who occupied the area now bisected by the International Border, represent a story often neglected in the formal histories of San Diego and the two Californias. This presentation will focus on who these native people were, how they adapted to Spanish colonialism, what their contributions to Spanish economic and cultural life were, and how their ancient roots continue into the modern era.

Carrillo, Charles (Santos of New Mexico/UNM)

[116] *The Young and the Restless or Digs of My Life*

Every student of archaeology dreams of the "project" that will launch his or her career. In 1977 a unique "grassroots" community based archaeological program hired Charles M. Carrillo to direct their program in the Hispano village of Abiquiu. Charlie was a student of Linda Cordell at the time. Little did he know that the invitation by Linda to "run" the project was an invitation to an entire lifestyle and career. This paper describes both the academic journey and the spiritual journey that shaped my research for the past 28 years. I attribute Dr. Linda Cordell for much of my success!

Carrillo S., Ramon [55] *see Ringle, William*

Carter, Allyson (University of Arizona Press) [24] *Discussant*

Carter, Brian (OSU) and Bement, Leland (OU)[165] *Clovis Bison Hunting at Jake Bluff: Culture Change during the Younger Dryas*

Jake Bluff is an arroyo style bison kill conducted by Clovis hunters near the end of the Clovis era. Continuing investigations and analyses of the site deposits, landscape, and drainage basin yield new insights into the transformations to cultural as well as ecological systems during this period of abrupt climate change in NW Oklahoma. Archaeological evidence for the extent of cultural alterations to technology and subsistence organization is presented against the backdrop of environmental change obtained from pollen, phytolith, stable carbon isotope, and particle size distribution analyses during the Younger Dryas chronozone.

Carter, Cecile Elkins (Caddo Nation of Oklahoma)[1] *A Decade of Straight Talk and Trust*

I was one of the tribal representatives given an opportunity to participate in a symposium entitled Roles and Relevancy: Native American Perspectives on Archaeology at the Annual Meeting of the Society for American Archaeology in 1996. The title of my presentation was "Straight Talk and Trust." Indian Nations and Archaeologists then were just beginning to learn how to communicate in a way that fostered understanding. Now, a decade later, it seems appropriate to ask ourselves: Have we learned how to talk straight? Have we earned trust?

Carter, Elizabeth [217] *see Kansa, Sarah Whitchee*

Casana, Jesse (University of Arkansas)[27] *Tastes Great, Less Error: Photogrammetric Orthorectification of CORONA Imagery and Archaeological Applications in the Northern Levant*

While a decade of research has proven CORONA imagery to be an indispensable archaeological resource in the Near East and elsewhere, the quality of CORONA data that researchers have produced and published remains highly variable. This paper presents results of efforts to develop efficient photogrammetric orthorectification techniques for CORONA imagery, yielding more accurate image maps and enabling the production of high-resolution digital elevation models from stereo pairs. Examples drawn from recent field projects in southern Turkey and western Syria show how these data improve potential for site discovery, landscape feature recognition, cultural resource management, and integration with archaeological fieldwork.

Casana, Jesse [95] *see Fogel, Aaron*

Case, D. Troy [3] *see Usher, Bethany*

Cases, Juan Ignacio (Universidad de La Laguna/Sociedad Española de Estudios Mayas)[143] *On Jewels and Stars: An Epigraphic Approach to Elements of Maya Cosmography*

Recent advances in epigraphy seem to indicate intimate associations between some kinds of jewels and certain cosmographic elements, which could eventually lend valuable insight to the emic conceptualization of those elements of Classic Maya Cosmography. Firstly in this paper, using linguistic and epigraphic sources from Classic to Colonial Period, evidences are presented towards the identification of several elements of cosmography as precious objects—specifically stars and planets as jewels. Secondly, the expression LAM-wa EK', the noun of a Río Azul lord, is discussed in detail, since it probably relates to a major planet as a jewel adorning the astronomical landscape.

Casparis, Luca (American Museum of Natural History)[78] *The Early Classic in the Valley of Oaxaca: The View from Jalieza*

Our knowledge of the Monte Albán State during the Early Classic is still to a great extent based on research at the Zapotec capital Monte Albán alone. The growing corpus of regional survey data represents an important contribution, but any attempt to improve our understanding of the state's functioning and territorial organization requires excavation data from sites at lower levels of the settlement hierarchy. Initial results of ongoing research at the important secondary urban center of Jalieza in the southern section of the Valley of Oaxaca provide new insight into the region's developmental trajectory during the Classic period.

Cassedy, Daniel (URS Corporation), Myers, Terri (Preservation Central, Inc.) and Butman, Elizabeth (Preservation Central, Inc.)

[5] *A 19th Century Historic Landscape Survival in 21st Century Texas*

In the 1840s, colonies of European immigrants were established on the Texas frontier just west of San Antonio. German-Alsatian farmers settled along Quihi Creek in Medina County, where distinctive stone farmhouses were built using an architectural vocabulary from their European building traditions. Data from historic maps, field surveys, and aerial photography are combined using a GIS database to illustrate the survival of this 19th century agricultural landscape into the 21st century. Settlement patterns are delineated to show how the historic mosaic of early roads, house sites, field boundaries, and stream crossings can still be seen today.

Cassell, Mark [96] *see Leeper, Karlene*

Casson, Aksel (University of Washington)

[101] *Luminescence Dating of Neolithic Ceramics from the Turkish Black Sea Coast*

Results of a luminescence dating project aimed at clarifying the chronology of the initial manufacture of ceramics (pre Early Bronze Age) in the Sinop Promontory, Turkey will be presented. Preliminary results indicate that the use of stylistic characteristics to determine age is inadequate. This research is part of a larger analytical project aimed at increasing the precision of luminescence dating through the implementation of optically stimulated luminescence (OSL) dating of fine-grained ceramics.

Cast, Robert [1] *see Perttula, Timothy K.*

Castañeda, Cesar (Universidad del Valle, Guatemala) and Hansen, Richard D. (Idaho State University)

[35] *Desarrollo de Vegetación y Cambio Cultural en la Cuenca Mirador, Guatemala*

La composición, estructura y dinámica vegetal en Cuenca Mirador y su interrelación cultural revela nuevos datos sobre biodiversidad y vínculos entre sistemas naturales y ocupación humana. Hay dos notables formaciones vegetales (bosques altos y bajos) con diversidad de comunidades en sucesión ecológica. Modelos de sucesión para las distintas etapas de ocupación humana sugieren abundancia de lagunas en los bajos actuales y que en las áreas deforestadas, cultivadas y construidas por siglos, se generó erosión, asolvamiento y contaminación que lentamente eutrofizó y aceleró sucesiones ecológicas de las lagunas.

Castañeda, Maria (IIA-UNAM)

[200] *The Origin of Tenochca History*

The victory of the Tenochcas over the city of Azcapotzalco meant the beginning of the rise of Tenochtitlan. This was the right moment to create an official history of the altepetl. Its author would be Itzcoatl (1428–1440), the ruler who had the popular support after his military victory. The objectives of this new history were to unite the ethnically diverse population under a common identity, and obtain an identity for the Tenochca royal house in order to justify the right to govern and conquer.

Castanzo, Ronald (National Museum of Natural History)

[107] *For Household or Community? Lime and Ceramic Production during the Formative Period in the Central Puebla-Tlaxcala Basin, Mexico*

The Tepeaca Kiln Project is studying prehispanic lime and pottery production in the central Puebla-Tlaxcala Basin, Mexico. Two kilns excavated in 2003 are believed to be associated with lime processing during the Middle Formative Period. In 2007–8, the excavation of several kilns at an apparent Terminal Formative ceramics manufacturing center is planned, as well as a comprehensive study of the chemistry of local prehispanic ceramics and clay sources through instrumental neutron activation analysis. Preliminary INAA results are discussed and the role of lime and pottery production in the Formative Period household economies of the Tepeaca area of Puebla-Tlaxcala is explored.

Castellon, Blas (Instituto Nacional de Antropología e Historia Mexico)

[97] *Especialización e Identidad en la Producción Antigua de Sal en el Sur de Puebla Época Posclásica*

Abordamos algunos problemas de la definición de la identidad regional en el sur de Puebla en

la zona de Zapotitlán Salinas. Especialmente la obtención de sal que tuvo gran relevancia en el pasado y subsiste hasta nuestros días. A partir de los aspectos tecnológicos de producción de panes de sal, se hace una propuesta sobre las relaciones entre los productores y las élites locales, su ubicación en términos de identidad, interacción política y subsistencia como grupo, hasta el momento del contacto europeo.

Castillo, Luis Jaime [61] *see Fraresso, Carole*

Castro-Reino, Sergio F. [105] *see Miksa, Elizabeth J.*

Cecil, Leslie [194] *see Nichols, Deborah*

Cecil, Leslie G. (University of Missouri) [139] *Discussant*

Cecil, Leslie G. (University of Missouri) and Glascock, Michael D. (University of Missouri)

[61] *Do Form Measurements Have A Place in Archaeometry? Conjoining Diversity Indices with Chemical Analysis of Pottery from Petén, Guatemala*

Archaeometric analyses of pottery manufacture and exchange typically focus on the composition of sherd pastes. While this focus is essential for understanding provenance and exchange patterns, it cannot always address the more socioeconomic concerns of variation within ceramic traditions and degree of quality control during the manufacturing process. Variation within ceramic traditions also can be interpreted through diversity indices that include rim diameter and wall height measurements. This study demonstrates the value of combining descriptive information (form measurements) with trace chemical data to better understand the changes in Postclassic pottery manufacture (Early vs. Late) and the corresponding socioeconomic milieu.

Centola, Lisa (Washington State University)

[50] *Deconstructing Lithic Technology: A Study from the Birch Creek Site (35ML181), Southeastern Oregon*

Using chipped stone material from two dated occupations of the Birch Creek Site, this paper explores how people made and used stone tools during the middle and late Holocene. The goal of this study is to identify whether factors such as settlement patterns and raw material availability influenced the design of the lithic toolkits. The two assemblages were evaluated along key dimensions of stone tool technology: portability, multifunctionality, maintainability, and reliability. This analysis suggests that the abundance of high quality tool stone on site was the central factor conditioning the manufacture, use and maintenance of stone tools.

Cepon, Tara [3] *see White, Benjamin*

Cerezo, Jessica (University of Arizona) and McClelland, John (Arizona State Museum)

[59] *Ashes to Ashes Dust to Dust: Mortuary Practices in a Classic Hohokam Site*

Mortuary practices at Yuma Wash AZ AA:12:311(ASM), a Classic period Hohokam site in Southern Arizona, are examined in regional and chronological context. Mortuary treatment included inhumations, primary cremations, and secondary cremations. The mortuary practices have been analyzed in terms of treatment of the body and associated material in conjunction with age, sex, and spatial distribution to explore aspects of social differentiation and social persona. Preliminary findings are that interments were consistent in terms of alignment but differed in terms of age.

Challis, Keith (HP Vista Centre, University of Birmingham, UK), Eastwood, Warren (School of Geography, University of Birmingham) and Howard, Andy (Institute of Archaeology and Antiquity, University of Birmingham)

[27] *Mapping Alluvial Geoarchaeology Using CORONA Imagery: Case Studies from the Near East*

It is now broadly recognised that alluvial landscapes are complex and that understanding processes of sedimentation and erosion in such dynamic environments provides the key to understanding the distribution and survival of cultural and environmental archaeological remains. The contribution of archaeological remote sensing is fundamental to achieving this

understanding. This paper explores the use of declassified CORONA imagery for geoarchaeological prospection and mapping of river valleys in the Near East through examples from Syria, Turkey and Iran.

Chamberlin, Matthew (Arizona State University)

[33] *Puebloan Settlement Formation, External Relations, and Social Differentiation*

Many archaeologists view aggregation as a primary cause of social differentiation. This poster argues that in the Salinas Pueblo District of New Mexico aggregation witnessed an elaboration of far-flung ceremonial traditions and an investment in new defensive capacities, developed primarily in traditions of place and in settlement patterning. However, INAA and stylistic data are marshaled to demonstrate that arenas of external relations where new traditions were acquired, identities forged, and prestige attained—including long-distance and local exchange systems—arose previously among dispersed groups.

Chambers, Erica (The Ohio State University), McKee, Jeffrey (The Ohio State University), Guatelli-Steinberg, Debbie (The Ohio State University) and Krigbaum, John (University of Florida)

[100] *Exploring Climatic Variation Using Oxygen Isotope Analysis of Human Tooth Enamel*

The purpose of this study is to determine whether oxygen isotope signatures obtained from human dental enamel carbonate are reflective of past climatic conditions. Samples include twenty-four individuals recovered from Abingdon Cemetery, Oxfordshire, England. These burials roughly correspond to periods of known climatic variation, the Medieval Warming Period (A.D. 950–1450) and Little Ice Age (A.D. 1450–1850). Although the difference in $\delta^{18}\text{O}$ values between these time periods is not statistically significant, the MWP $\delta^{18}\text{O}$ values are comparable to those from a previous study (Fricke et al., 1995), indicating that oxygen isotope analysis is a valuable analytical method for reconstructing past environments.

Chapa, Reymundo (University of Wisconsin–Madison) and Meade Davis, Katharine (Harvard University)

[43] *Aptapis and Archaeology: How Aymara Celebrations at Kasa Achuta, Bolivia, Give Meaning to the Past*

Recognizing the influence of environment on cultural practices, archaeologists often seek analogies from contemporary societies to explain the material record of the past. At the site of Kasa Achuta, Bolivia, a Middle Horizon residential complex in Tiwanaku's urban periphery, ash-pit features are found throughout the complex. The components that distinguish these ash-pits (ash, bone, and ceramic refuse, intermixed with clay clumps) are similar to ash-pits used during Aymara aptapis, events that employ expedient earthen ovens to cook potatoes for a variety of ceremonies. This paper attempts to explain ash-pits at Kasa Achuta by using aptapis as an analogy for practice.

Chapin, Nicholas

[33] *The Southwest Archaic Oshara Typology: The Projectile Point Collection from the Arroyo Cuervo*

In 1973 Irwin-Williams proposed the Oshara Tradition as the Archaic Period cultural sequence in the northern Southwest. Although the projectile point typology was important in defining this sequence, individual types were only vaguely described. This analysis examines for the first time the over 550 points, collected from both surface and subsurface contexts in the Arroyo Cuervo of New Mexico, which were used as the basis for the original Oshara typology. The results of this attribute analysis will help to clarifying the true variability among Archaic Period points and aid in the future classification of this important tool form.

Chapman, Bob (The University of Reading)

[68] *Life, Death and Social Reproduction: Residential Burial in Bronze Age South-east Spain*

During the third millennium BC in south-east Spain, the dead were interred in extra-mural kin-based, monumental tombs. This practice changed c.2250 BC, with the almost entire abandonment of such tombs and the interment of selected dead in mainly individual tombs within residential structures. The marked differences in wealth disposal can be compared directly with the evidence for production and consumption within the same structures and residential areas. The standardisation of all aspects of such residential burial over an area of

some 50,000 sq km implies widely-shared and politically imposed social practices that played a key role in social reproduction.

Chapman, Bob [132] Discussant

Chapman, Rebecca (University Texas–Arlington)

[75] *Blackman Eddy, Belize: A Problematic Deposit from the Maya Lowlands Revisited Within a Regional Context*

In a continued effort to comprehend past behaviors or cultural events that may have lead to the creation of problematic deposits, results from the 2006 microanalysis of ceramics from Blackman Eddy will be compared to other deposits within the Maya lowlands. Until recently, problematic deposits have been assigned cultural associations such as termination, ritual or feasting midden with little regional comparison. In conjunction with other current research, these deposits are examined more critically, with recommendations for standardization of methodological approaches, careful examination of the stratigraphy and extensive refitting to determine the nature of the ceramics in this Middle Preclassic deposit.

Charles, Douglas (Wesleyan University)

[56] *Past Hence Present Sense*

Over the past two decades, evolutionary developmental biology—Evo Devo—has revolutionized our understanding of biological evolution. Evo Devo also has implications for any historical discipline, including archaeology. This paper will examine some of those implications, particularly as they impact Darwinian and agency approaches to archaeology. At issue is the extent to which, or even whether, the past exists in the present in a “real” way. A recent article on the philosophy of history by Runia History and Theory provides a striking parallel to the implications of Evo Devo, and his argument will also be explored.

Charles, Douglas (Wesleyan University) [179] Discussant

Charles, Michael [217] see Twiss, Kathryn

Charlton, Thomas H. and Otis Charlton, Cynthia L.

[97] *Teotihuacan Takes Control: Settlement Systems, Resource Exploitation, and Trade Route Connections*

Once established the city and state of Teotihuacan set up in and near the Basin of Mexico a settlement system which was relatively stable for about 500 years. This system functioned to direct the production and/or movement of natural resources and cultural products from nearby and distant areas to consumers in and outside of the Basin. In this paper we examine aspects of this settlement system using surface and excavated data from the northeast Basin of Mexico and adjacent areas.

Charton, James (Yale University) and Levan, Larry (Yale University)

[147] *Variation in the Use of Open Space among Centers in the El Paraíso Valley, Honduras*

Investigation has shown that the open spaces of El Cafetal and El Paraíso hosted different activities. Differences in phosphate levels within the open spaces of these two sites suggest that the El Paraíso sunken patios were not associated with phosphate-rich activities, while El Cafetal's open plaza was host to several activity areas involved with food preparation, consumption, and disposal. These differences in the use of open space coincide with other differences (such as site plan, architectural form, adornment, and ceramic assemblages) between these two contemporary centers. They further support the notion that their inhabitants were highly distinct from each other.

Chase, Brad (University of Wisconsin–Madison)

[117] *Indus Meat Provisioning at Gola Dhoro: Continuity and Change*

Gola Dhoro is a small Indus settlement in Gujarat, India. Subsequent to its establishment, half of the residential space at the site was enclosed by a massive walled enclosure. The occupants of this new residential block were involved with the manufacture of distinctively Harappan style shell bangles. My study of a large sample of faunal remains from all periods and areas of the site has allowed for an investigation of both changes through time and intrasite variation in the production, processing, distribution, and consumption of the meat that was a significant portion of the diet of this small site's residents.

Chávez, Haydee[70] *Las Tradiciones Cerámicas del Norte de Sinaloa*

Con las recientes investigaciones arqueológicas en el norte de Sinaloa se ha acentuado cada vez más la necesidad de contar con una tipología cerámica que permita la identificación de los distintos tipos presentes en los sitios arqueológicos de esta región. Los últimos análisis cerámicos han proporcionado indicadores para una primera asignación cronológica relativa. La principal finalidad de esta tipología es servir como base para futuras investigaciones en el norte del estado y permitir la confrontación de información a nivel intraregional.

Chávez Balderas, Ximena [200] *see Stanton, Travis***Cheetham, David (ASU & BYU (NWAFF))**[149] *Lowland Maya: The Birth of Identity*

Lowland Maya civilization is characterized by material culture and practices that, although never static, maintained regional coherence for over 1,200 years. How and when did this coherence—this Maya identity—originate? I argue that it was forged through persistent inter- and intra-regional interaction during the Cunil horizon (c. 1000–800 BC). The product: permanent villages and uniform material styles, symbols, and mythic-religious practices. The motivation: agricultural pursuits and a quest for related knowledge and exotic goods. This was the birth of Maya identity in the ethereal and corporeal realms; a defining era of group formation and the path to Maya civilization.

Chen, Kwang-tzuu (Institute of History and Philology, Academia Sinica)[109] *The Southward Expansion of the Shang Culture? Analysis of Proto-Porcelains Excavated at Anyang by the IHP*

Proto-porcelains dated to the Shang period have been found at many sites in North and South China. Chemical compositional analyses suggest both a southern-origin and a multi-origin model. IHP's Anyang excavations in the 1930s yielded several fragments of proto-porcelains that have yet to be scientifically analyzed. This paper examines these fragments via petrographic analysis for the phase identification and textural examination, and via the ICP-ES and PIXE elemental analysis for the glaze and the body of the ceramics. Through correlating with available compositional data from other sites, the possible origins of these artifacts are discussed.

Chesley, John [39] *see Fenn, Thomas***Chesson, Meredith S. (University of Notre Dame)**[133] *Bodies, Bones, and Bereavement: Transformations of Social and Biological Bodies in Death during the southern Levantine Early Bronze Age*

The southern Levantine Early Bronze Age (c. 3600–2000 BCE) involved wide-scale population aggregation, invention of fortified towns, agricultural intensification, domestic and community-wide storage, increasing social complexity, and transformation of social and geographical landscapes. Only two EBA cemeteries have been excavated, and Ilan (2002) argues that EBA mortuary practices are conspicuous for their absence. At Jericho, Bab edh-Dhra, and a limited number of EB II-III sites with clusters of tombs, the majority of peoples' remains were disarticulated and stored collectively during secondary mortuary rituals. This paper explores potential significances to "missing" bodies, disassembled bodies, and our understanding of EBA personhood.

Chiarulli, Beverly (Indiana U of PA)[30] *A Re-Evaluation of Neutron Activation Analysis for the Chemical Characterization of Cherts in Western Pennsylvania, West Virginia, and Ohio*

While Neutron Activation Analysis (NAA) has been used in a number of studies to distinguish types of cherts, there have been some methodological issues associated with using the technique in Pennsylvania. This poster re-evaluates the application of NAA for the sourcing of chert from sites in Western Pennsylvania and describes methods for improving the use of this technique.

Chiarulli, Beverly [170] *Discussant;* [126] *see Neusius, Sarah*

Childs, S. Terry (National Park Service)

[210] *Other Pieces for the Big Picture Are the Collections and Associated Records: Current Problems and Potentials in the U.S.*

Many, but not all, CRM projects in the U.S. generate artifactual collections. All CRM projects generate associated records. Both should become part of the permanent record of the project, and are public property if the project is on federal land. This paper examines the current issues of collecting and preserving the collections and associated records from CRM projects, such as costs, accessibility, and their value to the archeological profession. It then looks at the potential impact of collections and associated records from CRM projects on contributing to archaeological knowledge and providing benefits to the public.

Chilton, Christopher [71] *see Keegan, William*

Chilton, Elizabeth (UMass Amherst)

[132] *Mobile Farmers and Sedentary Models: Horticulture and Cultural Transitions in Late Woodland and Contact Period New England*

New England's mobile farmers have confounded archaeologists and historians for centuries. Some have argued that we simply need more data or better methods to find the large farming villages that we just must be missing. Others have used the invisibility of sedentary villages to argue for a lack of cultural continuity, especially during the Contact period. In this paper I explore the extant data with an eye toward understanding the complexity and diversity of horticultural transitions in New England. In doing so, I attempt to disentangle the processes (and typologies) of subsistence change, social hierarchy, sedentism, and social complexity.

Chippindale, Christopher (Cambridge University Museum of Archaeology & Anthropology)

[214] *Absolute Dating and the Individuality of Rock-Art Sites*

It is vanishingly rare for the sequence at a rock-art site to be dated in detail, that is, for there to be so many and reliable absolute dates that one can track what was done on the same panel over a known and extended period. Such a set of reliable determinations exist for the three 'Gunbirdi' sites, in tropical North Australia. Distinctive features of the image-making are shown to be consistent over a long period at any one site—whilst at other sites only a few metres away a different set of traits persist. Each site is indeed an individual place!

Chisholm, Brian [33] *see Matson, R.G.*

Chisholm, Linda [4] *see Hoffman, Brian*

Chiu, Miriam [192] *see Lizarraga, Karen*

Christensen, Christian [108] *see Garza, Sergio*

Christian, Duane [123] *see Gorden, Mary A.*

Christie, Jessica Joyce (East Carolina University)

[76] *Possible Late Forms of the Inka Usnu in the Vilcabamba Region*

The Inka usnu made a strong statement about the political and ritual power of the ruler in settlements of the late 1400s. This paper will look at four sites (Waman Marka, Vitcos, Choqek'iraw, Espiritu Pampa) in the larger Vilcabamba area associated with Pachakuti and/or Manko Inka. Traditional usnus are absent but there are conspicuous platforms which tower above sections of the settlements. These platform structures might be seen as speculative late usnus which functioned as theatrical stages for the ruler's public appearances but also as strategic observation points as can best be documented for Waman Marka and Choqek'iraw.

Chu, Alejandro J. [175] *see Hodgins, Gregory*

Chu, Cheng-yi [20] *see Li, Kuangti*

Chuiipka, Jason (University of Colorado)[196] *Community Architecture at Sacred Ridge*

The Sacred Ridge Site was the largest aggregation of households in Ridges Basin during the Pueblo I period. Rather than being a plaza-oriented community, ritual activities at Sacred Ridge appear to have been conducted in pit structures and at a complex of features on the ridge top. Both of these contexts would have been more exclusionary and hidden than in plaza-oriented ritual. Among the elements within the ridge top complex was a tower that was prominently situated and may have functioned as a symbol of status and power that reinforced claims to the resources of the area.

Church, Minette (University of Colorado, Colorado Springs) and Yaeger, Jason (University of Wisconsin, Madison)[19] *"We May Have a Perfectly Harmless and Well Affected Inhabitant Turned into a Designing and Troublesome Neighbor": San Pedro, Belize*

The Caste War was a spectacular instance of indigenous resistance to Spanish/Mexican rule. Émigré Maya villages established in territory that would become British Honduras provide a unique lens for understanding how Maya everyday life changed with autonomy. Some colonial institutions and practices were unexpectedly retained, others abandoned. These took on new meanings under British colonial rule, where these villages occupied a delicate political and economic position amidst competing interests of Mexican and British Colonial governments, logging firms, and other Maya villages. Their material record can only be understood within the interplay of strategic resistance, affiliation, and accommodation that resulted.

Church, Tim [169] *see Walker, Steven James*Cinquino, Michael [11] *see Hayward, Michele***Ciolek-Torrello, Richard (Statistical Research, Inc.), Douglas, John (Statistical Research, Inc.) and Grenda, Donn R. (Statistical Research, Inc.)**[213] *Life at the Nexus of the Wetlands and Coastal Prairie, Los Angeles, California*

Since 1989, Statistical Research has conducted large-scale archaeological surveys and excavations in the Ballona wetlands on the southern California coast. Our overarching goal has been to study human adaptation to a dynamic environment. As part of our effort, geoscientists spent over a decade reconstructing the Holocene environment of the wetlands. At the same time archaeological investigations revealed an 8,000-year history of human occupation. Together these studies have shown that social change in the Ballona was related to the gradual evolution of the wetlands and surrounding coastal prairie, climatic fluctuations, and the movement of people between the desert and coast.

Ciolek-Torrello, Richard [146] *see Douglass, John G.*; [38] *see Wegener, Robert***Claassen, Cheryl (Appalachian State University)**[154] *A Review of Ritual Activities in Eastern US Caves*

Rituals have been conducted inside caves since Paleoindian times. Paleoindians buried humans and ravens, Early Archaic communities placed dedicatory human burials in some caves, along with swans and dogs, and prepared ocher. Late Archaic folks occasionally left glyphs inside and frequently left shells. Women removed to rockshelters for menstruation, birthing seclusion and reproductive health concerns and undertook related tasks while there such as drilling, twinning, and weaving. Early Woodlanders engaged in human sacrifice and mining while Middle Woodlanders used caves extensively for depositing the dead. Mississippian men removed to the depths of caves to leave religious iconography.

Clabaugh, Patricia (Texas A&M University)[159] *Cooking-Related Features at the Richard Beene Site, South-Central Texas*

The Richard Beene site contains features spanning 9,000 years in varying states of preservation representing diverse activities typical of short-term hunter-gatherer encampments. Two broad classes of features were identified: (1) cooking-related features, including earth ovens and hearths; and (2) debris concentrations, including mussel shell dumps, sheet middens, and flood-lagged deposits. Many cooking-related features contained fire-cracked rocks, burned and unburned pieces of chipped stone and mussel shells, and often bone fragments probably representing remains of family-sized cooking facilities, as opposed to

large, communal or bulk-processing facilities. Sheet middens likely resulted from disposal of cooking feature fill.

Clark, Bonnie (University of Denver) and Skiles, Stephanie (University of Denver)

[191] *When the Foreign is Not Exotic: Ceramics at Colorado's Japanese Internment Camp*
During World War II, the United States government interred 110,000 Japanese and Japanese-Americans in relocation camps. Archaeological survey at Camp Amache, Colorado, reveals that in this time and place where Japanese identity was under siege, Japanese ceramics were very common. Many factors mitigated against their presence including the limited personal goods internees were allowed to bring, financial strain, and the severing of trade relations with Japan. This talk will review recent research about the camp as a way to examine a situation where imported goods were perhaps the least "foreign" element of a people's way of life.

Clark, Jeffery [181] see Hill, Brett

Clark, John (Brigham Young University)

[58] *Social Simplification as Complexity: Integrating Kith with Kin in the Americas*

This paper surveys the earliest attempts in North, South, and Middle America to create integrative mechanisms for living in large groups that included non-family members. Although considered as the evolution of social complexity and ranking, the creation of mechanisms and institutions of social integration represented an overall simplification of social relations—from the factorial complexity of face-to-face societies to social groupings based on mediated and stereotyped, impersonal relationships. In the earliest experiments in group living, different integrative mechanisms were tried, so the evidence of social "complexity" differs according to the means of bringing together kith with kin.

Clark, John [25] see Colman, Arlene

Clark, John Edward [178] see Hodgson, John Garwood

Clark, Terence (University of Toronto)

[106] *Radiography and Reef Nets: Prehistoric Evidence for the Antiquity and Distribution of Reef Netting on the Northwest Coast*

Reef netting is one the most socially and technologically complex ethnographically-documented subsistence activities on the Northwest Coast of North America, the antiquity of which has not yet been established through traditional archaeological excavation. This paper uses radiography to examine the spawning age (age at death) of salmon from vertebrae. This technique has been used previously to identify different species. Radiography of a large sample of vertebrae from numerous sites from the Gulf of Georgia shows a dramatic restriction in species diversity where reef netting is present. Using this information the antiquity and distribution of reef netting is plotted using GIS.

Clark, Tiffany (Desert Archaeology, Inc.) and Eckert, Suzanne (Texas A&M University)

[62] *Integrating Ceramic Sourcing Analyses: A Study of Chupadero Black-on-White Pottery Production*

Archaeological research has shown that the combined use of mineralogical and chemical characterization techniques can be a powerful analytical tool for evaluating ceramic compositional variability. This study compares data obtained from petrographic and instrumental neutron activation analyses of Chupadero Black-on-white pottery from prehistoric sites in New Mexico in order to evaluate the relationship between the chemistry and mineralogy of archaeological ceramics. Results indicate that production groups identified by the two ceramic sourcing techniques generally correspond. In certain cases, however, the petrographic analysis of Chupadero pottery reveals more finite compositional distinctions than is discerned in the chemical data, and vice versa.

Clay, Berle (Cultural Resource Analysts, Inc.), Hargrave, Michael (ERDC CERL) and Dalan, Rinita (Minnesota State University-Moorhead)

[31] *A Large Area Magnetic Survey at Poverty Point*

A large area magnetic field gradient survey at Poverty Point has focused on Southwest ridges 1 and 2 and adjacent portions of the plaza. Large (20–28 m in diameter) circular anomalies at

the plaza edge may indicate post circles. Linear positive anomalies that parallel the ridges in some areas suggest "flank midden." Their presence/absence may indicate the relative intensity of domestic activity. Linear negative anomalies may represent ridge components designed to control slumping. Additional near-surface geophysical survey, down-hole measurement of magnetic susceptibility, susceptibility analysis of targeted samples, and future ground truthing are needed to evaluate these preliminary interpretations.

Clayton, Sarah [49] *see Novotny, Anna*

Cleeland, Lauren [112] *see Vehik, Susan*

Clifford, Jim [155] *see Wesson, Alex*

Cline, Cathey (Eastern New Mexico University)

[157] *Osteological Patterns of Paleopathology: A Comparative Study of the Tommy Site Population and Other Puebloan Communities in the Chacoan System*

Until landowner Tommy Bolack unearthed it in 1987, the Tommy Site lay beneath the alluvial deposits of the middle San Juan River in northern New Mexico. It has since become the focus of extensive archaeological investigations, revealing almost 100 human burials, and a significant number of dated ceramics. This study focuses on the paleopathology within this population, as well as a comparison with other sites in the Chacoan system. Initial osteological studies suggest that the occupants of the Tommy Site were healthier and more active than either their contemporaries or their successors.

Cloud, William A. (Andy) (Center for Big Bend Studies, Sul Ross State University) and Piehl, Jennifer C. (Center for Big Bend Studies, Sul Ross State University)

[73] *Revisiting La Junta de los Ríos: New Data from Archaeological and Human Osteological Investigations*

J. Charles Kelley's research of Late Prehistoric-Protohistoric agricultural villages in the La Junta Archaeological District was conducted primarily in the 1930s–1950s. These sites have seen little archaeological attention since that time; however, recent archaeological investigations and analyses of human interments recovered from La Junta by the Center for Big Bend Studies, Sul Ross State University are shedding new light on the distinctive farming cultures that occupied this hot and desolate environment. The development of pithouse architecture, mortuary customs, and health patterns during the village occupation are presented as a means of revitalizing research into the La Junta cultures.

Coats, Larry [82] *see Emslie, Steven*

Cobb, Allan [108] *see Garza, Sergio*

Cobb, Allan B. and Brady, James E (Cal State LA)

[141] *The Contribution of Cavers to the Development of Maya Cave Archaeology*

Since the late 1980s, the subdiscipline of Maya cave archaeology has benefited from the direct involvement of cavers who possess specialized skills necessary to map, investigate and explore these unique environments. Additionally, cavers have contributed specialized knowledge in such disciplines as biology, geology and computer science. Importantly, cavers have trained archaeologists to recognize modifications, such as speleothem breakage, leading to new insights into cave use. The methodological, theoretical, and scientific growth of the subdiscipline can be directly attributed to the incorporation of cavers into archaeological projects.

Cobb, Charles (Binghamton University) and Drake, Eric (Binghamton University)

[25] *The Color of Time in Eastern North America, A Study in Contrasts*

Color symbolism has a deep history in eastern North America, manifested in media ranging from earthwork soils to personal adornments. This symbolism is often depicted in strongly contrastive ways, notably the juxtaposition or repetition of red and white. We suggest that such color combinations evoked monumental time, referencing long-term patterns of deep ritual or cosmological knowledge. Yet the doxic aspect of color and time was manipulated through history, reworked in material form to convey notions of social time that denoted rites of passage, or even experiential time embedded in the sensual aspects of daily life.

Cobb, Peter (UNC)[77] *The UTARP Information System*

This paper gives a brief overview of a comparative example of an excavation database. The application of database technology to archaeological excavation has advanced rapidly in the last few years. Digital data provides the potential to enable improved access by the scholar to larger amounts of data than ever before. The UTARP Information System (UIS) was implemented during our first year at Kenan Tepe in 2000. We have continued to populate this database with new data as we have excavated it directly in the field. Thus, the UIS now contains a large quantity of highly detailed data available for immediate analysis.

Coben, Lawrence (University of Pennsylvania) [88] Discussant**Cobos, Rafael**[189] *Isla Cerritos: A Coastal Community at the End of the Classic Period*

Studies undertaken in the 1980s at Isla Cerritos confirmed the site's role in an intricate maritime trade network as well as Chichén Itzá's principle seaport in northern Yucatán during the Terminal Classic period. Recent excavations conducted at Isla Cerritos have yielded new data which are being used to interpret the function of this site as a coastal community. The analysis of the latest data allow us to better understand the site's internal morphology as well as reconstruct a small part of the complex and intricate internal functioning of a coastal community.

Cochrane, Ethan (Institute of Archaeology, UCL)[22] *Defining the Boundaries of Ancient Island Populations through Pottery Provenance Analyses*

The perceived separateness of islands encourages archaeologists to think about interaction—the movement of people, ideas, and artifacts—between different island populations. In Oceania, exotic artifacts recognized through provenance analysis have helped archaeologists describe interaction patterns. Research in the islands of western Fiji uses provenance analysis in a slightly different way. Clay provenance analysis (LA-ICP-MS) of a large, diachronic archaeological pottery assemblage from five islands defines the changing spatial boundaries of a pottery using population across multiple islands. This population description is a baseline that helps us explain the distribution of exotic artifacts over time and space.

Cochrane, Ethan [158] see Terrell, John; [167] see Stockdale, Neil

Cock, Guillermo [19] see Murphy, Melissa

Coffey, Grant (Crow Canyon Archaeological Center), Kuckelman, Kristin (Crow Canyon Archaeological Center) and Copeland, Steve (Crow Canyon Archaeological Center)[33] *Investigation of Goodman Point Pueblo: A Canyon-Rim Village with Multiple Bi-Wall Structures*

The Crow Canyon Archaeological Center's long-term research in the central Mesa Verde region of the American Southwest currently focuses on the Goodman Point community. The remains of this community, located in the Goodman Point Unit, Hovenweep National Monument, are being investigated during a six-year project that began in 2005. In the initial three years of excavation, we are examining Goodman Point Pueblo, a large canyon-rim village constructed during the middle A.D. 1200s. Research thus far suggests the presence of three uniquely situated bi-wall structures—regional evidence indicates that other such structures were used for special purposes.

Cohen, David (University of California, Berkeley)[144] *Human Subjugation and the Creation of a 'Bakgalagadi' Identity in Southeastern Botswana, AD 700 to AD 2007*

Botswana is rife with groups and political entities on the edge of their seat waiting to project modern constructed 'ethnic' identities on places and things of the past. In some cases, these practices have involved the creation of imagined human collectives of 'minority' groups, which have now been accepted as realities. Through a view from the southeastern fringe of the Kalahari/Kgalagadi Desert, I will discuss the historical constructions of groups now called

‘Bakgalagadi’ and the possible archaeological antecedents of these peoples before and after the arrival of Tswana-speaking groups that came to dominate the modern political and social landscape.

Cohen, Leslie (Museum of Indian Arts and Cultures/Laboratory of Anthropology) and Patterson, Stuart

[125] *Building During Changing Times: Diverse Construction Practices during the 13th – 14th Centuries in the Galisteo Basin, New Mexico*

Significant demographic changes occurred in the Galisteo Basin during the late Coalition period (AD 1200–1325); population increased at a rate suggesting immigration to the area, and people built aggregated settlements of 100 or more rooms. Construction techniques differed significantly between these settlements, ranging from coursed adobe, or coursed masonry, to a mixture of adobe and stone. This research tests the hypothesis that uneven distribution of good building stone limited the use of masonry. Distances to the nearest sources of potential building materials are calculated using friction surfaces to assess whether distance and effort affected the selection process.

Colaninno, Carol

[175] *A Comparison of Vertebrate Remains from Two Late Archaic Shell Rings on the Georgia Coast (USA)*

Much is written about the shell rings found along the Atlantic coast of Georgia (USA). One of the best-known of these sites is the Sapelo Island Shell Ring Complex, which was deposited between 3500 B.C. and 2500 B.C. Vertebrates from Ring III of this complex are similar to those from the Marsh Ring on near-by St. Simons Island. Both assemblages are dominated by estuarine fishes, specifically sea catfishes (Ariidae), drums (Sciaenidae), and mullets (Mugil spp.) Although this taxonomic representation is common to Georgia coastal faunal assemblages, differences in sea catfish representation indicate changes in environmental conditions from those prevailing today.

Cole, Ethan (UCLA)

[78] *When the Planets Align: Planetary Conjunction, and Ball Court Dedication in Post Classic Uxmal, Mexico*

Evidence for a connection between the Mesoamerican ball game and Venus comes from the presence of imagery on ball courts and the game's use as a metaphor for planetary movement in the Popol Vuh. This theoretical association was “set in stone” as inscriptions on ball court rings at Uxmal record dates that correspond to a rare event in which Venus Mercury, and Jupiter appeared in the pre-dawn sky. Compared to accounts of Aztec ball court dedication ceremonies, the Uxmal dates are believed to correspond to the inaugural game held at sunrise on the morning that the planets aligned.

Collard, Mark (University of British Columbia) and Buchanan, Briggs (University of British Columbia)

[158] *A Matrix Correlation Test of Early Paleoindian Migration Route Hypotheses*

The route by which Early Paleoindians colonized North America has once again become a matter of debate. Here, we report a study in which the four main competing hypotheses were tested by examining matrix correlations between Early Paleoindian projectile point morphological data and design matrices representing the different migration routes. The fit between the morphological data and the design matrices was evaluated using Mantel tests. When the geographic distances separating sites were taken into account, the Northwest Coast route hypothesis was the only one of the four hypotheses that was positively and significantly correlated with the projectile point assemblage data.

Collard, Mark [158] see Buchanan, Briggs

Collins, Lori (University of South Florida) and Doering, Travis (University of South Florida)

[106] *From Landscapes to Artifacts: Visualizing the Past in Three Dimensions*

The combination of conventional archaeological mapping and documentation with new spatial techniques is allowing archaeologists to move seamlessly from landscape, to feature, to artifact with more holistic understanding. Using case study examples from a large southeastern U.S. mound complex, a cave shelter in the Bahamas, circular features cut into

Florida limestone, and stone monuments and carved stelae from Mesoamerica, the authors demonstrate numerous applications for High Definition Documentation Survey (HDDS). HDDS is a suite of spatial technologies being used to efficiently and accurately document the past, and is poised to revolutionize how archaeology views and interprets landscapes and material culture.

Collins, Lori [173] see *Weisman, Brent*; **[208]** see *Klinger, William*; **[5]** see *Stephens, Daniel*; **[5]** see *Bell, Christine*

Collins, Michael B. (The University of Texas at Austin)

[1] *What We Know and Don't Know about the Earliest Peopling of Texas*

From a New World perspective and from evidence at a few sites in the state, there is little doubt that people were in what is now Texas prior to the Clovis efflorescence. Paucity of evidence about the preClovis era results from the nature of the record itself and from deficiencies in our protocols for investigation. We cannot improve the tangible record, but there is much we can do to improve our comprehension of it.

Collins, Michael B. (The University of Texas at Austin) [159] *Discussant*

Collins, Michael B. (University of Texas at Austin)

[190] *Clovis at Gault and in the Western Hemisphere*

Robust data on Clovis lithic technology from Gault site, Texas, and other sites suggest an improved concept for Clovis as an archeological manifestation. Historically, fluted Clovis points have been the operative diagnostic artifact for Clovis which has given rise to interpretive limitations. When available evidence permits, a more reliable characterization of Clovis emerges from the full technology of stone tool production, use, maintenance, and discard. Application of this approach significantly redraws the Clovis distribution map, partly resolves old typological disputes, and focuses attention on new interpretive questions, in spite of serious limitations in the report literature.

Colman, Arlene (Brigham Young University) and Clark, John (Brigham Young University)

[25] *The Domestication of Time in Mesoamerica*

Mesoamerican cultures are famous for their elaborate and concurrent calendars that measured astronomical and ritual cycles of varying periodicities. In this paper we consider the earliest evidence for the use of calendars among the Gulf Olmecs and also the changing patterns through time of public displays of calendar notations among their successors. We explore possible changing meanings of different calendar cycles and concepts of time among the Olmec and the Maya, as well as the manipulation of long time frames for social and political ends.

Colten, Roger (Peabody Museum), Newman, Elizabeth Terese (Yale University) and Worthington, Brian (Florida State University)

[160] *Prehistoric Fauna from the Las Obas Site, Oriente Province, Cuba*

In 1956 Paul Hahn excavated two trenches at the pre-ceramic site of Las Obas in Oriente Province, Cuba. Hahn's excavations yielded a large assemblage of vertebrate faunal remains. Our recent analysis shows that while the faunal assemblage from Las Obas is dominated by the remains of hutia, bones of fish, birds, and reptiles are also well represented. This paper is an analysis of a sample of this faunal collection focusing on the ecological and economic implications of the assemblage.

Colwell-Chanthaphonh, Chip (Anthropological Research, LLC)

[201] *The Gatekeeper Gáwasowaneh*

Arthur C. Parker, also known by his Seneca-Iroquois name Gáwasowaneh, is widely recognized as the first Native American archaeologist. Parker's career spanned five decades (1903–1955), during which he secured many high-level posts, including the first presidency of the Society for American Archaeology. Today, as we contemplate the role of archaeologists as producers and stewards of indigenous identities, it is important to consider how Native Americans have themselves participated as "gatekeepers." This paper examines Parker's career, focusing on how he sought (and often struggled) to negotiate a professional identity bound by neither his Native heritage nor his academic authority.

Compton, John (Kenyon College) and Ramirez, Roberto (Instituto Hondureño de Antropología e Historia)

[147] *A Copan Residential Enclave at El Paraíso, Honduras*

Investigations of an elite residential group at El Paraíso confirm that the site was established as an enclave or outpost of Copan, most likely in the mid AD 6th century. The elite residential architecture consists of cut-stone masonry, large internal benches, and the extensive use of stucco and mosaic architectural sculpture. Moreover, a high incidence of both utilitarian and fineware pottery imported from Copan has been documented. Both sets of data suggest strong ties to Copan elites. Furthermore, the architectural sequence of this residence helps delineate the extent of Copan's support of the elite residents of this political enclave.

Compton, Matthew (University of Georgia)

[173] *Woodland and Mississippian Hunters and Fishers of the Central Mississippi Valley*

Regional analysis of over 60 faunal assemblages from the Central Mississippi Valley indicates Mississippian groups and their Woodland predecessors shared a similar animal use strategy. This strategy focused on white-tailed deer and the abundant aquatic resources of the Central Mississippi Valley. Differences in animal use within the region are primarily the result of site location and local environmental conditions. However, analysis of faunal materials from the closely spaced Meador, Parkin, and Upper Nodena sites suggest some adjustments to animal use over time. Changes in plant cultivation, drought, and population pressure are discussed as contributing factors to shifts in animal use.

Condon, Peter C. (TRC Environmental), Hermann, Willi and Gitt, Donna

[33] *Examining Socio-Organization along the Franklin Mountain Alluvial Fans: Investigations at 41EP358, a Mesilla Phase Site, El Paso County, Texas*

Recent excavations at 41EP358 provide intriguing insights into patterns of early Formative land-use along the Franklin Mountain alluvial fans, El Paso County, Texas. Excavations conducted at 41EP358 investigated ten circular or sub-circular pit house structures over a seven-month period. Analysis of radiocarbon, Optical Stimulated Luminescence, macrobotanical, and faunal samples augment existing models of late Mesilla to early Doña Ana phase (A.D. 860 to A.D. 1180) socio-organizational, seasonality, and subsistence strategies along alluvial fan settings and identify possible shifts in adaptive strategies during the Jornada Mogollon pit house to pueblo transitional period.

Conkey, Margaret W. (UC Berkeley) [179] Discussant

Conlee, Christina (Texas State University), Noriega, Aldo (Universidad Nacional Mayor de San Marcos) and Buzon, Michele (University of Calgary)

[17] *Migration and Ethnogenesis: Long-Term Dynamics at the Site of La Tiza*

The site of La Tiza was occupied from approximately 100 BC to AD 1500 and spanned the first permanent settlement of the region through conquest and rule by the Inca. During this long period there were episodes of migration into and out of the Nasca valley. Evidence from strontium analysis of skeletal remains and shifts in architecture, artifact styles, burial practices, economic organization, and political structure indicate the influx of new populations during certain periods that contributed to social change. By the Inca conquest, new ethnic groups had developed that may be antecedents to those recorded historically on coast.

Conlee, Christina A. [62] see Buzon, Michele R.

Connell, Samuel (Foothill College), Gifford, Chad (Columbia), Lewis, Brandon (Santa Monica College), Sistrunk, Hannah (University of California, Berkeley) and Smit, Douglas (George Washington)

[9] *Roads of Control: Inka Colonial Strategy at the Pambamarca Fortress Complex in Northern Ecuador*

Facing fierce resistance, the Inka juggernaut constructed the Pambamarca Fortress Complex in Northern Ecuador. Our research into the Inka conquest and the Ecuadorian resistance looks at trade routes and roadways that interconnected the fortresses and fanned out into the other regions of Ecuador. In historic times the Amazon trade networks have proven crucial to establishing balances of power within Ecuador. An integral part of the Inka invasion strategy may have been the construction of at least one route to the Amazonia in order to circumvent previously established routes and co-opt the local trade.

Connell, Samuel (Foothill College) [88] Discussant; [76] see Gifford, Chad; [9] see Lewis, Brandon

Conrow, Michael (LaPorta and Associates, L.L.C., Geological Consultants), LaPorta, Philip C. (Graduate Center of CUNY and LaPorta and Associates, L.L.C., Geological Consultants) and Minchak, Scott A. (Texas A&M University and LaPorta and Associates, L.L.C., Geological Consultants)

[87] *An Analytical Method for the Analysis and Interpretation of Prehistoric Quarry Material*

The necessity for a quantitative analysis of prehistoric lithic assemblages to be free of the inherent prejudices of an analyst is vital when interpreting archaeological sites. This paper proposes a method of analysis for prehistoric quarry collections utilizing the Quarry Model devised by Philip LaPorta. This method divorces the partiality of the of the analyst from the analytical component and allows the attributes of the debitage to define their placement within the conceptual model. It also takes into count the intermediary artifacts as well as dual activity.

Conrow, Michael (LaPorta and Associates, L.L.C., Geological Consultants) Discussant

Contreras, Daniel (Stanford University)

[43] *A Mito-Style Chamber at Chavín de Huántar: Dating and Implications*

Excavations west of the monumental core at Chavín de Huántar, Peru have revealed a well-preserved plastered chamber in the style of the Mito Architectural Tradition. This link to a tradition well known from the Peruvian highlands but previously separated from Chavín both geographically and chronologically challenges standard definitions of both the Mito Tradition and Chavín itself. I discuss the material remains and associated radiocarbon dates from this feature, and consider their implications for understanding the sociopolitical dynamics that made Chavín's construction possible and assessing Chavín's place in Central Andean prehistory.

Conyers, Larry [84] see Sturm, Jennie

Conyers, Lawrence (Dept. of Anthropology, University of Denver)

[31] *Ground-Penetrating Radar for Archaeological Mapping and Hypothesis Testing*

Ground-penetrating radar (GPR) has the ability to produce images of buried archaeological sites in three-dimensions, allowing accurate analysis of sites that are otherwise invisible. When integrated with a knowledge of landscape use, social organization and settlement patterns, the GPR method can be used as primary data for anthropological hypothesis testing.

Cook, Anita (Catholic University) [130] Discussant; [186] Discussant

Cook, Edward [181] see Seager, Richard

Cook, Robert (Ohio State University)

[60] *Shell-Tempered Pottery in Fort Ancient Societies*

This presentation explores the occurrence of shell-tempered pottery in the Fort Ancient area at multiple analytical scales. A regional analysis reveals a concentration of shell-tempered pottery along the Ohio River, which is most pronounced after A.D. 1400 when the majority of Fort Ancient sites were concentrated in this area. Sub-regional and site-level analyses focus on the social and temporal contexts associated with the appearance of shell-tempered pottery in southwest Ohio and at SunWatch village. Recent petrographic analyses at this site and sub-region offer a unique opportunity to examine the relationship between emerging power structures and long distance interactions.

Cooke, Richard [63] see Iizuka, Fumie

Coolidge, Jen [53] see Evershed, Richard

Coons, Gina [4] see Hoffman, Brian

Cooper, H. Kory (Department of Anthropology, University of Alberta) and Wayman, Michael L. (Department of Chemical and Materials Engineering, University of Alberta)

[61] *Metallography of Native Copper Artifacts: Description and Interpretation*

Metallography, the study of the structure of metals and alloys, has been used for decades to analyze metal objects from archaeological contexts. Through metallographic examination researchers can identify both the types of metals and specific metallurgical techniques used in the past. This poster demonstrates the use of metallography in the analysis and interpretation of prehistoric native copper artifacts from Alaska.

Cooper, Judith (Southern Methodist University)

[106] *Exploring Spatial Variability in Late Prehistoric Bison Utilization on the Great Plains*

The Late Prehistoric bison kill record varies considerably across the Great Plains, with mass kills, such as jumps or pounds, common on the Northern Plains yet rare on the Central and Southern Plains. This is odd, given that bison remains are uniformly found at residential sites throughout the Great Plains. To explain this geographic variability in bison hunting, data on recorded Great Plains kill sites were synthesized from both published sources and unpublished, government documents. These data were analyzed against the environmental record using GIS to gauge the impact that climate and ecology had on regional bison hunting and utilization.

Cooper, Leslie (Monticello) and Smith, Karen

[63] *Regional Variation in Colonoware Manufacture and Use*

Analysis of colonoware from 13 slave-occupied sites in South Carolina and Virginia points to marked regional variation in vessel use and manufacture. Inter-regional variation in some attributes, including burning, indicates proportionately fewer vessels were used for cooking in Virginia than in South Carolina. Intra-regional homogeneity in other attributes, such as sherd thickness, may reflect colonoware made by specialists for Virginia markets; whereas, intra-regional heterogeneity may point to vessels made by individuals for local, household consumption in South Carolina. Interpretations of use and manufacture are bolstered by comparing abundance values of refined ceramics and iron cooking pot fragments to colonoware.

Copeland, Steve [33] see Coffey, Grant

Copley, Mark [53] see Evershed, Richard

Cordell, Linda (School of American Research) [131] Discussant

Cordero Hernández, Tulio [32] see Heldermon, Laura

Cordova, Carlos (Oklahoma State University), Kalchgruber, Regina (Oklahoma State University) and Henry, Donald (University of Tulsa)

[207] *The Geology, Geomorphology and Paleoenvironments around the Site of Ayn Abu Nukhayla, Jordan*

The Quaternary depositional environments surrounding the Neolithic settlement of Ayn Abu Nukhayla are strongly influenced by the local topography and lithology of the local sandstone and grano-dioritic formations and the predominantly arid climate. The main sequences of Late Quaternary deposits in the region include eolian sand and silt, alluvial fan deposits, and lacustrine sediments typical of playa lakes (locally called qa'). The sequence at qa' near the site suggests that the early Holocene was considerably moister. Changes in the orientation of paleodunes at this period suggest also a shift in wind direction that deviates from the typical west-east of the modern prevailing winds.

Cordova, Carlos (Oklahoma State University) [86] Discussant; [207] see Kalchgruber, Regina

Corrales Ulloa, Francisco (Museo Nacional de Costa Rica)

[151] *La Arqueología en Costa Rica: Situación Actual y Perspectivas Futuras*

La investigación arqueológica en Costa Rica es poco conocida fuera de sus fronteras. Se presenta un panorama de las actividades de investigación arqueológica, la evaluación del impacto de proyectos de desarrollo y rescate arqueológico, en las últimas décadas. Se

enfatisa el papel de las entidades oficiales en la aprobación y supervisión de proyectos arqueológicos. Se presentan comentarios sobre la práctica de arqueólogos extranjeros y sus relaciones con autoridades nacionales. Se comenta sobre las relaciones entre países, museos, universidades y científicos y las oportunidades de cooperación y diálogo.

Court, Emily (University of Toronto)

[95] *Investigating Household Organisation during the Near Eastern Chalcolithic: Micromorphology and Soil Sampling at Tel Tsaf, Israel*

Excavations at the Middle Chalcolithic (c. 7000 BP) site of Tel Tsaf, Israel have revealed extensive mudbrick architecture. There is evidence of large courtyards containing both circular and rectangular structures. During the 2006 field season, both micromorphology and bulk soil samples were collected from the site with the intention of gaining a better idea of the function of these spaces. These samples are part of a continuing PhD research project. This poster will present the preliminary results from this season, as well as detail future directions for the project.

Couture, Nicole (McGill University)

[68] *Dead Bodies and Living Houses: Elite Mortuary Practices at Tiwanaku, Bolivia*

This paper focuses on the intimate relationship between dead bodies and living houses within the context of an elite status group at the pre-Inka site of Tiwanaku in highland Bolivia. More specifically, this paper examines how different kinds of mortuary practices (e.g. human burials versus human bodies placed in dedicatory offerings) within a specific palace complex contributed to the ongoing production and representation of an aristocratic identity and historical consciousness over time.

Covey, Alan (Southern Methodist University)

[216] *Late Intermediate Period (c. AD 1000–1400) Settlement Patterns in the Maras-Chinchero-Anta Region (Cusco, Peru)*

Systematic survey research by the Xaquixaguana Plain Archaeological Survey (2004–2006) registered more than 250 LIP sites in a study region located to the west of Cusco. Site locations and settlement hierarchies indicate important sub-regional settlement pattern variations at the time that the Inka state was developing and beginning to extend its regional territorial control. This paper describes the LIP settlement patterns for three sub-regions and evaluates the degree of site continuity as the region was consolidated under Inka imperial control. The archaeological evidence provides an important independent means of evaluating ethnohistoric references to local political organization and Inka expansion.

Covey, Alan (Southern Methodist University) [88] *Discussant*; [216] see Griffis, Nick; [216] see Bélisle, Véronique; [216] see Davis, Allison

Cox, Shanna (University of Wyoming), Morris, Margaret (University of Wyoming) and Larson, Mary Lou (University of Wyoming)

[129] *Conservation of Cultural Resources in the Age of Accelerated Oil and Gas Development: A Predictive Model*

This poster will present results from a joint project in predictive modeling between the Department of Anthropology of the University of Wyoming, the Bureau of Land Management - Pinedale, and the Pinedale Anticline Working Group (PAWG). Utilizing a BLM developed database of known historic/cultural resources, this predictive model will help identify areas of high site potential. This information provides an excellent opportunity to develop new research directions to help the state of Wyoming find more productive means of finding, avoiding, and/or mitigating the affects that oil and gas development will have on cultural resources within the Pinedale Anticline region.

Coxe, Carey (Louisiana State University Museum of Natural Science)

[114] *Faunal Remains from a Possible Late 18th Century Louisiana Inn*

The John Dortch site (16WF89) is a small, late 18th Century house site located near St. Francisville, Louisiana, along U.S. Hwy 61. The site yielded some of the very finest historic ceramics available in the area, dating to the late 1790s, a time during which there was very little settlement in this part of south Louisiana. The faunal evidence, along with that of other artifact classes, suggests that Dortch operated a commercial endeavor, such as an inn for travelers between Natchez and Baton Rouge or New Orleans. This paper will compare the Dortch faunal remains to other assemblages from similar sites.

Craig, Douglas (Northland Research)[183] *Landscape Change and Household Organization in Hohokam Society*

Research conducted over the past 25 years has revealed considerable variability in the size, composition, and longevity of prehistoric households across the Hohokam region. This paper explores some of the factors that likely contributed to this variability. Special attention is paid to how households responded to changes in the local landscape, in particular, shifts in the river channels that provided water to agricultural fields. Drawing on case studies from different parts of the Hohokam region, a range of organizational responses to landscape change are identified. Regional variability in Hohokam sociopolitical development is discussed in light of these findings.

Craig, Oliver [166] see *Heron, Carl*

Cranford, David (University of Oklahoma)[66] *Mississippian Political Factioning and Competition in Eastern Oklahoma? The Norman (34Wg2) and Harlan (34Ck6) Sites*

The presence of "paired towns" during the Mississippian has been explained in several ways. One example from eastern Oklahoma may provide a different perspective with which to view political interaction, factioning, and competition of these closely-spaced mound centers. The Harlan (34Ck-6) and Norman (34Wg-2) sites are the two largest mound groups in Oklahoma besides Spiro, and are separated by only 5km. New dates from Norman indicate that occupations at the sites were significantly overlapped, making the discussion of interactions between Norman and Harlan fundamental to understanding the processes that eventually led to the development of the later Spiro Ceremonial Complex.

Crawford, Gary (University of Toronto at Mississauga)[20] *Early Neolithic Cultigens and Their Context in Northern Shandong Province China*

Flotation samples collected from a variety of contexts at the Early Neolithic Houli culture Yuezhuang site in Jinan city shed light on subsistence developments in the eastern Yellow River drainage basin. Three potential cultigens, rice, foxtail and broomcorn millet as well as a wide range of wild, anthropogenic plants are evidenced. They date to about 6000 cal. B.C. Comparisons are drawn to the Xinglonggou site plant remains as well as to data from later periods in Shandong. Implications of rice so early and this far north are also discussed.

Creaser, Robert A. [62] see *Buzon, Michele R.*

Creekmore, Andy (Northwestern University)[101] *The Role of Storage in Urban Administration: Two Storage Structures from the Early Bronze Age City of Kazane Hoyuk, Turkey*

In urbanized states, storage and control of goods is vital for the survival of institutions and the citizens they support or attempt to control. This paper presents two storage structures recently discovered via gradiometry and excavation at Kazane Hoyuk, an early bronze age city in Southeastern Turkey. It considers what the structures contained, how the managers controlled access to the goods, and how these factors contributed to urban administration. This evidence is considered in relation to storage in other urban settings in the Near East and elsewhere. I treat storage as both a necessity and a tool for political purposes.

Creel, Darrell (University of Texas at Austin)[90] *Pruitt Ranch and Baca: Classic Sites in the Lower Mimbres Valley*

Pruitt Ranch and Baca were relatively large Classic Mimbres villages, each with multiple roomblocks. Neither has been professionally excavated except for some minor highway salvage work at Baca. Each has one large roomblock with masonry more characteristic of the Colorado Plateau than the Mimbres area, and Pruitt Ranch had associated road-like feature bordered by prominent berms. The implications and possible northern connections of these seemingly anomalous architectural features are explored.

Creel, Darrell [208] see *Wilson, Samuel*; **[61]** see *Speakman, Robert J.*

Cregger, Michael (SWCA Environmental Consultants) and Phillips, Scott (SWCA Environmental Consultants)

[183] *There Are Hunters and There Are Hunters: Northwestern Colorado Site Use across Ages and Archaic, Fremont and Numic Lifeways*

On the Vermillion Bluffs between the Little Snake and Green Rivers, at the Colorado/Wyoming border, evidence of limited-occupation rather than extended settlement is rife in the archaeological record from the Archaic period to later Fremont and Numic cultures. Indication of hunting lifestyles and toolkits is a commonality across periods and cultural affiliations in this arid upland area. Our broad sample grid across this locale allows comparative analysis of a number of prehistoric site types that are illustrative of cultural use trends in the local environment, and demonstrate the utility of large surface surveys to test regional culture histories.

Cressler, Alan [154] *see Blankenship, Sarah; [154] see Simek, Jan*

Crews, Christopher (Texas A&M)

[93] *Stone Tool Technology in an Ancestral Samoan Village*

This poster will present analysis of both flake and utilized basalt lithics recovered from an excavation at Aganoa, a small village on the island of Tutuila, American Samoa. Two time periods have been noted at present dating to 2000 ybp and 2500 ybp allowing an analysis of change through time.

Crider, Destiny (Arizona State University) [153] *Discussant*

Croissier, Michelle [107] *see Balkansky, Andrew*

Cross, John (Bowdoin College)

[44] *Conceptions and Missed Conceptions: Identifying Middle Archaic Mortuary Contexts in the Northeast*

The task of recognizing and interpreting features, artifacts, and archaeological contexts continues to be a challenging one in Northeast archaeology, despite an expansion of the data base over the past 30 years. Nowhere is the challenge greater than in identifying Middle Archaic (ca. 8,000–5,000 B.P.) burials, especially when skeletal remains have not been preserved. Much of what we know is derived from a few sites and from collections made more than a half-century ago. Using examples from two sites in the Northeast, I argue that excavation strategies and soil micromorphology studies may reveal mortuary features that may otherwise go undetected.

Crown, Patricia L. (University of New Mexico) [8] *Discussant*

Crumbley, Norma (SWCA Environmental Consultants) and Bedingfield, Krista (SWCA Environmental Consultants)

[66] *Questions Behind Stone Walls*

Site 48LA207 consists of nine stacked stone walls located approximately 25 miles west of Cheyenne, Wyoming that were visited during the inventory for the proposed Overland Pass Pipeline project. These walls are oriented north-south, are in extremely good condition, and are believed to represent prehistoric hunting blinds used within the valley they overlook. Although one modified flake was observed, no diagnostic artifacts were located. An analysis of the walls will explore their function, the temporal association during which they were utilized, the site's connection with other similar structures in the area, and the structure's spiritual significance to Native American groups.

Crumley, Carole (University of North Carolina, Chapel Hill) [145] *Discussant*

Cruz, Juan Carlos [74] *see Jaime-Riveron, Olaf*

Cubbon, Emily (University of Virginia)

[138] *Precious Color, Primacy, and Fertility: The Role of Turquoise in Ritual and Political Authority and Legitimization in the Chacoan World*

Although the general ritual importance of turquoise for Pueblo peoples is well recognized, as is

the inextricability of religion and sociopolitical power in Pueblo society, specific details of the symbolic significance of turquoise and its potential as an integral piece of Chacoan leadership provide intriguing possibilities for further study. I posit that turquoise symbolized three ritually—therefore, politically—legitimizing cosmological forces: ultimate primacy, ancestral spatial Others, and water/fertility. I use theoretical, ethnographic, iconographic, and archaeological evidence to suggest that access to symbolically charged turquoise was an important way Chacoan leaders legitimized power over the politico-ritual institution in Chacoan society.

Cucina, Andrea [162] *see Tiesler, Vera*

Cuellar, Andrea (University of Lethbridge)

[64] *An Evaluation of the Economic Basis of Social Differentiation in the Quijos Chiefdoms (Eastern Ecuadorian Andes)*

Based on botanical information (pollen, phytoliths, macroremains) from households positioned differently in a regional hierarchy, I reconstruct the agrarian economy and consumption patterns among the ethnohistorically documented Quijos chiefdoms. I evaluate prevalent characterizations of ancient Andean economies that emphasize the importance of environmental variation, trade, or resource control by emerging elites. My findings suggest a great deal of similarity in the agrarian economy and consumption patterns across the social spectrum in a period when the most dramatic social transformations took place, which questions a simple correlation between social and economic differentiation.

Culleton, Brendan [178] *see Kennett, Douglas*

Culleton, Brendan J. (Department of Anthropology, University of Oregon), Kennett, Douglas J. (Department of Anthropology, University of Oregon) and Phillips, Donald L. (U.S. Environmental Protection Agency, Office of Research and Development)

[195] *Comparison of Stable Isotope Analysis of Human Bone and Faunal Assemblages from California's Northern Channel Islands*

A fundamental behavioral interface between the body and the environment – subsistence – is reflected in archaeological faunal assemblages and the isotopic composition of human bone. Each data source provides a complementary picture of past subsistence. Zooarchaeology offers fine-grained accounting of consumed prey taxa at the expense of estimating individual diet, whereas stable isotopes quantify individual diet but with poor taxonomic resolution, particularly in resource-diverse coastal habitats. Using an iterative isotope mixing model that accommodates multiple food sources, we compare Northern Channel Islands dietary reconstructions based on archaeofauna and human stable isotopes to investigate subsistence shifts and differential resource access through the Holocene.

Cummings, Linda (Paleo Research Institute, Inc.)

[36] *Commercial Archaeobotany and Environmental Sciences: An Alternative to the University Setting*

Established in 1972 when archaeobotany was more of a dream than a regular contributor to archaeological work, Paleoresearch Institute has grown into an interdisciplinary institute for the purpose of examining both the past environment and evidence of people's use of plants and animals. Synchronized studies of pollen, phytoliths, starch, macrofloral remains, and protein residues provide data bases for interpretation. Creation of archaeoclimatic models provides a look at potential climatic parameters of the past. Addition of AMS radiocarbon dating rounds out our current services. In short, Paleoresearch Institute has developed the atmosphere of creative innovation within the discipline of archaeobotany.

Cummings, Linda [145] *see Gear, W. Michael*; [145] *see Anderson, Patricia C.*

Cummings, Linda Scott [100] *see Varney, R.A.*

Cunningham, Jerimy (University of Calgary)

[75] *The Ethnoarchaeology of Household Political Economy*

In this paper, I describe the impact that household political economies have on domestic vessel consumption in the Inland Niger Delta of Mali. In particular, I show how specific types of vessels, such as terracotta water jars and enamel serving dishes, assist women to resist

patriarchal control within their extended family households. The use of these vessels in the negotiation of domestic power structures adds to their overall value for the women who are their primary consumers. This increased value is reflected materially in the comparably long distances that these objects travel between the point of purchase and the household.

Cunningham, Kevin (Delaware DOT)

[42] *Inter-Changes, Culture Change, and Change Orders: Current Archeological Experiments at the Delaware DOT*

Practicing archeology and historic preservation and meeting the demands of the ever-changing transportation system while including interested individuals and groups in DelDOT's public works projects has created a rich environment. In this atmosphere, DelDOT has been able to conduct experiments upon the record, which have added significant cultural and scientific perspectives as well as public meanings into Delaware's expanding and changing cultural heritage. Several remarkable examples from historic and pre-Columbian sites will explore the juggling act of integrating creative, imaginative and innovative research that keeps historic preservation and reflexivity in the forefront along with time sensitive transportation projects.

Cunningham-Bryant, Alicia (Yale University)

[95] *Testing for Core Civilization Supremacy: The Case of the Nabataeans at Petra (Jordan) on the Periphery of Rome*

This paper evaluates the applicability of the World Systems Model to the city of Petra in Nabataea during the transformative years of 50 BC to 106 AD. The study focused on column capitals as markers of cultural change, i.e. Roman influence vs. continued Nabataean power. Detailed analysis of the column capitals suggests that the World Systems model is not applicable since although Roman elements were identified, they were significantly outnumbered by contemporary Nabataean features. The evidence rather points to the Distance-Parity Model of cultural interaction as a better theory for Petra/Nabataea and perhaps the Roman Empire as a whole.

Curewitz, Diane C. (Washington State University)

[105] *Pajarito Culinary Ware: Coalition to Classic Period Changes*

Pajarito culinary ware shows changes from the Coalition to the Classic periods in surface treatment, inclusions, size range, large-to-small vessel ratio, and wall and rim thickness. These changes may be part of an overall increase in large-group feasting activities. Standardization indicates production by a few skilled domestic specialists for local exchange, or trade with other communities. Changes in vessel wall thickness may relate to changes in cuisine, cooking practices, or fuel availability. Significant quantities of standardized non-local, mica-tempered vessels at LA 82 (Tyuonyi), a large plaza pueblo, suggest their importance as exchange items.

Curtis, Matthew [6] see Arthur, John

Cushman, David [218] Discussant

Cutright, Robyn (University of Pittsburgh) and Terrones Cevallos, Jorge (Universidad Nacional de Trujillo)

[43] *Recent Excavations at Pedregal, a Late Intermediate Period Village in the Jequetepeque Valley, Perú*

We discuss preliminary results from excavations at Pedregal, a small LIP site in the Jequetepeque Valley. Of particular interest is the relationship between this residential settlement and the contemporaneous monumental centers of Pacatnamú and Farfán, especially during Chimú conquest. Excavations centered on the site's domestic architecture and revealed a focus on agricultural production and textile manufacture. This evidence, along with Pedregal's location near the river bottom, adjacent to ancient field systems, suggests that its population supplied agricultural products to these nearby centers. Continuing analysis investigates how domestic activities at the site may have changed with the Imperial Chimú arrival.

Cutrone, Daniel (California State University, Los Angeles)**[82] *Spirit Bird Cave: Emergence Shrines and the Legitimization of Settlement Space***

Spirit Bird Cave is an extensively modified earth opening located on a cliff face overlooking the Nancy Patterson site located in Montezuma Canyon of southeastern Utah. The extent of architectural modification suggests that the cave complex is public architecture belonging to the larger settlement system. The study of Spirit Bird Cave is important to southwestern archaeology in recognizing the significance of emergence shrines to the legitimization of settlement space.

Dahlin, Bruce H (Pakbeh Regional Economy Program)**[189] *'Phantom Artifacts' at Chunchucmil (and Elsewhere)***

Prehistoric tropical and subtropical peoples overwhelmingly used organic materials in their day-to-day activities. These artifacts are rarely represented in the archaeological record, except perhaps as chemical residues, phytoliths or starch grains. Nevertheless, we know they used fabrics for clothes, wood and thatch for roofs, gourds in addition to ceramic vessels, and cutting implements despite a paucity of good quality chert, etc. How should we think about these 'phantom artifacts', or should we continue to ignore them ad infinitum for lack of direct evidence? This paper explores these questions in relation to the market economy of Classic Maya site of Chunchucmil.

Dahlin, Bruce [161] see Terry, Richard; [55] see Mazeau, Daniel E.

Dahlin, Eleanor (Texas A&M University), Laumbach, Karl W. (Human Systems Research, Inc.) and Laumbach, Toni S. (New Mexico Farm and Ranch Heritage Museum)**[63] *Socorro Black-on-White Pottery in the Cañada Alamosa: Local Manufacture or Import?***

Socorro Black-on-white ceramics (A.D. 1050–1275) recovered from three sites within the Cañada Alamosa of west-central New Mexico is theorized to initially be a trade ware but locally manufactured after the arrival of Socorro Tradition communities in the early 1100s. Documentation of these Socorro Tradition communities expands the southern boundary of Socorro pottery and reflects the movement of northern pueblo groups into new territories, a characteristic of the Pueblo II/III transition. Instrumental neutron activation analysis is used to determine whether Socorro Black-on-white from the Cañada Alamosa sites was of local or foreign manufacture.

Dalan, Rinita (Minnesota State University Moorhead) and Goodman, Dean (Geophysical Archaeometry Laboratory)**[31] *Visualizing Landscape Formation and Use with Downhole Susceptibility Data and GPR Software***

New options for the field measurement of fine-scale depth variations in magnetic susceptibility along with advances in software for ground-penetrating radar (GPR) signal processing and data presentation are two significant developments in archaeological geophysical studies. These contributions are combined in a pioneering approach to visualize buried landscapes using downhole magnetic susceptibility data and GPR imaging software. This study utilized capabilities of GPR-SLICE software for processing and imaging the susceptibility data to visualize, examine, and interpret multiple buried surfaces and areas of focused human activities, demonstrating the potential of such an approach for understanding landscape change and use over time.

Dalan, Rinita [31] see Clay, Berle

Dancey, William (Ohio State University)**[3] *The W.S. Cole Site Resurrected: A Fresh Look at a Significant Late Prehistoric Period Site in Central Ohio***

In 1947, Richard Morgan, Curator, the Ohio State Museum, hired Raymond Baby to excavate a site on the crest of a low glacial kame in Delaware County, Ohio. It has not been published, but field notes at the Ohio Historical Society Collections Center are sufficiently rich to be able to reconstruct the excavation and the context of the artifacts recovered. Combined with a later test excavation in 1978 these data convincingly suggest that the site was a cemetery rather than a settlement as alluded to occasionally in the literature. Radiocarbon dating suggests a thirteenth century A.D. age of use.

Dangerfield, Cory [75] see Swink, Clint

Daniels, Michael [95] *see* Haws, Jonathan

Darley, Zaida (University of South Florida) and Wells, E. Christian (University of South Florida)

[30] *Dirt Cheap Dirt Science: Simple and Inexpensive Soil Analyses for Archaeological Resource Managers*

About the only thing more abundant at an archaeological site than pots and rocks is dirt. Yet, archaeologists often do not realize the full interpretive potential of soil science. Using a series of case studies, this poster presents a range of simple, inexpensive analyses that can shed light on questions of interest to archaeological resource managers. By studying such properties as texture, pH, and phosphates, it is possible to rapidly define site boundaries without relying on artifact distributions, to prospect for activity loci and areas that have a high probability of containing subsurface deposits, and to obtain supporting evidence for NRHP nominations.

Darling, J. Andrew (Cultural Resource Management Program, Gila River Indian Community), Neff, Hector (IIRMES, California State University, Long Beach), Eiselt, B. Sunday (Southern Methodist University) and Newman, Linda (Cultural Resource Management Program, Gila River Indian Community)

[61] *Provenance Research in the Middle Gila River Valley Using Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry (LA-ICP-MS)*

Chemical-based provenance research is new to Hohokam ceramic studies, which have long been dominated by petrographic techniques. One of the challenges of the petrographic approach is our inability to characterize mica schist-tempered pottery and assign it to source. A second involves the effects of raw clay selection on provenance assignments. Recent research in the Gila River Indian Community utilizes oral history and consultation with Native potters to refine source sampling and interpret trace element patterns using LA-ICP-MS. The study is unique for its location and for its potential contribution as an adjunct to long-standing, labor intensive petrographic analyses.

Darling, J. Andrew [30] *see* Loendorf, Chris

Darras, Veronique (CNRS, Nanterre)

[107] *Obsidian Prismatic Blade Production in Northern Michoacan*

The introduction of prismatic blade technology in the Zacapu region (Michoacan, Mexico) occurred during the Late Postclassic period and must be connected with sociopolitical changes in Tarascan society (Milpillan phase 1200 – 1450 A.D.). For this period, the archaeological data indicate free access to regional obsidian sources and an extreme banalization of the obsidian pressure blade. In spite of the process of centralization power structures, the study of obsidian craft activities indicates that obsidian prismatic blade production was realized in small independent hamlets located outside of Tarascan urban centers.

Darras, Veronique [168] *see* Faugère, Brigitte

Dartt-Newton, Deana (University of Oregon)

[201] *Can the Sub-Altern, Neo Chumash Speak? The Politics of Identity in Southern California Cultural Resource Management*

In recent years some anthropologists acting as self appointed identity gatekeepers claim that lucrative cultural resource monitoring contacts are motivating Native cultural revitalization underway in our communities. I argue that these allegations—posed by competing interests—are a colonial response to the shifting power over the stewardship of archaeological resources into the hands of Native groups who encourage preservation over high-impact excavation. I also assert that scholarly journals which publish such allegations are complicit in the colonial response by promoting one perspective while silencing the “other.”

Darvill, Timothy (Bournemouth University, UK)

[210] *Contract Archaeology and the Diversification of Outputs*

Developments in spatial planning practice, greater emphasis on the ‘polluter pays’ principle,

and the widening scale of Environmental Impact Assessment has fundamentally changed contract archaeology. Increasingly, work is undertaken to achieve specific objectives within the development process and is targeted to the needs of pre-determination evaluation or post-determination mitigation. Each stage produces distinctive outputs that are often unfamiliar to archaeologists working in other sectors. Here it is argued that in order to use such reports to create new knowledge of past it is necessary to establish new expectations and provide both physical and intellectual access to the data.

Darvill, Timothy [210] *see Milner, Ehren*

Darwent, Christyann (University of California–Davis), LeMoine, Genevieve (The Peary-MacMillan Arctic Museum, Bowdoin College), Darwent, John (University of California–Davis), Johansen, Trine (University of California–Davis) and Lange, Hans (Greenland National Museum and Archives)

[6] *The Polar Inughuit of Northwestern Greenland: Culture Contact in an Isolated Land*

Although most famously known as the place from which Robert Peary gathered assistants for his expeditions to the pole (1890s–1909), Iita (Etah) continues to be an important hunting site for Inughuit in Northwest Greenland. Excavations in 2006 of stratified house deposits indicate occupation throughout the late Thule/early historic period (1700s–early 1900s)—a time when historical documents note loss and regain of such key technologies as kayaks and bows-and-arrows. Our analyses focuses on testing what aspects of a relatively isolated economic system remain static and what change in the face of outside contact and changing climatic conditions.

Darwent, John (University of California–Davis)

[158] *Phylogenies of Thule Period Harpoon Components from the North American Arctic*

Thule period (ca. A.D. 1000–1900) harpoons from the North American Arctic were multi-component implements primarily used to hunt sea mammals. Consisting of intricate arrangements of harpoon heads, foreshafts, sockets, shafts, floats, and tension pieces, these harpoons present a dilemma for undertaking phylogenetic reconstruction using cladistics, which relates to the scale of analysis. The issue is whether whole harpoon-weapon systems are evolving or merely changing while their individual components undergo independent phylogenetic paths? Here I use cladistics to reconstruct phylogenies for individual Thule harpoon components to demonstrate that the method is most effectively used with small-scale units.

Darwent, John [6] *see Darwent, Christyann*

Davidson, James [104] *see Roberts, Erika; [171]* *see Tennant, Edward*

Davidson, John (University of Wyoming)

[169] *Do Dates Equal People? An Examination of the Use of Radiocarbon Dates as Markers of Human Settlement in Prehistoric Wyoming*

In the last 15 years large numbers of radiocarbon dates have become available which may enable researchers to study ancient human occupation patterns. If there are enough dates, general overviews of regional trends may be apparent. The validity of the conclusions drawn from large databases of radiocarbon dates is based on a set of issues which include radiocarbon calibration, knowledge of biases, and the association of the material dated. When the final analysis of the radiocarbon dates has been carried out, trends in population movement and size in prehistoric Wyoming should be apparent.

Dávila, Patricio (Instituto Nacional de Antropología e Historia)

[18] *Los Pectorales de Concha de la Huasteca*

Antiguamente cada pueblo y clase social portaba adornos alusivos a su origen, rango o especialidad. La mayoría fue de materiales perecederos, como textiles, papel, plumas y pieles, y sólo en escasas ocasiones se conservó alguno, como las cuentas, colgantes, orejeras, bezotes y otros adornos duraderos. Lo que conocemos sobre su atavío proviene de las representaciones en figurillas, escultura, murales, códices y lienzos cercanos al contacto europeo. Trataré los pectorales de concha calados y esgrafiados frecuentes en la Huasteca y las culturas del este de Norteamérica y, a través de su análisis, plantearé algunas inferencias culturales.

Davis, Allison (University of Michigan) and Covey, R. Alan (Southern Methodist University)

[216] *An Early "Vertical Archipelago?" Patterns of Landscape use on the Xaquixaguana Plain, Cusco, Peru (2200BC–AD200)*

The Xaquixaguana Plain Archaeological Survey identified Formative period sites (2200BC–AD200) ranging from .03 to 6 ha in size located between 3200 and 4000 masl. Did all sites share the same general activities regardless of size and location? Or were some sites dedicated to special activities? Ceramic vessel form will be used as the primary indication of site function. Correlations in function, location, and size may show whether or not special economic strategies were practiced in various resource zones. Surface materials may not represent all activities carried out at any given site; therefore results are preliminary.

Davis, Amber [161] see Shaw, Leslie

Davis, Hester (Arkansas Archeological Survey) [210] Discussant

Davis, Katharine (Harvard University)

[182] *Household Archaeology at Muru Ut Pata: Domestic and Ritual Activity at a Classic Tiwanaku site*

Recent excavations into the Classic Tiwanaku site known as Muru Ut Pata, in the community of Kasa Achuta, Bolivia, 300 meters from the monumental core, reveal evidence of rich and varied economic activity. Matching this diversity of productive activity, mortuary and household ritual tradition, including use of figurines and hallucinogenic snuff, is equally compelling. Together with architectural remains the site exposes a complicated picture of Tiwanaku culture where attractive pottery is not solely possessed by the elite and where use of drugs and the performance of ritual are not limited to the actions of priests on top of pyramids.

Davis, Loren (Oregon State University) and Willis, Samuel (Archaeological and Historical Services)

[184] *Thermoluminescence, Radiocarbon, and Artifact Chronologies for the Indian Sands Site on the Southern Oregon Coast, USA*

Archaeological investigations at the Indian Sands site (35-CU-67C) during 2001 and 2003 recovered a large lithic artifact assemblage from a paleosol associated with a 14C date of $10,430 \pm 150$ RCYBP. Thermoluminescence (TL) samples taken during the 2003 excavations clarify site chronology, showing that the Indian Sands site holds a temporally stratified sequence of cultural components spanning the late Pleistocene to middle Holocene. Lithic analysis reveals use of a generalized toolkit design through time, which incorporated a variety of local and extralocal raw materials. These data lead us to consider paleo-coastal technological organization and its role in early settlement patterns.

Davis, Loren [184] see Raab, Mark; [184] see Gusick, Amy

Davis-Salazar, Karla L. (University of South Florida), Wells, E. Christian (University of South Florida) and Kuehn, David D. (Lone Mountain Archaeological Services)

[15] *Alternative Models for Settlement and Land Use in Prehispanic Northwest Honduras*

This paper examines data on population shifts, soil quality, and landform change in northwest Honduras to evaluate alternative models of prehispanic land use and its socioeconomic and ecological consequences. Work in the Naco Valley suggests that populations increased dramatically during the 7th–9th centuries AD. Efforts to feed the growing numbers of people may have resulted in two different strategies: 1) use of valley escarpments that were vulnerable to destructive erosion when cleared and planted over long periods, and 2) reorganization of large communities into smaller hamlets that allowed for more efficient use of riparian ecozones and adjacent landforms watered by seasonal streams.

Davis-Salazar, Karla L. [85] see Wells, E. Christian

Dawson, Matt (TRC and University of New Mexico)

[155] *Now is It Archaeology?*

It has been asked of late whether or not CRM can be considered 'true' archaeology. Some have conceded that CRM can be acknowledged as archaeology, but only as an "assembly-

line' variant with undirected goals and sloppy methods, selling itself out to the highest bidder." What then, can CRM actually contribute to archaeology specifically, and to the community at large? This paper intends to address the question by examining a particular CRM firm and one of its ongoing projects. It further proposes that CRM is in a unique position to address issues that escape the more restricted realm of academia.

Day, Grant (AMEC Earth & Environmental), Meyer, Regina (Missouri Army National Guard) and Peterson, Ryan (AMEC Earth & Environmental)

[113] *High Tech Data Collection at Jefferson Barracks, Missouri*

At the request of the Missouri Army National Guard (MOARNG), AMEC Earth & Environmental conducted a remote sensing survey of selected portions of Jefferson Barracks and recorded one of the historic structures there using a laser scanner. Jefferson Barracks, located in St. Louis County, Missouri, has been a military post since 1826. Many military expeditions of exploration departed from the garrison making it a gateway to the West. This paper will show the results of the remote sensing survey and the laser scanner data collection and discuss the benefits and drawbacks of these data collection methods.

Day, Peter (University of Sheffield) and Howie, Linda (University of Sheffield)

[149] *Provenance, Style and Technology: Integrated Approaches to Ceramic Production and Exchange during the Classic to Postclassic Transition*

The reconstruction of pottery production and exchange has played a central role in the study of social and economic change in the Maya lowlands during the Classic to Postclassic transition. While the identification of different groups of potters and locations of manufacture during this time clearly is important, their discrimination, based on visual and chemical criteria, is problematic. This is in part due to widespread stylistic similarity and a relatively homogeneous regional geology. We discuss the potential of methodologies which integrate complementary stylistic, petrographic, microstructural and chemical approaches, privileging technological practice as an avenue to understanding manufacturing organisation and provenance.

de Anda Alanis, Guillermo (Universidad Autonoma de Yucatan)

[108] *Mortuary Practices in Cenotes of Northern Yucatán: A Regional Approach*

This work is based on the need to find specific regional patterns for the study and understanding of mortuary practices in cenotes of the north of Yucatán. It is expected that these patterns can be discerned following study of the morphology, location, and chronology of the ritual use of the cenotes that have been researched. This work also intends to establish a more accurate understanding of the role of cenotes in relationship with the practice of depositing human remains in a specific region. Such regional patterns may then be compared to similar patterns of other regions in the Maya area.

De Boer, Warren [212] *Discussant*

de la Cova, Carlina [3] *see Wells, Joshua*

De Leon, Jason (Penn State University)

[107] *Reassessing the Organization of Postclassic Period Salt Production in the Basin of Mexico*

Current archaeological and ethnohistoric evidence indicate that Postclassic salt production in the Basin of Mexico often occurred in domestic contexts and was a major component of the political economy. Still, several questions remain unanswered including: 1) How was production organized within domestic contexts? 2) What was the range of craft and subsistence activities occurring within these contexts? 3) Does the archaeological evidence support ethnohistoric descriptions of salt production as being integrated into the political economy? 4) What models best describe salt production? By summarizing current data this paper addresses these questions and offers new theoretical insights into Aztec salt production.

De Lucia, Kristin (Northwestern University)

[205] *Domestic Economies and Regional Transition: Obsidian and Household Strategies in Early Postclassic Mexico*

This paper investigates the strategies of Early Postclassic (A.D. 900–1150) households in

central Mexico by exploring the manufacture, use, and exchange of obsidian. Obsidian associated with rooms and middens of an architectural complex at Xaltocan, Mexico, are analyzed to address the following questions: Was blade production for local exchange or household consumption? Do use and wear patterns derive from specialized activities or general domestic tasks? Was exchange governed by local or regional control? This study will contribute to our understanding of how household units articulated with regional economic and political systems following the decline of Teotihuacan (circa A.D. 650).

de Maret, Pierre (Université Libre de Bruxelles (ULB))

[144] *Who's Who? The Luba Case*

Archaeological research has yielded a continuous sequence of occupation in the center of Katanga. Linking the Early Iron Age to the present day inhabitants, the rich archaeological record raises thus the issue of the time depth of today's Luba population: On what evidence can we project ethnic identity back in time? Furthermore, the term "Luba" itself, has been used to designate a wide variety of populations, becoming a most ambiguous ethnonym. There are few instances where the discussion of the ethnic ambiguity in African historical archaeology is more relevant.

De Vore, Steven (National Park Service)

[31] *Magnetic Gradient Survey at Fort Union Trading Post National Historic Site, Williams County, North Dakota*

A magnetic gradient survey of selected areas within the Fort Union Trading Post National Historic Site (1829–1867) in Williams County, North Dakota, was conducted in the summer of 2006. The project focus was to identify and evaluate potential buried archaeological resources along the park's service access road from the maintenance facility and the reconstructed American Fur Company trading post. Results of the magnetic gradient survey indicated the presence of two trash dumps associated with the trading post, the Fort William stockade, and the western extent of the Crow-Flys-High Hidasta village site.

Deagan, Kathy (University of Florida)

[19] *Politics and Indifference: Indigenous Resistance to Spanish Imperial Design in Hispaniola and Florida*

Violent conflict and armed resistance marked the first several decades of encounter between Spaniards and indigenous Americans in Hispaniola and Florida, with victories and defeats for both sides. The post-encounter political and social landscapes of these regions emerged in large part through continued resistance to the ideals and demands of Spanish imperial colonization by non-elite residents of both European and American origin. This paper explores the ways in which Taino and Timucua resistance through politics and indifference reshaped imperial expectation and colonial practice.

Dean, Emily (Southern Utah University) and Sillar, Bill (Institute of Archaeology, University College London)

[9] *Deconstructing the 'Collcas': Re-Evaluating the Evidence for Inca State Storage at Cacha (Raqchi)*

In this paper we re-evaluate the evidence for the existence of state storage at the Inca administrative and religious site of Cacha. Through an analysis of architectural, ceramic, and macrobotanical evidence, we present data indicating that the battery of 152 circular structures at Cacha, often presented in the archaeological literature as representing Inca storehouses, date to the Middle Horizon and show evidence of domestic use. In our discussion we confront the 'problem' of long-lived ceramic traditions and uncooperative radiocarbon dates. We conclude by considering how and why Inca planners incorporated pre-existing architectural features and landscape traditions into their imperial installations.

Dean, Glenna (Historic Preservation Division, Dept. of Cultural Affairs, State of New Mexico)

[36] *New Information from some Reeeeeeeally Old Coprolites*

Texas A&M students pushed the interdisciplinary envelope in their diverse studies of hundreds of coprolites from Hinds Cave, a dry rockshelter in southwest Texas, and their results were big news in the late 1970s. Subsequent advances in radiocarbon dating and the theory and practice of archaeological pollen analysis now urge the re-examination of some of those

original data. New information and dates are emerging from an ongoing re-analysis of my pollen and macrofossil data from 100 coprolites from a single Hinds Cave latrine. Thus begins a new chapter in the Consumption Residue Analysis Project: Life in the Texas Archaic.

Dean, Glenna [136] *see Procter, Rebecca*

Dean, Jeff (University of Arizona) [181] *Discussant*

Dean, Rebecca M. (Southern Illinois University, Carbondale)

[207] *Faunal Remains from 'Ayn 'Abu Nukhayla*

The site of 'Ayn 'Abu Nukhayla is located in a marginal environment for agriculture. Faunal remains from the site suggest that the prehistoric inhabitants followed a risk-management strategy of mixed hunting and herding. Domestic goats (*Capra hircus*) were of critical economic importance. The needs of these animals dictated a pattern of seasonal transhumance, with 'Ayn 'Abu Nukhayla only occupied during cooler months. In addition to the domesticates, wild animals were economically important. The villagers continued to hunt ibex (*Capra ibex*), a protein staple prior to the Neolithic. Hare (*Lepus capensis*) and gazelle (*Gazella* sp.) were also exploited in significant numbers.

Deats, Stewart (EnviroSystems Management, Inc.)

[138] *Changes in Prehistoric Food-Grinding Tools and Subsistence Strategies in Northern Arizona*

Prehistoric transition from hunting-gathering economies to agriculturally based ones in the American Southwest has been a long standing area of investigation. Evidence of this transition and increased agricultural subsistence specialization is observable in prehistoric food-grinding tool assemblages recovered over the past decade from projects in northern Arizona.

Variations in grinding efficiency and intensity exhibited by manos and metates suggest that reliance on food grinding fluctuated but generally increased over time. Changes signifying increased formalization of the food-grinding toolkit toward maize processing were also found. This information indicates a subsistence strategy heavily dependent on agriculture by the Pueblo III period.

DeBoer, Beau (Eastern New Mexico University) and Tykot, Robert (University of South Florida)

[157] *Reconstructing Ancestral Puebloan Diets in the Middle San Juan River, New Mexico through Stable Isotope Analysis*

Situated along the middle San Juan River, New Mexico, are the Ancestral Puebloan sites of Tommy (Pueblo I / II) and Mine Canyon (Pueblo III). Dietary investigation from archaeological contexts is often limited to faunal remains and macro and microbotanical remains, and typically represents the general diet at that site. Stable isotope analysis provides an alternative and allows for diet to be determined on an individual basis. A total of fifty individuals were sampled from these two sites using collagen and apatite for analysis to identify dietary differences through time, between the sexes, and amongst the elite.

Decker, Jeremy (Northern Arizona University)

[40] *For Sale: The Past... and It ain't Cheap. Archaeological Looting in Gila National Forest, New Mexico*

Archaeological looting, whether for personal collection or for illicit sale on the antiquities market, is a worldwide problem. The American Southwest is no exception. In Gila National Forest, New Mexico, a wealth of archaeological and cultural knowledge is threatened by extensive looting. Unfortunately the full extent of the damage to archaeological sites is poorly understood. By looking systematically at the numbers and types of sites looter's target, it is possible to begin to understand the extent of the looting problem, and to attempt to create new management strategies to aid in the protection and management of these valuable cultural resources.

del Cid, Mario [26] *see Garcia, David*

Delaney-Rivera, Colleen (Moorpark College), Plummer, Thomas (Queens College-CUNY & NYCEP), Oliver, James (Illinois State Museum) and Hertel, Fritz (CSU-Northridge)

[4] *Pits & Pitfalls: Applying Actualistic Tooth Mark Experiments to Zooarchaeological Analysis*
Archaeologists use tooth mark frequency on bones to infer carnivore involvement in the

formation/modification of faunal assemblages and to determine whether hominids accessed fleshy or defleshed carcasses. The carnivore taxa for which quantitative data are available is limited, however. Feeding experiments with sixteen omnivore and carnivore species are described. Defleshed ungulate long bones used in the experiments were analyzed for surface and fracture damage. This study expands the taxonomic and size range of carnivores providing tooth pit data. The results demonstrate considerable overlap in tooth pit dimensions between different size- class carnivores and highlights difficulties in uncritical application of actualistic tooth mark data to zooarcheological analysis.

DeLeonardis, Lisa (The Johns Hopkins University)

[133] *Nasca Warriors, Real and Ideal*

Among the Nasca (ca. AD 1–700) of south coastal Peru, decapitation of young men as a cultural practice is supported by the presence of mummified human heads and decapitated bodies in specific archaeological contexts. Visual narratives on painted ceramics depict the participants, display of the heads, and the disposition of headless bodies. In the present discussion I approach the issue of decapitation through the analysis of both mortuary contexts and the visual arts in order to draw inferences about how the practice was conceived and portrayed. This analysis lends itself to defining the roles of the participants, particularly the warrior.

Delgado, Arnulfo (Cal State, Los Angeles) and Brady, James E. (Cal State, Los Angeles)

[108] *The Chicomoztoc and Modern Jalkateko Origin Mythology*

The belief in group genesis from seven caves or from a seven-chambered cave, often referred to by the nahuatl term “Chicomoztoc,” is pan-Mesoamerican. Group differences and relatedness were explained in terms of peoples coming from different caves. A basis of modern Jalkateko identity is the claim to descent from a founding couple who now reside in the community cave. In Jalkateko myth, the founding father is one of seven brothers who disperse to create the principal communities of the area known as the Huista. The concept of the Chicomoztoc serves to define and bind this area.

Delgado, Florencio (Universidad San Francisco de Quito)

[206] *Social Dynamics of Raised Field Production of the Lower Guayas Basin's Raised Fields*

Raised field agriculture in the Lower Guayas Basin, coastal Ecuador has been associated with late Milagro-Quevedo communities (AD 700–1500). Organized into regional polities, these communities transformed the local landscape through the massive construction of raised fields that afforded them to drain the area, utilize the nutrient-rich deposits brought from the Andes by the local river system during the flooding episodes and, maximize the area for cultivation. In this presentation I will discuss, the organization of raised field construction, maintenance and production by one of the communities, the Yaguachi, near modern city of Guayaquil.

Delgado, Mercedes [3] see Rhode, Matthew

Delgado González, Carlos [216] see Bélisle, Véronique

DeLoney, Marguerite (Brown University)

[47] *Promoting the Hunt: Tool Manufacturing at Late Prehistoric Base Camps in the Lower Nueces Valley, South Texas*

Between AD 1000 and 1700, the Lower Nueces River Valley was a regional center for the production of chert tools. This paper focuses on the organizational structure of tool manufacturing during this period and how settlements supported an efficient hunting economy. Quarries, base camps, and household workshops will be discussed as components of the manufacturing network. The author argues that the household workshop functioned as the primary tool production unit. The paper concludes with commentary about the importance of combining descriptive lithic analysis with research approaches that link tool assemblages with social structures, settlement patterns, and economic networks.

DeMaio, Justin (Indiana University of Pennsylvania), Mazza, Celeste (Indiana University of Pennsylvania) and Hinrichsen, Kellen (Indiana University of Pennsylvania)

[126] *New Perspectives from New Investigations at Some Old Sites*

One focus of the IUP Late Prehistoric Project has been the re-investigation of sites first

excavated from 20 to 50 years ago. In 2006 and 2004, archaeological Field Schools excavated at the Johnston and Carl Fleming Sites in Indiana County. As a result, we have collected data that have changed our perspectives on these sites and contributed to our understanding of the Late Prehistoric cultures in the Conemaugh River and Crooked Creek watersheds.

Demarest, Arthur (Vanderbilt University) and Barrientos, Tomas (Universidad del Valle)
[26] *The Cancuen City-State and the History of the Great Western Trade Route of the Classic Maya World*

Since 1999 the Cancuen Archaeological Project has studied an unexplored zone from Seibal, Peten, south along the Pasion River route to the gateway center of Cancuen, and then up through the Verapaz highlands. This is the direct interface between the lowland Classic Maya kingdoms and the very distinct highland societies. Investigations have elucidated the unusual and complex nature of Cancuen itself and have documented signal events and processes along the great trade route including "international" intrusions and influences. Implications are drawn for the general nature of Classic Maya civilization and the eighth century beginnings of its decline.

Demarest, Arthur [26] see Garcia, David; [26] see Wolf, Marc; [26] see Barrientos, Tomas; [26] see Torres, Paola

Dematte, Paola (Rhode Island School of Design)

[120] *Chinese Identity and Archaeology*

Chinese archaeologists are sometimes charged with supporting a nationalist agenda. While it may be occasionally true, it is necessary to realize that Chinese archaeology had an identity and a development independent from the West. Since antiquity, Chinese scholars were concerned with the recording of their past. As a result of this interest an antiquarian tradition emerged in the 10th–11th centuries and bloomed in the 18th–19th centuries blending with Western style archaeology in the early 20th century. This paper explores the transformation of Chinese antiquarian studies into modern archaeology and argues for the existence of a Chinese modernity.

Demoule, Jean-Paul (Institut National de Recherches Archéologiques Préventives)

[197] *Hunters and Farmers: New Fashions and Old Fashions in Archaeology*

For over a century debate on the relations between Mesolithic hunter-gatherers and Neolithic farmers has followed changing ideology and academic fashion in the various European countries. Migrationist models, for a long time dominant in the German and central European archaeological tradition, are now replacing, in the Anglo-American tradition, indigenist or even immobilist models. Yet archaeological data do not necessarily follow fashion. They must be viewed in their totality, and the whole movement of neolithization in Europe, including the Near East, should taken into consideration, as well as comparable movements on other continents.

Denevan, William M. (University of Wisconsin-Madison), Woods, William I. (University of Kansas) and Neves, Eduardo G. (University of São Paulo)

[15] *Population Estimates For Anthropogenic Dark Earths (Terra Preta) In Amazonia*

Estimates of pre-historic population densities based on cultivated field size, type, and area covered, have previously been made for raised fields and terraces. Here we estimate densities on anthropogenic dark earths (ADE) in Amazonia. These continuously fertile soils support semi-intensive cultivation today. Given a crop to fallow ratio of 1:4, a maize staple, 20 people per hectare in cultivation, and an estimated 0.2% of Amazonia with ADE, the estimated potential total population on ADE would have been 4,800,000.

Dennett, Carrie (Trent University)

[63] *Ceramics from the Rio Claro Site (AD 1000–1530), Northeast Honduras*

Precolumbian Northeast Honduras is considered the northern-most extension of the Isthmo-Colombian Area. This area stretches southward from Northeast Honduras into northern South America and is comprised of regionalized Chibchan-speaking groups. The archaeology of Northeast Honduras is perhaps the least well known of the entire Isthmo-Colombian Area. This poster presents an overview of Late Period ceramics from the site of Rio Claro. Although these ceramics share certain stylistic and decorative traits with other contemporaneous

assemblages of the Isthmo-Colombian Area, this presentation is designed to demonstrate key distinctive aspects that are characteristic of the Northeast region as a whole.

Densmore, Julie (University of North Texas), Nagaoka, Lisa (University of North Texas) and Wolverton, Steve (University of North Texas)

[4] *Evaluating Measures of Bone Fragmentation*

The extent/intensification of fragmented faunal remains have been documented through multiple measures. This project evaluates the strengths and weaknesses of such methods using the archaeofaunas recovered from Eagle's Ridge, an Archaic site in the coastal plains of Texas. The development of pottery 2000 years ago by this mobile, hunter/gatherer society may be linked to subsistence issues such as resource depression and the intensified use of high ranked prey, which can be seen in the faunal record as increased fragmentation. The patterns of fragmentation will be analyzed through time at this site using foraging theory models.

Densmore, Julie [4] see Welch, Ransley C.; [4] see Wolverton, Steve

Denton, Mark H. (Texas Historical Commission)

[80] *Cisterns in Texas*

From the 1840's to the early part of the 20th Century thousands of water cisterns were constructed in Texas. Their size, shape, mortar, plaster linings, and other construction techniques give important clues to their age. In urban areas, the variations in these factors are systematic and evolutionary, but in the rural areas of Texas variation is rare and common uniformity seems to be the rule. The construction and use of cisterns spread quickly and their size and shape changed significantly since their introduction and the urban termination of their use in the early 20th Century was as swift as their beginnings.

Denton, Mark (Texas Historical Commission) [118] Discussant

Deppen, Jacob E. [150] see Nolan, Kevin C.

Dering, Phil (Shumla School)

[10] *The Transition from a Paleoindian to an Archaic Economy Along the Southern Plains Periphery*

Using the diet-breadth model, I compare faunal and botanical assemblages from several Paleoindian and Archaic components located within the southern periphery of the Great Plains, from the Eastern Woodlands to the Chihuahuan Desert and the Rocky Mountains. The comparison of many sites across the region is useful for describing temporal and spatial variation in the transition to an Archaic economy. Resources as well as hunting and plant processing technologies vary within relatively short distances along the east-west moisture gradient. Intensification of earth oven plant processing, characteristic of the Archaic Period, appears to be delayed in the west.

Dering, Phil [99] see Quigg, Michael

Derry, Linda (Old Cahawba, A.H.C.)

[111] *Borrowing a Tool from Eco-Tourism: Finding the Market Segment that Cares about Archaeological Resources*

SAA Ethic # 4 asks us to reach out to interested publics to cooperatively preserve, protect and interpret the archaeological record, but some citizens will never be interested at this activist level. So how do we identify, understand, and motivate the potentially interested? Through partners in the tourism industry, I discovered a useful tool in this quest: the National Survey on Recreation and the Environment. This nationwide survey identifies and describes personality types, or market segments, that we can use to find and develop archaeology's audience.

Des Lauriers, Matthew (California State University, Northridge)

[184] *Of Clams and Clovis: Isla Cedros, Baja California and the Peopling of the New World*
Research on Isla Cedros has revealed 9 Terminal Pleistocene/Early Holocene sites. At least three of these sites date in excess of 10,000 rcybp. These sites demonstrate a maritime economic focus among the earliest islanders, suggesting they were originally coastal peoples

rather than terrestrial hunter-gatherers. Faunal remains from one deposit mirror changes in coastal landforms, providing a 2,000 year sequence of adaptation to changing littoral ecology. The evidence from Isla Cedros is placed within the dialogue surrounding the Peopling of the New World, and suggestions are made regarding the relevance of Peninsular and coastal research to the larger continental colonization process.

Descantes, Christophe (Research Corporation, Univ. of Hawaii), Speakman, Robert J. (University of Missouri) and Glascock, Michael (University of Missouri)

[160] *Instrumental Neutron Activation Analysis of Ceramics from Five Archaeological Sites in Antigua, West Indies*

Ceramics of multiple styles from five archaeological sites on Antigua were analyzed at the University of Missouri Research Reactor Center (MURK) to obtain a better understanding of compositional variability within Antigua. Bulk chemical characterizations of pottery were determined by instrumental neutron activation analysis (INAA). Findings suggest that all of the ceramics in our sample were made from locally available, naturally tempered clays, and that there is compositional continuity through time despite the varying stylistic and locational attributes of the sherds.

Desilets, Mike (Garcia and Associates), Dixon, Boyd (PBS&J), Orr, Maria and Lee-Greig, Tanya (Cultural Surveys Hawaii, Inc.)

[51] *Dating Maui's Last Lava Flow: Preliminary Results of a Collaborative Survey of the Ahihi-kina'u Natural Area Reserve*

Based on late eighteenth century explorer's maps and second-hand ethnohistoric accounts, Cape Kina'u, Maui, is currently thought to have resulted from a recent Kalua O Lapa lava flow dating to not long after AD 1786. Radiocarbon dating by scientists at the Hawaiian Volcano Observatory, however, suggests an emplacement date in the range of AD 1480–1600. This earlier date range correlates closely with Hawaiian traditional history, the results of recent archaeological survey, and Mahele-era ahupua'a boundaries.

Deter-Wolf, Aaron [66] see Wampler, Marc E.

Dever, Alejandro (University of Pittsburgh, Wenner-Grenn Foundation)

[175] *Local trade, Community Formation and Specialization of a Tairona Coastal Community: Cases from the Parque Tairona, Colombia*

The development of communities and a regional economy over a 1700 year sequence of Tairona occupation will be discussed using the archaeology of villages in the Bay of Chengue. The small community will be contextualized at the regional scale while taking into consideration the dynamics of its social organization at a domestic level. New evidence resulting from systematic excavations will include demographic estimation, paleo-environmental reconstructions, analysis of ceramics use and a refined chronology. Models for the development of specialization and chiefly political structure will be evaluated.

Devitt, Lauren [3] see White, Benjamin

DeWitte, Sharon (University at Albany)

[3] *Age and Sex Patterns of Black Death Mortality: Estimates from the East Smithfield Cemetery*

This project investigates the epidemiology of the Black Death (1347–51) using large skeletal samples from Europe. Using new paleodemographic methods, and comparing the mortality patterns in the East Smithfield Black Death cemetery to those in a normal cemetery sample, this research seeks to answer the following questions: How was the excess mortality associated with the Black Death distributed by age? Were children and the elderly at higher risk than other age groups, or were all ages at equal risk? How was Black Death mortality distributed by sex? The results provide new information about the mortality patterns of the Black Death.

Deyloff, Glenda [90] see Huntley, Deborah

Dial, Susan [96] see Black, Stephen

Dickens, William (Texas A&M University)[89] *Clovis Biface Reduction at the Gault Site, Texas*

Two strategies comprise Clovis lithic technology—blade production and biface manufacture. Excavation within the Lindsey Pit yielded four Clovis points, 57 bifaces, 464 blades, and 50 blade cores allowing concurrent study of these technologies. A variety of raw-material forms were selected for both strategies; blocky, chert tabs were favored for bifaces. Examination of the bifaces and associated debitage revealed that blade-making techniques were used throughout the biface-reduction sequence culminating with the final flute removal. This suggests a close association between the two strategies. The origins of fluting may be tied to blade production and perhaps evolved during Clovis times.

Diederichs, Shanna (Mesa Verde NP) and Glowacki, Donna (ASU)[91] *Distribution and Function of Towers on Mesa Verde*

Towers are a distinct characteristic of the Northern San Juan Region during the Pueblo III and appear to have played an essential role in Ancestral Puebloan social organization. Although towers are common on Mesa Verde Proper, we know little about their setting and function. In this study, we assessed 83 known Pueblo III towers in Mesa Verde National Park to determine patterns in distribution, construction, and architectural context. The results of our study show that towers served multiple roles including religious, defensive and regulative functions.

Diego, Laura (INAH - Oaxaca)[211] *El Palacio en la Sociedad Mixteca del Posclásico el Caso del Sitio Pueblo Viejo de Teposcolula Yucundaa*

Se contrasta una categoría de organización sociopolítica dada, construida a partir de fuentes históricas, como lo es el anífe mixteco o Palacio, con respecto a la información obtenida a través de métodos y técnicas arqueológicas durante las excavaciones llevadas a cabo en el sitio Pueblo Viejo de Teposcolula Yucundaa.

Diehl, Richard (University of Alabama–Tuscaloosa) and Diehl, Jr., Richard[140] *Roadtrippin' with Robert: Texas to the Tuxtlas to Tabasco*

Robert Santley had different but equally significant impacts on the lives of both authors. These will be discussed and analysed in the context of a car trip the three of us made to Mexico in 1978 to initiate planning for his first research project in the Tuxtlas.

Diehl, Jr., Richard [140] *see Diehl, Richard*

Dietler, Michael (University of Chicago) [53] Discussant**Dietler, Michael (University of Chicago) and Herbich, Ingrid (University of Chicago)**[11] *The Agency of Ancestors: Reflections on an Ethnographic Case from Africa*

Ethnographic research among the Luo people of Kenya reveals that ancestors are an important and pervasive agentive force in daily life. They can intervene in a direct, often malevolent, way: for example, in the realm of disease and misfortune, or by appearing in dreams and causing people to undertake actions of various kinds. But, more positively, time and space are also structured by ancestors in ways that construct identity and the landscape, and fear of offending them helps maintain order. This paper explains the multiple roles of ancestors in Luo life and offers some reflections on dealing with ancestors in archaeological contexts.

Dietz, Michael (University of Missouri) and Speakman, R. J. (University of Missouri)[17] *Reconstruction of Dietary and Activity Patterns of the Early Intermediate Chongos Culture Using LA-ICP-MS*

We present results of trace element analysis of bone from 32 individuals from the Early Intermediate Chongos site, Pisco Valley, Peru (~2000 BP) using LA-ICP-MS. This site has been hypothesized as having been a principal source of agricultural products for the Paracas elite. The data, however, demonstrate variability in individual dietary patterns, ranging from a diet high in agricultural products to a diet high in marine resources. These results will be discussed relative to community health and social implications.

Dillehay, Tom (Vanderbilt University), Rossen, Jack (Ithaca College) and Iriarte, Jose (University of Exeter)

[10] *Interpreting Economy and Technology at Various South American sites: Interassemblage and Intercontextual Analyses of Varying Species of Plant Remains*

Archaeological remains excavated from the well-preserved single component layer of Monte Verde II and from several Preceramic sites in Peru inform our understanding of the comparative importance placed on various assemblages that represent plant use. In this paper, we compare and contrast macrobotanical remains, starch grains, and phytoliths from selected floor and feature contexts for differential contribution to reconstructing site economy and technology. The Monte Verde site is particularly well-suited to this comparison because of its excellent and unbiased preservation of all types of organic remains. Other less preserved sites provide comparative control sites.

Dillehay, Tom [43] see Rossen, Jack; [79] see Santoro, Calogero

Dillian, Carolyn (Princeton University) and White, Carolyn (University of Nevada, Reno)

[191] *Trade and Exchange: Prehistoric and Historic Perspectives*

Aspects of trade and exchange frequently are components of research designs, but explicit focus on the cultural and social foundations of exchange is unusual. We propose a diachronic perspective on exchange with new ideas and case studies from around the world. Prehistoric exchange, often identified through geochemical sourcing, united diverse populations across time and space. Historic trade, traced through manufacturing, stylistic, and documentary indices, connected individuals to both familiar and exotic distant lands. We seek to bring trade and exchange into the foreground of archaeological research, and offer comment and new questions for trade and exchange studies.

Dillian, Carolyn [174] see Bello, Charles; [191] see Ndiema, Emmanuel

Dirkmaat, Dennis (Mercyhurst College) and Cabo-Pérez, Luis (Mercyhurst College)

[48] *Repatriation of the Recently Deceased in Disaster Scenarios: Issues, Goals and Experiences*

Anthropology now has a significant role to play in the mass disaster, bombing, and mass grave incidents where in the past, documentation of context has been woefully inadequate. Through scientific modeling, processing of mock scenes and real-case experiences, it can be demonstrated that much information can be gathered through the application of proper archaeological techniques during recovery. This includes where to look for evidence, expectations of remains density, and thoroughness of recovery. Repatriation of human remains, therefore, can be done efficiently and effectively while collecting evidence of value to investigators attempting to more precisely describe what happened at the scene.

Dirkmaat, Dennis [102] see Cabo-Pérez, Luis

Dixon, Boyd (PBS&J)

[85] *Los Naranjos: The Birth of a National Archaeological and Ecotourism Park*

The archaeological site of Los Naranjos, located on the shores of Lake Yojoa in central highland Honduras, has been designated as part of a new national park by the Instituto Hondureño de Antropología e Historia. This paper explores the present uses and potential contributions that archaeology and related disciplines can make to public interpretation and involvement at the park, based on the results of recent excavations at the site and a regional settlement pattern survey directed by the late George Hasemann.

Dixon, Boyd [51] see Desilets, Mike

Dixon, Christine (University of Colorado, Boulder) and Weller, Errin

[15] *An Analysis of Ceren Soils: Too Good To Be True*

El Ceren, El Salvador provides a unique window into an ancient village of the Maya region. Excellent soil analyses and preserved agricultural fields at Ceren afford insight into the intersection of soil productivity and agricultural practices in this area. Excavations and soil analyses have revealed that these soils are not expected to be highly productive, however, corn-kernel counts indicate that the agricultural yields at Ceren are three times higher than

those estimated at any other site in the Maya World. Extraordinary levels of archaeological preservation at Ceren makes this site an excellent case study for understanding the relationship between soil composition and agricultural yields.

Dixon, James (University of Colorado–Boulder)

[184] *Archaeological Potential of Southeast Alaska's Continental Shelf*

Large areas of the continental shelf of Southeast Alaska were ice-free during and near the end of the Last Glacial Maximum (LGM) when sea level was 100–120 m lower than it is today. Regional archeological evidence indicates early maritime adaptations were established prior to circa 10,000 calendar B.P. when the continental shelf along the Northwest Coast was above sea level. Artifacts and other evidence recovered from the continental shelf suggest underwater sites may be located along ancient submerged shorelines, river channels, and other locales that were inundated by post-Pleistocene sea level rise.

Dixon, Kelly [215] see Schablitsky, Julie

Dobson, Steve (University of Sheffield), Gregory, David (National Museum of Denmark) and Matthiesen, Henning (National Museum of Denmark)

[171] *Geophysics and Landscape Assessment: Exploring Historic and Modern Change at Nydam Mose, Denmark*

Nydam Mose has attracted archaeological interest for many years due to the incredible number of well preserved finds from this peat bog site. In recent years a number of geophysical investigations have taken place and have attempted to establish the extent of Iron Age material to aid the process of preservation and resource management. These surveys have also highlighted a more complex picture of historic change which has not traditionally been the focus of archaeological investigation. This presentation explores possible plans to broaden the scope of research at Nydam to incorporate the study of modern and historic change and land-use.

Dockall, John (Prewitt and Associates, Inc.)

[159] *Stability with Change: Characterizing Early-to-Late Holocene Lithic Technology at the Richard Beene Site*

Lithic assemblages recovered from 41BX831 present a unique impression of technological strategies at a single location during the Holocene epoch on the inner Gulf Coastal Plain. With the exception of changing projectile point styles the lithic technology of the Early, Middle, and Late Archaic components yielded assemblages composed of heavily retouched and fragmentary projectile points, chipped bifacial adzes, and a variety of specialized flake tools such as graters, beaked unifaces, denticulates, and burins. The technology emphasized procurement and processing a wide variety of local lithic, floral, and faunal resources within a woodland and riverine environment.

Dodd, Lynn Swartz (University of Southern California)

[77] *The Middle Bronze Age Occupation at Kenan Tepe*

Research carried out at Kenan Tepe from 2000–2006 has uncovered substantial Middle Bronze Age remains dating to the 18th and 17th centuries B.C on all sides of the upper mound. Multiple phases of stone-founded mud brick structures characterized this period of occupation. Recent research offers some evidence of an abrupt, possibly even catastrophic, abandonment of the site during its last phase of Middle Bronze Age occupation. This paper presents an overview of the changing nature of settlement during this period, with particular emphasis on the architecture, ceramic and other finds.

Dodd, Lynn Swartz [77] see Sands, Ashley

Dodd, Walter (California State University, Fresno)

[38] *Maize Agriculture and the North American Monsoon*

Maize is a summer crop that requires adequate sunshine and water at the right time of year. Its successful use in the prehistoric Greater Southwest and Great Basin was closely allied with a summer-dominant pattern of precipitation originating over Mexico. This paper will discuss spatial and chronologic variability in the distribution and intensity of monsoon-derived moisture in the region, and how it might have influenced where and when corn was grown. Geographic

limits on monsoonal rain may partially explain why maize did not spread into the neighboring Mediterranean climate of California.

Dodson, John (Brunel University), Atahan, Pia (University of Western Australia), Grice, Kiliti (Curtin University) and Itzstein-Davey, Freea

[86] *Agriculture and Environmental Change at Qingpu, Yangtze Delta Region: a Biomarker, Stable Isotope and Palynological Approach*

The Yangtze delta is a region renowned for its long history of rice cultivation and high density of prehistoric sites. This rich archaeological record provides an ideal backdrop to study long-term environmental impacts of prehistoric rice agriculture and human-environment interactions. In addition to palynological analyses, this study employs biomarker and compound specific isotope analyses to study ancient rice agriculture and environmental change in the Qingpu District of the Yangtze delta. The earliest major human disturbance detected in this study was widespread forest clearance ca. 2400 BP. Subsequently rice agriculture dominated the study area.

Doelle, William [181] see Hill, Brett

Doering, Travis (University of South Florida)

[78] *El Marquesillo, A Formative Period Olmec Center*

Research into the Formative period site of El Marquesillo, in southern Veracruz, has demonstrated the ancient inhabitants participated in the Olmec sociopolitical interaction sphere along the Southern Gulf Lowlands. Results also illustrate that residents of this civic-ceremonial center differed significantly from the monolithic "Olmec Culture Model" prescribed by many social theorists.

Doering, Travis [106] see Collins, Lori; [173] see Weisman, Brent; [208] see Klinger, William; [5] see Bell, Christine; [7] see Rosenswig, Robert

Dominguez, Rosario (Universidad Autónoma de Campeche)

[162] *William J. Folan, the Archaeology of Campeche, Mexico, and the Study of Related Archaeological Materials*

The archaeological research of William J. Folan in Campeche from 1981 to present has greatly benefited the enrichment of our understanding of Maya culture. In the same way, my collaboration with him has been the driving force behind my academic trajectory and successes. What I am going to present in this paper is a summary of the archaeological investigations carried out by William J. Folan in Campeche as an investigator and director of the Historical and Social Research Center of the Autonomous University of Campeche, Mexico as well as my archaeological projects carried out in collaboration with him.

Dong, Sandra [48] see Loren, Diana

Dooley, Mathew [129] see Wandsnider, LuAnn

Doonan, William [19] see Quilter, Jeffrey

Dore, Christopher [33] see Markussen, Christine

Dorshow, Weatherby [42] see Wilkie, Duncan C.

Dosh, Steven [122] see Moore, Scotty

Dost, Sarah (Mercyhurst Archaeological Institute)

[101] *Statistical Comparison of Early Bronze Age I Textiles to Early Bronze Age II–III Textiles from Sodom*

The extensive manufacture of loom woven Linum sp. textiles has been documented at Bâb edh-Dhrâc in Jordan (Biblical Sodom) in the late fourth millennium to the late third millennium (3150–2300 B.C.E.) contexts. Metric and statistical analysis of several technological attributes of the perishable collection from this site suggests that the degree of standardization in textile manufacture increases from the earlier to the later contexts. This "trend" is linked to differences in the locus and mode of manufacture and is related to issues of emergent social complexity.

Doucette, Dianna (PAL)

[44] *Knapping on the Job: Salvaging A Pre-Contact Lithic Quarry in Southeastern Massachusetts*

During a recent cultural resource management survey for a private housing development, a pre-Contact lithic quarry of unprecedented magnitude was discovered, becoming one of the first sites of this kind to be treated within a CRM data recovery plan. This rare type of site is of up most importance in terms of understanding procurement patterns of stone quarrying activities developed over time by pre-Contact hunter and gatherers in New England. This paper examines how we can ask, and try to answer, all the right questions, preserve the data, and do it within a budget and scope acceptable to all.

Douglas, John [213] *see Ciolek-Torrello, Richard*

Douglass, John G. (Statistical Research, Inc and University of California, Riverside), Keller, Angela (Statistical Research, Inc), Vargas, Benjamin (Statistical Research, Inc), Ciolek-Torrello, Richard (Statistical Research, Inc) and Grenda, Donn R. (Statistical Research, Inc.)

[146] *Constructing Identity in Colonial Southern California*

At the turn of the nineteenth century, European colonizers in California sought to dominate indigenous communities through a variety of means, including an extensive Mission system, strategic military installations, new labor relations, and forcible relocation. Though largely disenfranchised by colonial practices and institutions, California Native American groups were not entirely powerless. Using data from our ongoing work at island, coastal, and inland sites in southern California, we outline some of the mechanisms by which indigenous peoples adopted, resisted, escaped, and transformed colonial life by redefining themselves as individuals and communities.

Doutriaux, Miriam (Dumbarton Oaks)

[9] *Late Pre-Hispanic Ethnic Groups: A Historical-Archaeological Approach*

The cultural diversity of the Inca Empire is well known. It was documented during the colonial period, formed the basis of imperial administrative divisions, and is generally traced back to the independent polities of the LIP. Inca history has been largely conceptualized in terms of the interactions and distinct histories of ethnic groups. Yet the meaning of ethnicity and the criteria used for ethnic identification changed as the Andes went from localized to imperial rule, and later to European domination. A diachronic look at ethnicity in the late prehistoric Andes provides valuable insights into Inca statecraft.

Doxtater, Dennis (University of Arizona)

[72] *A Statistical Evaluation of Compound, Large-Scale Geometric Patterns among Natural and Archaeological Sites of the Pueblo Ancestors*

Recently submitted research on large-scale geometry among natural and built features in the Pueblo Ancestral landscape statistically verifies the likelihood of three intentionally designed patterns: alignments, cardinal relationships, and bisects. This study used software that created some number of random points within a geographical area where the same number of archaeological sites occur. Patterns of 100 sets of points were compared to existing ones. The present report continues by adding two primary patterns, a ninety degree angle and non-bisect equal angles. The primary work, however, tests eleven logical combinations of the five in "compound" patterns that can include up to five primary ones.

Doyel, David (US Air Force, Luke AFB) and Rankin, Adrienne (US Air Force, Luke AFB)

[106] *Settlement History of the Barry M. Goldwater Range (East) in Western Papagueria, Southwestern Arizona*

Field survey has recorded 1,200 archaeological sites distributed across 64,000 ha (160,000 ac) on the Barry M. Goldwater Range (East) in Western Papagueria in southwestern Arizona. The resulting GIS database is used to develop settlement models for the Paleoindian, Archaic, Formative, and Historical periods that inform issues relevant to the occupation of this arid desert region including hunter-gatherer adaptations, agricultural strategies, cultural diversity, trade and interaction, mining, ranching, and military activities. The dataset also informs wise resource management and provides information of interest to descendant communities. Plans for future work are discussed.

Drake, Eric [148] see Dunham, Sean; [25] see Cobb, Charles

Drakos, Paul (Glorieta Geoscience, Inc.) and Reneau, Steven (Los Alamos National Laboratory)

[105] *Soil-Stratigraphic Framework, Timing of Recent Eolian Events, and Preservation of Archaeological Sites on the Pajarito Plateau, New Mexico*

Stratigraphic relationships and soil characteristics provide a geomorphic framework for Ancestral Puebloan, Archaic, and Paleoindian sites on the Pajarito Plateau near Los Alamos, New Mexico. Ancestral Puebloan sites are partially buried, by eolian or colluvial deposits, and are generally in good archaeological context. Mesa top sites are underlain by a sequence of discontinuous, truncated late Pleistocene through mid Holocene soils that have preserved buried Paleoindian sites. Although locally preserved in valley bottom and swale fill deposits, the relative paucity of pre-1 ka Holocene deposits, absent from many locations, likely skews the archaeological record against preservation of Archaic sites.

Drass, Richard (University of Oklahoma), Vehik, Susan (University of Oklahoma) and Perkins, Stephen (Oklahoma State University)

[208] *Digging Ditches; Fortifications at Bryson-Paddock and Other Southern Plains Villages*
Spanish soldiers in 1759 described a fortification consisting of a roughly circular rampart with a stockade surrounded by a ditch at a Red River Wichita village. Similar structures, however, were being made as early as 1500. Magnetometer surveys and excavations at an earlier 18th-century Wichita village have revealed the presence of extensive ditches that appear to represent portions of two fortifications. The effort expended to construct such fortifications suggests a period of intensified intertribal conflict in the southern Plains that may be partially attributed to increased mobility with the arrival of the horse and competition for European trade.

Drass, Richard [112] see Vehik, Susan

Drennan, Robert D. (University of Pittsburgh), Peterson, Christian E. (Washington University) and Fox, Jake R. (University of Pittsburgh)

[152] *Degrees and Kinds of Inequality*

Comparative study of social inequality requires consistent means of distinguishing greater and lesser degrees of it. Recognizing that human societies show different kinds, as well as different degrees, of inequality represents an advance in understanding, but only makes assessing the degree of inequality harder. Indeed, the observation that two societies show inequality of different sorts has frequently been offered as an antidote to the interpretation that one shows much greater inequality than the other. Comparison of early chiefdoms shows that different degrees of at least two basically different kinds of inequality (prestige and wealth) can be distinguished consistently.

Dresch, Patrick [147] see Cagnato, Clarissa

Drolet, Robert (Corpus Christi Museum of Science and History)

[47] *Late Prehistoric Occupation of the Lower Nueces River Valley, South Texas*

Intensive survey and site excavations conducted in the Lower Nueces River Valley over the past seven years are providing information about prehistoric hunter/gatherer settlement organization prior to European contact. This paper focuses on Late Prehistoric occupation (AD 1000–1750) and offers a description of site locations, settlement density and diversity, artifact assemblages, and internal features recorded at habitation sites. The author concludes with a discussion about Late Prehistoric settlement growth, integration, and decline in the Lower Nueces River Valley and how this long-term study is contributing new perspectives about this cultural period over the South Texas region.

Drooker, Penelope B. (New York State Museum)

[192] *"Octagonal Openwork" and Mississippian Boundaries*

"Octagonal openwork twining," defined in 1936 by Horace Miner based on examples from Kincaid, IL, Tolu, KY, and Spiro, OK, is a lacy, decorative fabric structure, common in the lower Ohio Valley and nearby but only rarely found elsewhere. Its known occurrences can be useful in exploring geographical, temporal, and status-connected boundaries within the Mississippian world, as well as trans-boundary interactions.

Duarte Flores, Luz Gabriela (Escuela Solidaridad)[136] *Minas Nuevas, A Ghost Town*

The object was for 8 and 9 year old children to awaken respect for historic sites and their preservation. We worked with an old town on the outskirts of the city, beautiful and enigmatic for most people: "Minas Nuevas." Working through the academic curriculum, we discovered part of the history of our town. The exercise was an appropriate way to obtain knowledge, not only because it's practical but because it gave us fun activities, clear and in sync with the children's needs. But it wasn't easy. There were many obstacles to be overcome, but it was a very fruitful and gratifying effort.

DuBarton, Anne (NewFields International) and Perry, Laureen (Bureau of Reclamation, Lower Colorado Region)[204] *Archaic Las Vegas: Early Occupations at the Meadows*

The Archaic Period in Southern Nevada is generally defined by one site: Gypsum Cave. An overview of previous research reveals a broad distribution of small task specific sites and isolated projectile points, suggesting ephemeral use as people traveled through, tending to cluster near washes, springs, sand dunes, and valley margins. Our research focuses on understanding this often ignored evidence, combined with re-evaluations of known sites and recent subsurface discoveries, and what this information says about Archaic use of the Las Vegas Valley. Additional information on prehistoric climate; resource procurement; and population movement broadens our understanding of this neglected time period.

Dudgeon, John (University of Hawaii / IIRMES)[92] *Molecular Relatedness and Its Correlation with Social Geography*

A first approximation of the molecular lineage structure within the archaeological skeletal population from Rapa Nui uses stylistic, ethnographic and geographic data to generate hypotheses about the possible characteristics and sufficiency of boundaries to gene flow. This type of social geography is a necessary foundation for understanding the historical pattern of genetic variation within populations without biological or ecological barriers to sexual interaction. By comparing geographic estimates of phylogenetic and social distance, we can evaluate the synchronic record of molecular relatedness with the archaeological record of social relatedness to begin to construct a coherent model of prehistoric lineage formation.

Dueppen, Stephen (University of Michigan)[183] *An Early Village in the West African Savanna: Kirikongo, Burkina Faso*

Villages are the fundamental building blocks of complex societies throughout the world, but in West Africa their formative trajectories have received only limited study. Excavations along the Mouhoun River, Burkina Faso at the mound cluster of Kirikongo (AD 400–1400) have uncovered mud-brick architecture, abundant subsistence remains and a diverse material culture. After describing the nature of the component parts of the settlement, the economy and chronology, I discuss how our findings inform on the underlying socio-political integrative mechanisms at Kirikongo and how these can help us understand developments in other parts of the West African savanna.

Duff, Andrew (Washington State University), Ferguson, T.J. (Anthropological Research, LLC) and Bruning, Susan (Southern Methodist University)[90] *Pueblo Perspectives on Archaeology, Landscape and History in the Southern Cibola Region*

As part of ongoing archaeological investigations into Chaco period community organization, we sought to increase our understandings of archaeological sites, settlement history and landscape in the Largo Creek–Carrizo Wash area by soliciting Puebloan input and perspectives. Working with groups from Hopi, Zuni, Acoma, and Laguna, we visited Chaco-era residential, petroglyph locations, and later villages to discuss the process of settlement history and change. Discussion of landscape, history and threats to archaeological and historical resources in the region were facilitated by the project proximity to the Zuni Salt Lake. This poster describes the project and some of its findings.

Duff, Andrew [138] see Arakawa, Fumiyasu; [181] see Ryan, Susan; [75] see Elkins, Melissa; [90] see Snyder, Charles; [90] see Cameron, Catherine

Duff, Eric [42] *see* Lotti, Teresa

Duffus, Katherine (The College of Wooster) and Kardulias, P. Nick (The College of Wooster)

[95] *Political Agenda in Assyrian and Babylonian Sculpture in the First Millennium BC*

Examined in this study is the extent to which politics affected sculptural art in Babylon and Assyria in the first millennium BC. First I examined the ways political propaganda expressed itself, specifically through religious and military forms. Religious propaganda promoted ideas such as service to the gods and divine protection from them, whereas military propaganda promoted the idea of military success in battle and national prosperity. Secondly, I examined to what extent Assyrian propaganda affected Neo-Babylonian art. The results of my analysis suggest that Babylonian works were separating themselves from the brutality of the Assyrian conquerors.

Duke, Daron (Far Western and University of Nevada, Reno) and Carpenter, Tim (ArchaeoMetrics)

[110] *Testing the Limits of Obsidian Hydration Analysis*

The limitations of conducting hydration analysis on early artifacts are highlighted in this analysis of roughly 350 Late Paleoindian stemmed points from the Great Salt Lake Desert. Age, weathering, and environmental considerations are all factors that must be scrutinized before any statements about chronology can be made. The artifacts in this study come from numerous sites along the now desiccated Old River drainage system where Paleoindian peoples occupied an expansive wetland area. We will discuss the importance of integrating hydration results with various spatial, typological, and geomorphological data before inferring any chronological relationships.

Dukeman, Casey and Stiger, Mark (Western State College)

[124] *Projecting Residential Facility Investment*

The dynamic environmental history of the mountainous Upper Gunnison Basin in Colorado is modeled using modern environmental observations and prehistoric data. The Basin's archaeological record of features is compared to this environmental history and patterns are isolated. Using Binford's Frames of Reference, circumstances for increased facility construction are explored.

Dumas, Ashley (University of Alabama)

[173] *Evidence for Late Woodland Salt Production in Southwest Alabama*

It is generally accepted that salt was an important resource for people who rely on horticulture for subsistence. Production of salt by Mississippian groups in Eastern North America, therefore, is not unexpected. However, a recent analysis of ceramics from salt spring sites in southwest Alabama suggests that local Late Woodland people were the first to make salt there. This paper explores whether Late Woodlanders were making salt primarily for themselves or for trading with Mississippian groups. Findings have implications for the initial appearance of Mississippian culture in the region.

Dumas, Ashley [123] *see* Carr, Philip

Dunbar, James S. (Public Lands Archaeology, Florida Bureau of Archaeological Research)

[110] *Chronostratigraphy and Paleoclimate of Late Pleistocene Florida and the Implications of Changing Paleoindian Land Use*

The Florida Page-Ladson site stratigraphy provides the first well-dated, substantially uninterrupted, regional, Pleistocene-type section in the Southeast. The establishment of a regional event stratigraphy for this site is compared to the global event stratigraphy. The implications of these data will be related to Paleoindian settlement and land use options in the extreme Southeastern US.

Dunham, Sean (CCRG/Michigan State U) and Drake, Eric (Binghamton University)

[148] *After the Fur Trade: The Archaeology of Native American Sites in the Upper Great Lakes Region ca. 1775–1850*

The period from 1775 to 1850 is critical to our understanding of Native American cultures in

the Upper Great Lakes region. The late 18th and early 19th centuries marked the decline of the fur trade as well as the beginning of intensive EuroAmerican settlement in the region. The fur trade included active Native American participation in this economic pursuit whereas subsequent US policies attempted to remove them from American society. This paper will examine archaeological evidence from this dynamic period and how these factors may have effected the social and economic organization of Native American life in the region.

Dunning, Nicholas (University of Cincinnati), Beach, Timothy (Georgetown University) and Luzzadder-Beach, Sheryl (George Mason University)

[168] *Environmental Instability and Human Response in the Late Preclassic Southern Maya Lowlands*

Mounting evidence suggests that the Late Preclassic inhabitants of the Southern Maya Lowlands made adaptive decisions in an environmental context charged with instability. This instability included rising sea levels and associated hydrologic responses that affected land use decisions both on the coast and along interior rivers. Regional climate appears to have undergone a progressive drying trend in the Preclassic, punctuated by episodic drought. Geoarchaeological evidence suggests that major floods, possibly generated by hurricanes, also distressed Maya communities. Maya activities, especially land clearance, agriculture, and quarrying also contributed to environmental instability. The Maya responded to this dynamic environment with variable success.

Dunning, Nicholas [145] see Beach, Timothy

Durand, Kathy Roler (Eastern New Mexico University) and Wheelbarger, Linda (San Juan College)

[157] *The Point Community: Life in a Chacoan Small House Community*

A set of thriving communities existed along the Animas, La Plata, and San Juan Rivers, New Mexico, during the Pueblo I – III time periods. While the regional Chacoan great houses of Aztec and Salmon Ruins are well known and studied, numerous small house villages, often clustered into groups, also flourished at this time. Work at two of these small house sites, the Tommy Site (Pueblo I/II) and Mine Canyon Site (Pueblo III), part of the cluster of sites known as the Point Community, has provided a diachronic view of life in a small house community.

Duwe, Samuel (University of Arizona)

[105] *Like Opening Christmas Presents: Ceramic Analyses of Classic Period Pueblos Collected by the Pajarito Archaeological Research Project*

The large Classic Period pueblos of Otowi (LA 169) and Tshirege (LA 170), located on Los Alamos National Laboratory land, were surface collected by the Pajarito Archaeological Research Project (PARP) in the late 1970s. Although never fully analyzed, these assemblages offer the potential to understand both inter and intra-site occupational sequences, ceramic technology, and important information pertaining to the historic (and perhaps prehistoric) Keres/Tewa ethnic boundary that divided the Pajarito Plateau. This project analyzes the full ceramic assemblages (painted and utility wares) from both sites in order to answer the above questions and to explore relationships with the wider Rio Grande region.

Dye, Thomas (T. S. Dye & Colleagues)

[51] *A Bottom Up Approach to the Maka'ainana Transformation*

This paper explores a fundamental transformation of traditional Hawaiian social organization during which typical Polynesian corporate kinship groups were replaced by congeries of ephemeral, ego-based kindreds. Earlier attempts to theorize the transformation took a top down approach, focusing on the arrangements developed by chiefs to manage the kindreds. Theorization from the bottom up explores the effect of the transformation on commoners in an attempt to develop an explanation for a curiously "uneconomic" behavior revealed by recent large-scale archaeological excavations—the importation of hundreds of metric tons of low-quality oven stones to the sandy Waimanalo Plain on O'ahu Island.

Dykstra, Christina (University of Wisconsin–Madison) and Roth, Barbara (University of Nevada–Las Vegas)

[205] *Ceramics and Household Activity at La Gila Encantada, a Mimbres Mogollon Site in Southwestern New Mexico*

Much of the research on Mimbres Mogollon pithouse occupations has focused on larger

issues of community organization and river-based adaptations. Another area of study that has received less attention is the study of household activities. In this paper, we examine pithouse occupations by looking at household activities, in and around the structures, as evidenced by ceramics. Our investigations at La Gila Encantada in southwestern New Mexico have provided a wealth of data on household activities. By using this approach, we hope to gain new insights into the Mogollon Pithouse period.

Eakin, Daniel H. [191] *see* Finley, Judson B.

Eastwood, Warren [27] *see* Challis, Keith; [86] *see* Roberts, C Neil

Ebbitt, Alicia [81] *see* Sievert, April

Ebert, David (Université de Montréal) and Burke, Ariane (Université de Montréal)

[45] *Paleoethology as a Tool for the Development of Archaeological Models of Land-Use*

The principal aim of our research is to capitalize on the close relationship between prehistoric hunters and their prey to develop spatial models for the investigation of land-use patterns. Ideally, these models should be useful both as predictive tools for designing regional archaeological surveys, and as analytical tools for studying the distribution of known archaeological sites. Here, we build upon a basic G.I.S. model (including standard environmental variables) adding a paleoethological variable in the form of range reconstructions for the regionally dominant, prehistoric human prey species: *Equus hydruntinus*.

Echevarria L., Gori Tumi (Universidad Nacional Mayor de San Marcos) and Anderson, Karen (University of California, Santa Barbara)

[83] *An Early Middle Horizon Tomb from Piñami, Cochabamba, Bolivia*

This paper presents detailed information from a rich Early Middle Horizon tomb from the site of Pinami, a long term habitation mound located in the Central Valley of Cochabamba, Bolivia. This tomb, excavated in detail in 2004, is one of the best examples of tomb architecture found at Pinami and provides us with extensive information about construction techniques, deposition methods, and funerary customs from the transitional time period when Tiwanaku influence was producing extensive change in local Cochabamba funerary customs.

Eckerle, William (Western GeoArch Research), Bollong, Chuck (SWCA Environmental Consultants), Burnett, Paul (SWCA Environmental Consultants), Slessman, Scott (SWCA Environmental Consultants)

[34] *The Winds Do Blow: Depositional Context and Formation Processes at the Joe Miller Site*

The Joe Miller Site (48AB18) is located just west of Laramie, Wyoming, on Strouss Hill a hogback ridge that overlooks Cooper Creek Valley to the west. An aeolian sand shadow containing buried cultural material occupies the lee side. Excavations reveal an occupation that contains quantities of intensively processed wapiti (*Cervus canadensis*) bone as well as large amounts of fire-affected rock, lithic tools and debitage. Aeolian sand composes the occupation substrate and also overlies and underlies the occupation zone. Stratigraphic, sedimentological, pedological, and chronometric data are used to investigate site formation processes, with particular focus given to evaluating post-occupational disturbance.

Eckert, Suzanne (Texas A&M University)

[167] *The Production and Exchange of Polynesian Plain Ware at Aganoa, Tutuila Island, American Samoa*

Using petrographic analysis of temper, I argue that at least five production groups are reflected in the ceramic assemblage of Aganoa, an ancestral Polynesian village. The presence of these production groups remains consistent over time and probably reflects long term divisions in ancestral Polynesian social organization. Preliminary analysis suggests that the frequency of these production groups change over time. This may reflect changes in exchange networks and settlement patterns on Tutuila island. Examining the manufacture and movement of pottery in Samoa has important implications for understanding prehistoric subsistence, settlement patterns, exchange networks, and social organization in western Polynesia.

Eckert, Suzanne [62] *see* Clark, Tiffany

Eckert, Suzanne L. [131] *see Habicht-Mauche, Judith A.*

Edwards, Joshua (SWCA)

[196] *Faunal Patterning and Ritual Treatment of Domestic Dogs in Ridges Basin*

Cultural diversity can be expressed in patterns of species or animal size preferences, and can reflect cultural identity differences across the landscape. This research seeks to tease out functional differentiation and the potential effects of access restrictions versus cultural preferences of animal resources among sites. It will also explore differences in procurement versus consumption at different sites and generate expectations of these causal variables. The reasons for high frequencies of domestic dogs recovered from ritual contexts dominated by processed human remains will also be explored.

Edwards, Matt [17] *see Vaughn, Kevin*

Edwards, Susan (Desert Research Institute)

[6] *Camp Desert Rock: The Material Culture of America's Atomic Army*

Camp Desert Rock was established in 1951 when U.S. military leaders decided American ground troops needed physical and psychological training in atomic warfare. Over the next six years, the camp was home to the nearly 60,000 soldiers that participated in military maneuvers during atmospheric atomic weapons testing. Abandoned when above-ground testing ended, Camp Desert Rock was dismantled and its buildings moved. Today, the camp appears as a sterile expanse of desert dotted with rock-lined tent platforms, concrete foundations, and trash scatters. Although visually unimposing, the site is rich with the history of America's nuclear weapons development and military training program.

Eerkens, Jelmer (University of California Davis) and Lipo, Carl (California State University Long Beach)

[166] *Technological Change and Brownware Pottery Technologies in the Western Great Basin of North America*

The study of pottery has long been a significant line of research in archaeology. While we know much about technological developments for this craft in complex and agricultural societies we know very little about how small-scale hunter-gatherer groups incorporated modified, and developed pottery technologies. Pottery was adopted by the hunter-gatherers of the Western Great Basin of North America about 600 years ago. Using luminescence and radiocarbon dating, we trace technological changes in the craft from inception to abandonment (about 150 years ago). We see significant changes in how pots were made, especially the diversity of forms over time, and attempt to relate these changes to transmission processes that may have been operating in prehistory.

Eerkens, Jelmer [17] *see Vaughn, Kevin; [17]* *see Carpenter, Tim; [30]* *see Ferguson, Jeffrey R.*

Eichmann, William (University of Wisconsin - Madison)

[38] *Early Holocene Hunter-Gatherers in Hungary and the Spread of Agriculture in Southeastern Europe: the Regöly-2 Site*

Mesolithic research in southeastern Europe has primarily focused on several micro-regions. Outside these few "hotspots," Early Holocene occupation across the region remains largely hypothetical. Paucity of Mesolithic evidence from western Hungary has encumbered investigation of the subsequent spread of agriculture from southeastern to central Europe: linked to appearance of Linearbandkeramik (LBK) 5,600-5300 cal. B.C. I report initial findings from 2003-2006 research at a Mesolithic site (Regöly-2) in southwestern Hungary. Surface survey and excavation have yielded lithics, bone, and occupation features. This site provides new information bearing on both the Mesolithic and the transition to agriculture in the region.

Eiselt, Sunday (Southern Methodist University)

[163] *Enclave Economy and Ceramic Exchange: Historic and Archaeological Evidence from the Northern Rio Grande of New Mexico*

Starting in the mid-1700s, the Jicarilla Apaches established an enclave community in the northern Rio Grande of New Mexico. Enclavement was accompanied by a reorganization of settlement pattern and female labor as the result of decreased access to large bison herds,

meat, and hides for exchange. Ceramic manufacturing was elevated to fill this gap in Jicarilla economy and perpetuate mutualistic trade with Hispanic villagers. Archaeological evidence from the Rio del Oso Valley, a tributary of the Chama, provides a rare glimpse into the process of ethnic specialization and the nature of forager-farmer relations in state and frontier economies.

Eiselt, B. Sunday [61] *see Darling, J. Andrew*

Elera, Carlos [49] *see Matsumoto, Go; [59]* *see Shimada, Izumi*

Eling, Herbert H. (Instituto Nacional de Antropología y Historia) and Turpin, Solveig (University of Texas at Austin)

[82] *Cueva Pilote: Ritual Bloodletting Among the Prehistoric Hunters and Gatherers of Northern Coahuila, Mexico*

Cueva Pilote, a small cave hidden in the precipitous canyons of the Sierra Encantada, northern Coahuila, produced an artifact assemblage that is best explained in the context of ritualized auto-sacrifice, or bloodletting, a custom well-documented in the complex societies of Mesoamerica. Four radiocarbon assays produced an age range between 600 and 1000 B.P. for the ritual complex. Historical, ethnographic, and pictorial accounts of bloodletting and human protein residues on a sample of agave spines support the proposition that Pilote was a ritual cave, utilized by hunting and gathering people who shared their religious asceticism with urban neighbors to the south.

Elkins, Melissa (Washington State University) and Duff, Andrew (Washington State University)

[75] *Serving Up Ethnic Identity In a Chacoan Frontier Community*

Two Great Houses in west-central New Mexico, Cerro Pomo and Cox Ranch, are situated at Chaco's southern frontier and contain ceramic evidence for co-residence of Mogollon and Pueblo groups. Mogollon brown ware dominates the assemblage, and bowls with smudged interiors are prevalent. In fact decorated red ware bowls, common at contemporaneous sites nearby, are comparatively rare at these sites. We explore the possibility that smudged brown ware was used in place of red ware as serving bowls, a potential indicator of historical practice, by documenting the distribution of this pattern, its technological attributes, and implications of patterning for social organization.

Elkins, Melissa [90] *see Buvit, Ian*

Elkins, Zachary (Idaho State University) and Hansen, Richard D. (Idaho State University / FARES)

[35] *Terminal Utilization and Artifact Distribution of Platform Floors on Monumental Architecture at El Mirador*

Detailed excavations of platform floors on monumental architecture at El Mirador, Guatemala have revealed patterns of abandonment behavior during the terminal Late Preclassic period. Recovery of artifacts in direct association with floors and excavations of intrusive pits, post holes, and dedicatory caches suggest new interpretations of terminal utilization of monumental architecture which indicate a behavior that is not consistent with the use and intent of the original structures. Such possibilities include radical modifications of the original occupation of the buildings, artifact and burial searches by Preclassic Maya populations, and ceremonial deposits of caches.

Ellick, Carol (SRI Foundation)

[136] *You Never Know Where the Trail will Take You!*

You never know where a trail will lead! Now that is an understatement. Never could I have imagined that the development of an educational unit relating to travel and trade on the Camino Real for state and federal agencies would lead me down the trail, into Mexico! As an introduction to this session, we will review project origins and the logistics required in creating materials and training for use on both sides of the international border.

Elliott, Gabrielle (BLM) and Gardner, A. Dudley (Western Wyoming Community College)

[156] *Maize Agriculture in the Piceance Basin of Northwestern Colorado*

The extent of maize cultivation east of the Douglas Creek drainage in Northwest Colorado is

not well known. Recent excavation along Piceance Creek has revealed corn was cultivated along this drainage between AD 500 and AD 1200. This paper will look at reasons why zeolite pollen, maize kernels, and corn cobs are present in the archaeological record in the high elevation Piceance Valley.

Elson, Christina (American Museum of Natural History)

[183] *Late Classic Occupation at Jalieza: A Subregional Center in the Valley of Oaxaca*
During the Late Classic period the site of Jalieza grew in size and population to rival the Zapotec capital of Monte Albán. Jalieza's ceremonial core is situated on a defensible hilltop and the site is extensively terraced. Recent work has produced a detailed site map and used satellite imagery to examine the placement of monumental architecture, terraces, roads, and boundary marking features. The results allow for an initial assessment of Jalieza's development during a time period when Monte Albán itself was in decline.

Elson, Christina [194] see Nichols, Deborah

Elson, Mark (Desert Archaeology), Ort, Michael (Northern Arizona University), Anderson, Kirk (Northern Arizona University) and Sheppard, Paul (University of Arizona)

[100] *Human Adaptation to Volcano Eruptions: A Tale of Two Volcanoes in the American Southwest*

Sunset Crater and Little Springs Volcano erupted ca. A.D. 1050-1200, significantly altering the physical and cultural landscapes of northern Arizona. The volcanoes are 200 km apart and the eruptions occurred among groups with similar social and technological organization. Comparisons of these eruptions, combined with data from the historic eruption of Parícutin in Mexico, show that human adaptation to catastrophic events varies dramatically and is predicated upon, and constrained by, a complex mix of variables, including in this case the nature of the eruption and surrounding environment, and the social organization, agricultural practices, technology, and complexity of the affected group.

Elster, Ernestine S. (The Cotsen Institute of Archaeology at UCLA)

[192] *Material Culture Boundaries and Textile Traditions: Some Examples from Prehistoric Greece*

Patterns impressed on ceramic fragments provide evidence for the fabrics and mats which themselves were not preserved. The artifacts of textile production—the large assemblages of spindle whorls—reflect clearly on this craft and its crafters. Study of whorls from the site of Sitagroi in northeast Greece indicate that traditions shaping the form and decoration of these artifacts change through time and space. Comparisons to other assemblages from contemporaneous sites nearby and outside the region reflect on the maintenance, boundaries, and shaping of material culture traditions in this craft including where, how, when and why they vary.

Elston, Robert G. (Desert Research Institute) [209] Discussant

Emberling, Geoff (Oriental Institute)

[193] *Archaeologists and the Military in Iraq: Collaboration, Compromise, or Contribution?*

Offers to teach military units deploying to Iraq about history and culture of the region raised questions relevant to all archaeologists whose areas of study are subjected to conflict. Should we engage with the military at all, giving them the benefit of not only our archaeological knowledge, but our familiarity with local customs? Or could that knowledge be used against the local population that has welcomed us over the years, or in some way lead to destruction of monuments, sites, and museums? I summarize my experience, and compare this program with parallel efforts by other archaeologists working with the military.

Embre, Cristin (California State University, Los Angeles)

[82] *Earth Openings and Settlement Patterns Among the Northern Sinagua*

The Sunset Crater eruption of A.D. 1064 forced the Northern Sinagua to resettle in lower lying areas of Northern Arizona. Northern Sinagua settlement studies generally focus on soil fertility and have paid little attention to the ideological basis of these settlements. This study suggests that settlement was laid out around significant landmarks in the sacred landscape. More

specifically, habitation appears to be closely linked to the proximity of karstic, pseudokarstic and tectonic earth openings. The importance of earth openings to the Northern Sinagua strongly suggests that the relationship of settlement to these features derived from cosmology rather than coincidence.

Emerson, Thomas (University of Illinois) and Walthall, John (Illinois Department of Transportation)

[210] *Building the Cahokian Political Landscape: The Possibility of Long-Term Research Programs in Cultural Resource Management*

For nearly one-half a century the Illinois Department of Transportation and the University of Illinois have worked in conjunction to mitigate the impact of transportation projects on archaeological resources. The result of this cooperative effort has been to produce a geographically focused and theoretically unified program that has functioned to integrate data from broad surveys, testing and major excavations across Illinois and completed over many years into a productive research program. The success of this approach is most dramatically revealed in the advances made in our understanding of the political landscape of North America's primate urban center, Cahokia.

Emerson, Thomas [204] see *Anderson, David*

Emery, Jason [155] see *Watson, Rachel*

Emery, Kitty (Florida Museum of Natural History) and Brown, Linda (George Washington University)

[178] *Curating and Caching Animal Bone in the Maya World: Cautions for Zooarchaeology*
Ongoing archaeo-ethnographic research in Guatemala reveals a pattern of ceremonial use of wild animal remains among the modern Maya including ritual caching and curation for re-use of various skeletal parts. In the highlands wild animal bones are deposited in ritual caches at sacred sites as part of hunting related ceremonies. In the lowlands wild animal bones are curated for re-use in medicinal ceremonies often associated with the treatment of childhood ailments. Documentary and oral-historical evidence points to a historical time-depth for these activities. Thus they have implications for zooarchaeological interpretations of animal bone remains recovered from ancient Maya sites.

Emslie, Steven (Univ. of North Carolina Wilmington) and Coats, Larry (Univ. of Utah)

[82] *Climate Change and the Origin of Split-Twig Figurines in Grand Canyon, Arizona*
Split-twig figurines represent a unique cultural phenomenon that was well established in the Grand Canyon region by 4000 B.P. Previous research has examined the role these figurines may have played in the hunting rituals of late Archaic cultures. Here it is hypothesized that mid-Holocene climate change from mesic to drier and warmer conditions affected the productivity of big-game species and hence the ability of late Archaic peoples to survive in the region. As entrances to the underworld, caves became the foci of these rituals, with the presence of extinct big-game animal remains likely adding to their significance in prehistoric cosmology.

Enloe, James (University of Iowa), Storey, Glenn (University of Iowa), Thompson, Jason (University of Iowa) and Audouze, Françoise (CNRS Paris)

[208] *Ground Penetrating Radar in the Paleolithic: A Survey of an Open-Air Site at Verberie, France*

While ground penetrating radar has proven productive for locating buried massive architectural features, it has rarely been applied to less substantial objects. The open-air Upper Paleolithic site of Verberie is a shallow deposition with well-preserved spatial distributions of hearths, lithics and bones in excavated portions of the site. Ground penetrating radar survey was used to evaluate the spatial extent of the archaeological remains outside of the previously excavated area, to search for the configuration of potentially additional residential locations. The relationship between the excavated and unexcavated portions is used to evaluate models of social and economic organization for the campsite.

Enright, Erin A. (Eastern New Mexico University)

[157] *Faunal Analysis of the Tommy Site: Subsistence and Ritual at a Residential Puebloan Community*

Over the past few decades, faunal analyses have increased our understanding of prehistoric cultures. The Tommy Site, an ancestral pueblo site, is located on the south side of the middle San Juan River, near Farmington, NM. This site, a Pueblo I through Pueblo II community, offers a unique opportunity to study the fauna from a prehistoric residential location.

Subsistence and ritual taxa from the Tommy Site are compared with faunal data generated from other great house and smaller sites in the Chacoan region to better understand faunal utilization in the Southwest.

Enriquez, Roxana (Colegio de Michoacán) and Saint Charles Zetina, Juan Carlos (Centro INAH Querétaro)

[194] *Interacción Entre la Región Centro Norte y la Cuenca de México, Elementos para su Interpretación*

A lo largo de años de investigación, hemos identificado algunos elementos que nos dejan clara la relación que existió entre los grupos de la Cuenca de México y la región centro norte, desde el periodo formativo hasta el epiclásico. Sin duda, se trata de una región de frontera y encuentro cultural, en la que conviven diversos grupos y cuya relación es cambiante de acuerdo con los procesos que se viven en el resto del territorio mesoamericano.

Ensor, Bradley (Eastern Michigan University)

[189] *The Coastal Role of Islas de Los Cerros in the Chontalpa Region's Late Classic Political Economy*

Islas de Los Cerros is a large complex of coastal sites at the mouth of the Laguna Mecoacan, Tabasco, approximately 12 km downriver from the Late Classic interior center of Comalcalco. The large residential population, rich ecosystem, internal ceremonial-administrative center, and probable port function at Islas de Los Cerros indicate that the complex played a significant role in the region's Late Classic political economy. Models on the broader significance of Islas de Los Cerros in the macro-coastal Maya world are discussed.

Eppich, Keith (Southern Methodist University)

[103] *Consecrating Architecture: Reverence, Dedication, and Burial at Two Residential Compounds at El Perú-Waka', Guatemala*

This presentation involves two compounds, three buildings, three ritual deposits, eight bodies, twenty-nine ceramic vessels and numerous bits of jade, bone, shell and 3000 pieces of obsidian. These three deposits represent archaeological "snapshots" of the ritual activities carried out by the Ancient Maya. Such activities took place in the compounds of the secondary elites of the site over a period ranging from the site's undefined Middle Classic to its Terminal Classic florescence. The ritual deposits involve not only the laying out of the dead, in both burial and sacrifice, but the consecration of architecture and its preparation for continued reverence.

Eren, Metin (Southern Methodist University) and Greenspan, Aaron (Think Computer Corporation)

[169] *A Cutting-Edge Experiment: Quantifying and Comparing Lithic Cutting Edge Amount from Blade and Flake Production*

Some Paleolithic/Paleoindian scholars assume that more cutting edge per mass is produced by manufacturing blades rather than flakes. Alternatively, recent scholarship argues that rather than being more efficient, blade technology is actually wasteful of raw material. These debates mean little without experimental confirmation cited as evidence. This paper presents a series of experimental results comparing the amount of lithic cutting edge per blade and flake reduction using direct percussion. This paper also presents a new and accurate methodology for quantifying lithic cutting edge using Adobe Photoshop and Adobe Illustrator that was applied to over 600 blanks manufactured from 6 cores.

Eren, Metin I. [150] see Nolan, Kevin C.; **[4]** see Willis, Lauren M.

Erickson, Clark (University of Pennsylvania)

[145] *Homo ecologicus, Homo devastans, Farming, and Issues of Scale in Historical Ecology*
Scholars, policymakers, conservationists, and the public debate whether human activities are positive or negative for the environment. Any evaluation assumes a benchmark to which specific anthropogenic environments can be compared. Since no natural or pristine environments exist today or in the recent past, comparison is difficult. The continuum of temporal and spatial scales and the changing state of an environment further complicate comparison. In reference to multiple temporal and spatial scales, I evaluate the impact of pre-Columbian raised field agriculture in the Bolivian Amazon through measures of biodiversity, ecological heterogeneity, carrying capacity, landscape capital, longevity, and intensity of anthropogenic signatures.

Erlandson, Jon (University of Oregon), Kennett, Douglas (University of Oregon), Walker, Phillip (UC Santa Barbara), Braje, Todd (University of Oregon) and Richman, Rebecca (UC Santa Barbara)

[154] *Burial Caves and the Island Chumash: Antiquity of a Channel Islands Ritual Practice*
California's Chumash Indians used caves and rockshelters for secular and ritual activities. The Chumash created fantastic rock art galleries in many mainland caves, for instance, but cave art is rare on the Channel Islands. In contrast, human burials in caves or rockshelters are common on the islands but rare in mainland Chumash territory. Ritual use of caves on the islands appears to have begun ~7500 years ago and intensified during the Late Holocene. Despite intensive interaction between island and mainland groups, regional variation in the Chumash ceremonial use of caves suggests that islanders maintained some distinctive ritual traditions for millennia.

Erlandson, Jon [195] see *Rick, Torben C.*

Ernenwein, Eileen (Center for Advanced Spatial Technologies), Kvamme, Kenneth (University of Arkansas) and Hargrave, Michael (ERDC CERL)

[31] *Systematic Anomaly Testing at Pueblo Escondido, New Mexico*

Geophysical data often reveal great archaeological detail, but interpretations can be questionable without test excavations. Anomaly testing has most often been done by carefully selecting the most promising anomalies for excavation. At Pueblo Escondido we took a different approach - stratified random sampling. This allowed us to evaluate the contribution of each geophysical method, the reliability of various types of anomalies, and the improvement in interpretations when anomalies are indicated by multiple methods. We also encountered a problem with attempting to "verify" geophysical anomalies by traditional excavation methods, since some very promising anomalies could not be found in the ground.

Ernenwein, Eileen [65] see *Herrmann, Jason*

Escamilla, Marlon (CONCULTURA El Salvador)

[151] *Investigaciones Arqueológicas en El Salvador. Reseña Histórica y Perspectivas*

Durante 1900, las investigaciones arqueológicas en El Salvador fueron desarrolladas por arqueólogos extranjeros, algunas con financiamiento extranjero y nacional. La segunda mitad del siglo XIX, está marcada por un incremento en proyectos, destacando los reconocimientos sistemáticos y rescates. En 1993, surge la Ley Especial de Protección al Patrimonio Cultural y su Reglamento, contribuyendo a regular y supervisar las investigaciones. En la misma época, se abre la carrera de Arqueología. Actualmente la Arqueología de El Salvador es regulada por el Consejo Nacional para la Cultura y el Arte (CONCULTURA) a través del Departamento de Arqueología.

Escobar Morales, Santiago (Instituto Hondureño de Antropología e Historia), Ramirez, Roberto (Instituto Hondureño de Antropología e Historia) and Canuto, Marcello A. (Yale University)

[147] *In the Copan Style: The Role of El Paraíso Structure 1 in Copan Administrative Strategies*

As part of their administrative strategy elites at the Copan-enclave site of El Paraíso oversaw the construction of a large ceremonial structure (Str. 1). Rising over twelve meters above the eastern slopes of the valley, its summit dominated the landscape as the valley's highest constructed point, and was constantly visible to all below. The multi-room superstructure was

adorned with Copan-style architectural sculpture and stucco, and the substructure was accessed from a sunken court via an outset stair flanked by sloped balustrades. We examine how the building's strongly Copanec form and exterior architectural adornment materialized Copan presence in the valley.

Escobedo, Hector [103] *see Freidel, David*

Esh, Kelley (University of Hawaii at Manoa) and Hunt, Terry (University of Hawaii at Manoa)

[92] *Reviewing Rapa Nui Subsistence: A Look at the Faunal Remains*

Recent excavations conducted by the University of Hawai'i Rapa Nui Archaeological Field School have revealed a significant cultural deposit at Anakena Beach. This assemblage represents one of the only large, well-preserved and well-stratified faunal deposits known on the island. Our presentation will focus on the analysis of these remains, especially in the context of a revised late chronology for the island. Furthermore, we will review the reported faunal data from other locations on the island in order to provide a more comprehensive picture of prehistoric subsistence on Rapa Nui.

Espinda, Leilani [72] *see Haynes, Gregory*

Esterhuysen, Amanda (University of the Witwatersrand)

[144] *Politics and Pots: A Study of the Material Culture of the Kekana Ndebele*

The 19th century socio-economic landscape of the northern region of South Africa was characterized by shifting authority and competition for control over resources and trade. Chiefdoms maintained and managed their political networks through, amongst other things, the careful negotiation of relationships through marriage alliances. Consequently, a woman's identity was mutable; it could be maintained, or manipulated depending on the socio-economic circumstance in which she found herself. Pottery, the material expression of women, may provide the tangible remains of such alliances. This paper presents an analysis of the ceramics of a known northern Amandebele group against the background of evolving political relationships.

Estrada, Orlando J. [155] *see Baker, Larry L.*

Estrada-Belli, Francisco (Vanderbilt University)

[188] *Early Maya Ritual in the Holmul Region 800 B.C.-A.D. 100 and the Rise of Ancient Maya States*

Maya state institutions and ideology emerged from early forms of ritual behavior during the Middle and Late Preclassic Periods (1000 B.C.-A.D. 100). Evidence from several sites in the Holmul region of northeastern Guatemala, shows great depth of occupation in ritual spaces and some of the earliest signs of cultural complexity in the Maya Lowlands as inferred from artifacts and architecture. Early developments in ritual and ideology in this region of the southern lowlands are compared to cultural trajectories elsewhere in the Maya Lowlands to identify crucial conjunctures in the long-term development of ancient Maya states.

Estrada-Belli, Francisco [149] *see Callaghan, Michael; [189]* *see Reents-Budet, Dorie*

Etayo-Cadavid, Miguel F. [175] *see Hodgins, Gregory*

Etner, Michael (Univ. of WA & Applied Osteology), Holman, Darryl (Univ. of WA) and Fitzhugh, Ben (Univ. of WA)

[195] *Technological and Social Scale in Human-Animal Dynamics: The Kuril Biocomplexity Project*

The Kuril Island chain extends over 700 miles to connect Hokkaido Japan and the Kamchatka Peninsula. In the ongoing Kuril Biocomplexity Project, these islands are used as laboratories to understand how cultural groups with differing demographic, technological, and social organizations interacted with indigenous faunas. Drawing on principles of island biogeography and historical ecology, we present a model of human-animal dynamics that considers the more and less reciprocal dynamics of human impacts on native taxa, and the implications of those impacts on the sustainability of human settlement. Field data are used to examine the model implications.

Etnier, Mike [45] *see Fitzhugh, Ben*

Eudy, Douglas (Truman State University)

[21] *Ceramic Collections from Körösladány 14 and Okány 16: An Inter-Site Comparison*

Surface collecting remains an important component to site research in the Körös region. With the beginning of a new phase of investigation, the data collected by this method will become more and more valuable in the interpretation of sites. This paper analyzes the surface collection data from Körösladány 14 and Okány 16, two Early Copper Age sites that have undergone recent surface surveying.

Evans, Amanda [178] *see McKillop, Heather*

Evans, Amanda M. (Tesla Offshore), Floyd, Robert J. (Tesla Offshore) and Keith, Matthew (Tesla Offshore)

[208] *Identifying Offshore Prehistoric Sites from Remote Sensing Data: Preliminary Site Investigation in the Gulf of Mexico*

The outer continental shelf (OCS) has been exposed above sea level repeatedly over the last 25,000 years. Despite the potential for prehistoric site occurrence and preservation on the OCS, few detailed archaeological investigations have occurred on prehistoric sites in the Gulf of Mexico. In 2005, a buried prehistoric landform was interpreted from acoustic profiles as a possible midden by Tesla Offshore during a geophysical survey offshore of Galveston. This paper will discuss the process of interpreting this prehistoric site feature from remote sensing data and outline methodologies used to prepare the subsequent investigation of the site.

Evershed, Richard (University of Bristol), Sherratt, The late Andrew (University of Oxford), Payne, Sebastian (English Heritage), Copley, Mark (University of Bristol) and Coolidge, Jen (University of Oxford)

[53] *The Emergence and Spread of Dairying in Southeast Europe and the Near East*

Single compound stable carbon isotope analyses of lipid residues in potsherds from Neolithic and Chalcolithic sites dating between 6500 calBC and 4500 calBC provide clear and abundant evidence of dairying and the use of milk in the Marmara region of NW Turkey, and evidence of some dairying in Central and SE Turkey and N Greece. These findings are supported by data from animal bone assemblages. The results add to evidence of regional variation in early food-producing communities, and are at variance with the secondary products revolution hypothesis.

Eyre, Chureekamol Onsuwan (University of Pennsylvania)

[183] *Intensive Survey of Prehistoric and Proto-Historic Sites in Thailand: An Alternative Views of the Past*

While reconnaissance and systematic surveys conducted over the past decades in Thailand have discovered hundreds of prehistoric sites, recent surveys stressing intensive methodologies have revealed unexpected patterns of land use and settlement systems. This paper discusses the methodology and results of a recent intensive survey in central Thailand. The 25 sites dating between 2000 B.C. and A.D. 1000 provide evidence for a prehistoric settlement system emphasizing long-lived, often large, but heterarchically-related occupations. Sharp changes including appearance of a site hierarchy appeared rapidly just prior to the proto-historic period c. A.D. 400, about 1000 years later than previously thought.

Ezzo, Joseph (SWCA)

[196] *Radiogenic Isotope Studies of the Animas-La Plata Burial Population*

Strontium isotope ($87\text{Sr}/86\text{Sr}$) analysis of first- and third-molar enamel of individuals from Ridge's Basin seeks to compliment the Animas-La Plata bioarchaeological studies and to inform on aspects of migration and residential mobility. The potential contribution of this type of analysis to studies of settlement dynamics is presented. Research is in the preliminary stage; to date, nearly all of the individuals analyzed reflect the local $87\text{Sr}/86\text{Sr}$ signature. Some possible explanations for this are explored, and prospects for future research are discussed.

Fadem, Cynthia (Washington University in St Louis), Smith, Jennifer (Washington University in St Louis), Moore, Andrew (Rochester Institute of Technology) and Moore, Barbara

[39] *A Ceramic Typology for the Early and Middle Neolithic in Central Dalmatia*

We constructed a quantitative ceramic typology for the Danilo Bitinj and Pokrovnik sites using paste and fabric attributes. This typology will enable archaeological analysis of the pottery assemblages from these sites, and provide a framework for analysis of Early and Middle Neolithic ceramic assemblages in the region. Spectroscopic and petrologic analyses focused on fabric type, mineral inclusion type and diversity, and inclusion size. We also hope to refine this typology and source the materials using bulk chemical analysis from neutron activation or x-ray fluorescence.

Fadem, Cynthia [145] see Smith, Jennifer

Fahsen, Federico [26] see Barrios, Edy; [26] see Suasnavar, Jose

Fairley, Helen (US Geological Survey) and Andrews, Timothy (Utah State University)

[106] *A Cultural Landscape Analysis of the Colorado River in Grand Canyon, Arizona*

For 5000+ years, the Colorado River corridor in Grand Canyon, Arizona, has attracted human occupation. Consequently, the river corridor contains multiple, superimposed cultural landscapes that are difficult to decipher due to the complexity of human use combined with the effects of dynamic geomorphic processes. Using GIS analysis techniques and a culturally-neutral site typology, we disentangle the complex geomorphic and cultural landscapes through analyzing river flow data in relation to the placement and distribution of multiple-occupancy and single-occupancy sites. This approach allows us to distinguish generalized human habitat preferences from culturally-prescribed preferences and to characterize diverse human adaptations using geospatially-defined criteria.

Faith, J. Tyler (George Washington University) and Gordon, Adam (George Washington University)

[37] *Skeletal Element Abundances in Archaeofaunal Assemblages: Economic Utility, Sample Size, and Carcass Transport Strategies*

Economic utility indices provide a means of interpreting carcass transport decisions reflected in the relative abundance of skeletal elements. Because of destructive taphonomic processes, interpreting skeletal element abundances in terms of human behavior requires that analysts consider only those elements which accurately reflect their original abundances following human discard. In this study we examine the impact of sample size on correlations between high-survival skeletal element frequencies and utility in four assemblages reflecting distinct transport strategies. We show that the Shannon Evenness Index can be used as a quantitative means of distinguishing assemblages characterized by subtle variations in skeletal element abundances.

Falconer, Steven [27] see Rempel, Sidney

Fall, Patricia [27] see Rempel, Sidney

Fang, Hui [109] see Li, Min

Fargher, Lane (Purdue University) and Blanton, Richard

[219] *Market System Evolution and Social Equality*

Archaeologists study market system evolution over the long term, and, as a result, can address long-standing questions about the role of markets in the evolution of complex societies. One such issue is the relationship of market evolution to patterns of social inequality. Marxists argue that commerce brings economic differentiation, while neoclassical economists see markets as precursors of social equality. These hypotheses are preliminarily evaluated using a comparative method, in two parts. One is based on an intra-cultural comparison of Chinese rural communities, while the other is based on a world-wide sample of pre-modern states.

Fariss, Barker (UNC-Chapel Hill), Jochem, Chris (UNC-Chapel Hill), Billman, Brian (UNC-Chapel Hill), Quist, Juliana and Boswell, Alicia

[65] *Archaeological Survey and Assessment of Cerro Ramon: A Late Intermediate Period Site in the Upper Moche Valley, North Coast, Peru*

The previously undocumented prehistoric site at Cerro Ramon, a large multigenerational domestic complex, may provide a more detailed look at the trajectory of highland-coastal interaction on the north coast of Peru 1,000 years ago. In the summer of 2006, a team of archaeologists and geographers mapped the architecture, collected diagnostic sherds, and surveyed the area surrounding the site. It is strategically positioned between the Andean highlands and the Pacific coastal plain, and the topography of the area provides excellent natural protection. Ceramic evidence from two distinct ethnic groups was found on site, an unidentified highland tradition and Chimú.

Farnum, Julie [49] see Matsumoto, Go; [59] see Shimada, Izumi

Fash, William (Peabody Museum, Harvard University)

[151] *Reflections on 30 Years of Collaborative Research and Conservation Projects in Western Honduras*

The lead article in the inaugural (1975) issue of the IHAH's journal *Yaxkin* was written at the invitation of that institution's Director, to lay out a long-term plan for the "Preservation" of the Copan Valley's cultural patrimony. That plan and the projects which developed from it were designed and generally directed by non-Honduran archaeologists to fulfill conservation priorities and other needs of the IHAH, while simultaneously addressing questions and contemporary theoretical issues driving Mesoamerican anthropological research. Reflections are offered on the changing nature of the collaborations, priorities, dissemination and challenges in this arena in the past, present, and future.

Faugère, Brigitte (Paris 1 University) and Darras, Veronique

[168] *Chupicuaro, from Late Formative to Protoclassic: A Diachronic Analysis of Cultural Changes*

This paper proposes a reappraisal of Chupicuaro cultural trajectory, based on the recent investigations in the valley of Acambaro, Guanajuato. More specifically, it focuses on the evidences from 400 B.C. to 250 A.D., which illustrate different scales of interactions with neighbouring areas. A special attention will be attached to the characteristics which link Chupicuaro to the West Mexican cultural sphere, as well as the connections, still poorly understood, established with Central Highlands, particularly the Basin of Mexico. Finally, it leads to a proposal concerning the place of Chupicuaro in Formative Mesoamerica and examines the transitional processes to the Classic period.

Faught, Michael (Panamerican Consultants, Inc.)

[184] *Submerged Prehistoric Archaeology: A Nascent Subdiscipline Critical to Understanding Early Coastal Occupations and Migration Routes*

Finding archaeological sites on the continental shelves is one aspect of Pleistocene (and Early Holocene) coastal archaeology needed to reconstruct more accurate settlement patterns and understand processes of migration into the New World. However, finding submerged prehistoric sites is a challenge for academic researchers and cultural resource managers alike. This paper reviews some principles and methods for finding underwater sites and presents some recent examples and ideas on how to find more.

Faust, Betty (CINVESTAV- Mexico)

[162] *Mentored by Folan*

"Betty, the Maya know. Listen to them." It was 1985, I had found William J. Folan in Campeche. "Don't get upset. Don't yell. Be quiet, wait, listen, keep your eyes open. Start with the women, the old women." His respect for and encyclopedic knowledge of the Maya held my attention, as did his questions relating present to past, past to present, social change to environmental change. Without the advice that guided me through rough places and the questions that pushed me, I would not now be mentoring Mexican graduate students in human ecology at CINVESTAV, Mexico's equivalent to the Smithsonian.

Faust, Katherine A. (University of California, Riverside) and Halperin, Christina T. (University of California, Riverside)

[18] *Huastec and Maya Body Aesthetics: Junctures of Body and Vessel as Expressive Communication*

The body is often evoked as allegory for social experience. In this paper, Huastec and Maya vessels are considered metaphorical bodies in that the body interfaces the interior contents or self with the exterior social world or other. Particular emphasis is placed on overlapping motifs expressed in Huastec body modification (e.g. tattooing, scarification, and body painting) and Huastec pottery vessels. Parallel connections are made between motifs from Maya clothing and vessels. While these parallels tie conceptions of the body to vessels, they also emphasize the distinct manner in which Huastec social identities were expressed in relation to other Mesoamerican peoples.

Fazioli, K. Patrick (SUNY Buffalo)

[183] *Migration, Religion, and the Bracteate Connection*

Investigations of migration have recently seen renewed interest within Anglo-American archaeology. However, in studying migration, many archaeologists have abandoned traditional analyses of material culture in favor of promising genetic and biochemical techniques. These methodologies, while often valuable, generally ignore the sociopolitical context of migrations and may be incorrectly used to speculate about race and ethnicity. Here, I provide a socially embedded analysis by considering the connection between migration and the material culture of belief systems during the Anglo-Saxon migrations (4th-6th centuries AD), supported by ethnohistoric and ethnographic data and an examination of bracteates from Migration Period England and Denmark.

Feathers, James (University of Washington)

[60] *Chronological Issues of Early Shell-Tempered Pottery in Eastern North America*

For understanding when shell-tempered pottery first appeared in the eastern woodlands and when it rose in frequency, traditional chronological methodology has been hampered by averaging techniques that suppress variation and by confusion about what exactly is being dated. Luminescence dating allows dates on the pottery sherds themselves. A suite of luminescence dates from Alabama, Tennessee and Arkansas suggests that perhaps we don't know as much about the chronology of shell-tempered pottery as we think we do.

Fedje, Daryl (Parks Canada), Mackie, Quentin (University of Victoria) and McLaren, Duncan (University of Victoria)

[184] *Pleistocene-Holocene Transition Archaeology and Environment on Haida Gwaii (Queen Charlotte Islands), BC, Canada*

Archaeological data from southern Haida Gwaii show maritime adaptation on the Northwest Coast by 9,500 RCYBP. Discovery of pre-Holocene archaeological sites on this archipelago is constrained by environmental change, especially rising sea levels which drowned late Pleistocene coastlines by up to 150m. We are overcoming these constraints by excavating in karst caves and underwater. Karst caves have produced fauna dating to 12,000 and a small amount of archaeological material to at least 10,500 RCYBP. A multi-year underwater archaeology project beginning 2006 will focus on a nearby ancient lake, now drowned 35 metres below sea level.

Fedje, Daryl [184] see Mackie, Quentin; [184] see McLaren, Duncan

Feinman, Gary (The Field Museum) and Nicholas, Linda (The Field Museum)

[219] *Marketplace Exchange in the Classic-Period Valley of Oaxaca: A Multi-Scalar Perspective*

Direct archaeological evidence confirming or disconfirming marketplace exchange is ever elusive. This paper outlines a wide range of empirically based arguments, that draw on multiple empirical scales (from domestic excavations to regional scale analyses), to advance the importance of this exchange mode in the Classic-period Valley of Oaxaca. Broader implications of this assessment yield insights into elements of continuity that crossed the Classic-Postclassic transition in Oaxaca, despite the collapse of the Monte Albán polity and some in-migration into the region.

Feit, Rachel (Hicks & Company)

[80] *Building the Urban Landscape: The Development of City Infrastructure in Austin*

Less than 80 years ago in Austin open sewage regularly flowed down Congress Avenue, and the stench of back yard dumps and privies forced people to hold their noses as they walked by. In 1903 Austin had no paved streets, and as late as the 1920s the city's Street and Bridge Department was still using mule teams to build roads. This talk will focus on infrastructural growth in Texas' capital, and discuss how archeology is uncovering many unpleasant and unexpected truths about how Austin developed in the nineteenth and early twentieth century.

Fenn, Thomas (Department of Anthropology, University of Arizona), Mills, Barbara (Department of Anthropology, University of Arizona), Chesley, John (Department of Geosciences, University of Arizona) and Ruiz, Joaquin (Department of Geosciences, University of Arizona)

[39] *Lead Astray? Sourcing of Lead in Prehistoric Glaze Paints of the Southwestern US*

Individual and group identities are hot research topics at present. Several recent research efforts have been made to elicit this type of information concerning prehistoric potters and pottery communities in Pueblo III/IV contexts of the Central Arizona Mogollon Rim region. This study was undertaken to examine lead isotope ratios in glaze paints from a sample of previously studied ceramics (chemical composition analysis) from the Mogollon Rim in order to better understand social contacts and technological information exchange as well as to further understand the groups and possible individuals involved. Preliminary results suggest distant contacts were utilized to procure lead.

Fennell, Christopher (University of Illinois, Urbana-Champaign)

[191] *Social Bonds and Commodity Chains: Market Subversions in a Nineteenth Century Mid-Atlantic Periphery*

This study addresses the interaction of three cultural processes in the ethnically diverse upper Potomac and northern Shenandoah region surrounding Harpers Ferry during the period of 1750 to 1865. One process involved the dynamics with which distinct social groups and networks formed, solidified and dissipated over time. Such social group dynamics included a second process of communication through the stylistic shaping and display of material culture. These two in turn impacted a third set of dynamics that involved regional exchange systems and competing socio-economic interests deployed across the North Atlantic and within the mid-Atlantic region of America.

Ferguson, Jeffrey R. (University of Missouri), Eerkens, Jelmer E. (University of California, Davis) and Glascock, Michael D. (University of Missouri)

[30] *Artifact Size Bias in Obsidian Chemical Characterization Studies: New Data for an Old Problem*

Sampling strategies for obsidian chemical characterization studies are typically biased by the size restrictions of the analytical equipment. The most commonly used method for obsidian, XRF, is currently incapable of accurately analyzing the smaller debitage (that other methods can characterize) typically recovered from archaeological sites. By selecting only artifacts large enough for accurate analysis researchers bias their chemical source distribution toward reduction activities involving large source material, typically locally-procured raw material. In this study, we reanalyze the previously-reported data sets from Oregon and California in light of new chemical and metric data from a site near Owens Lake, California.

Ferguson, T. J. [201] see Kuwanwisiwma, Leigh J.; [90] see Duff, Andrew

Ferguson, T.J. (University of Arizona) and Mills, Barbara (University of Arizona)

[180] *Animate Objects: Shell Trumpets and Ritual Networks in the Southwest*

For over a millennium, shell trumpets have been an important part of Southwestern ritual practice. Their deposition in specific archaeological contexts in the Hohokam, Chaco, Tonto Basin, and Western Pueblo areas demonstrates their status as highly valued objects. This paper traces the use and distribution of Southwestern shell trumpets, arguing that they were part of a complex of historically linked ritual practices. This complex is still evident in Pueblo society today, illustrating the ways in which life was literally breathed into objects and sound used to animate and de-animate other objects.

Ferring, C. Reid [4] see Wolverton, Steve

Ferris, Jennifer M. (Washington State University), Andrefsky, Jr., William (Washington State University) and Pouley, Cheryl K. (Washington State University)

[50] *Transport Damage and Inferred Stone Tool Functions*

Macroscopic and microscopic edge wear on lithic artifacts has been linked to aboriginal stone tool functions. In fact, archaeologists frequently assume patterned flake removals on chipped stone blanks equate to artifact use. This study explores the influences of lithic raw material transport wear on flake blanks. Raw material transport experiments reveal a wide array of edge damage (retouch) under varying circumstances. Our results suggest that spurious identifications are easily made and functionality is often misinterpreted when transport damage is not assessed on lithic artifacts.

Fertelmes, Craig (Arizona State University), Abbott, David (Arizona State University) and Shackley, M. Steven (University of California Berkeley)

[39] *Obsidian Sourcing From Las Colinas: Shifting Exchange Patterns during the Hohokam Sedentary - Classic Transition*

Present research suggests that the Hohokam strategy for procuring and distributing obsidian was markedly different between the Sedentary and Classic Periods. Although these reported findings are most likely accurate, the use of relatively large temporal periods in the investigations have left issues concerning the nature of the shift open to question. This study uses chemical assays for obsidian provenance along with refined temporal controls to better understand the nature of the transition in obsidian exchange strategies in the Phoenix basin. We consider our results with reference to the transition from ballcourts to platform mounds as the focus of Hohokam village activity.

Fialko, Vilma [189] see Reents-Budet, Doree

Fiedel, Stuart (Louis Berger Group) and Morrow, Juliet (Arkansas Archaeological Survey)

[110] *New Dates for the Anzick Clovis Cache*

We report and interpret new high-precision radiocarbon dates from the Anzick site (24PA506). Located near Wilsall, Montana, Anzick is the only known burial of the Clovis culture. The new dates confirm that ca. 13,000 cal BP, a Paleoindian child was buried here with a spectacular ochre-covered cache of finely crafted Clovis stone and antler tools. Analysis of the samples also has yielded provocative hints about Paleoindian subsistence and migration routes.

Field, Julie (University of Hawaii, Manoa) and Graves, Michael (University of New Mexico)

[167] *Recent Investigations in Windward Kohala, Hawaii Island*

This research focuses on the birthplace and home of Kamehameha the Great, the chief who first unified the Hawaiian archipelago. In 2006 a series of investigations were conducted in windward Kohala that had as their focus the agricultural complexes and habitations associated with Kamehameha and his supporters. Aspects of the construction and chronology of these features will be analyzed and placed into a prehistoric and historic context. Distinct features and technological advancements that resulted from Kamehameha's direct influence (e.g., the construction of irrigation tunnels at the higher elevations) will also be discussed.

Figueroa, Alejandro (Honduran Institute of Anthropology and History)

[85] *Renewing Institutional Public Archaeology: The Rock Art Project of Honduras*

As part of a wider institutional strategy to increase community outreach, involvement, and commitment, the Honduran Institute of Anthropology and History's Rock Art Project, through its programs of Community Education and Training, has been seeking to educate and involve local communities in the conservation, protection and promotion of their local cultural heritage through the creation of a local heritage management structure. The effectiveness of these efforts needs to be revised, refined and then transformed into the policy of an institution in charge of the monumental endeavor of managing the cultural resources of an entire country.

Figueroa-Gonzales, Antonia (Center for Archaeological Research-UTSA)

[54] *Looking for Change: A Comparison of Native Ceramics from Late Prehistoric and Spanish Colonial Sites in Texas*

The typical Native ware encountered at Spanish Colonial sites in much of Texas is termed

"Goliad." Most researchers assume this bone-tempered ware is a continuation of the Late Prehistoric ware "Leon Plain." This paper discusses a variety of attributes that were compared on Native wares from both Late Prehistoric and Spanish Colonial sites. Investigating the two temporally different wares could aid in our understanding of how the introduction of the Spanish Mission community affected Native subsistence and mobility patterns.

Filean, Erik (University of Iowa)

[37] *The Silence of the Lambs: Taphonomy, Quantification and the Scale of Herding Production in the Roman Lower Rhineland*

Taphonomy frequently challenges the zooarchaeologist's attempts to determine the scale of animal production systems and the relative importance of species in herding economies. For example, previous studies of the Dutch Lower Rhineland during the Roman Period describe specialized, large-scale cattle production with supplementary sheep/goat husbandry. Through analysis of the effects of relative fragmentation and size-mediated recovery biases for cattle and ovicaprids, this paper demonstrates that representation of sheep/goats has been underestimated relative to cattle. The results show that multi-species herding and not specialized cattle production best characterizes the Lower Rhineland domestic animal economy.

Filini, Agapi (El Colegio de Michoacan)

[188] *The Emergence of Complexity in the Cuitzeo Basin, Michoacán: from the Formative to the Postclassic*

Research during the last decade has underscored the importance of the Cuitzeo Basin, Northern Michoacán as a link between West Mexico and the Basin of Mexico. The emergence of socio cultural complexity in this region involves various factors such as long-distance obsidian exchange, the existence of networks of contact, the exchange of prestige artefacts, and the ample traffic of symbols. Drawing on a long durée perspective the interaction and social differentiation between these two areas are examined through time.

Filsinger, Tomas, Gonzalez Cuesta, Antonio and Perez Ixoneztli, Luis

[13] *Visualizing the Evolution of the Basin, Valley and City of Mexico through 3000 Years*

While the production of high resolution maps and virtual reality environments covering an area as large as the Valley of Mexico is itself a challenge, incorporating the changes that occurred over several centuries of complex, dynamic history is especially daunting. Through a presentation of the author's diachronic visualization of ancient, historic and modern Mexico, this paper will highlight the challenges, pitfalls, and insights inherent in incorporating multi-disciplinary sources to clearly communicate historical, geographical and archaeological data.

Finley, Chris C. [191] see Finley, Judson B.

Finley, Judson [112] see Scheiber, Laura

Finley, Judson B. (Washington State University), Scheiber, Laura L. (Indiana University), Eakin, Daniel H. (Office of Wyoming State Archaeologist) and Finley, Chris C. (Bighorn Canyon NRA)

[191] *Exploring Social Isolation at Contact Period Sites in Northwestern Wyoming*

Native peoples living in the western United States during the early colonial period experienced significant disruption of traditional economic practices. This paper explores changes in range, territories, and exchange networks among a band of Mountain Shoshones living in the Greater Yellowstone Ecosystem (GYE). Obsidian source characterization and hydration analyses of diagnostic projectile points from contact period sites in the GYE tests a model of social response to encounters with warring Plains Indian tribes and Euroamerican explorers. We test whether reduced variability of obsidian sources through time, in essence a loss of the exotic, indicates social isolation in contact situations.

Finney, Bruce [128] see Misarti, Nicole; [128] see Jordan, James W.

Finucane, Brian (Oxford University)

[38] *Maize and Sociopolitical Complexity in the Ayacucho Valley, Perú*

It will be argued that maize was the mainstay of the subsistence economy of Peru's Ayacucho Valley from at least ca. 800 BC and that maize agriculture was the economic foundation of the

Wari polity, the first urban, state society of the Andean sierra. Evidence from a suite of stable isotope values from directly dated human remains from the sites of Pikimachay, Rosamachay, Trigopampa, Conchopata, and Huari will be presented in support of this thesis. In addition isotopic evidence for the use of fertilizer and intensive agriculture is considered and evaluated with respect to sociopolitical changes in the region.

Fischer, Anders [166] *see Heron, Carl*

Fish, Paul [52] *see Fish, Suzanne*

Fish, Suzanne (University of Arizona) and Fish, Paul

[52] *Institutions, Irrigation, and Hohokam Society*

The Hohokam of the Sonoran Desert in the southwest United States are noted for constructing the largest canal networks in the New World north of Peru. For centuries, they maintained massive canal lines in the Phoenix Basin, supporting the densest regional population. Hohokam farmers outside the Phoenix Basin watered their crops using canals of lesser magnitude, floodwaters diverted from secondary drainages, and devices for capturing overland runoff. The flexible institutions of the Hohokam provided a framework for dynamic balance throughout their domain that involved risk sharing, demographic and labor adjustments, productive intensification and specialization, and increasing societal differentiation.

Fisher, Christopher (Colorado State University)

[145] *Scale and the Landscape in West Mexico: The Lake Pátzcuaro Basin and Malpaso Valley Case Studies*

Scale is a critical concept for understanding socio-landscape trajectories. Here I discuss the course of landscape change for two disparate regions of Mesoamerica; Lake Pátzcuaro in the West Central Highlands, and the Malpaso Valley on the Northern Mesoamerican frontier. Though both regions are today severely degraded the cause and consequences of this human generated change vary dramatically. This discussion centers on the role of scale dependant phenomena in the evolution of these landscapes.

Fisher, Christopher [206] *see Pollard, Helen*

Fisher, Erich (University of Florida)

[169] *Beyond Smoke and Mirrors: Applications of Multidimensional GIS at Two Cave / Rockshelter Sites in Ethiopia and South Africa*

Multidimensional visualization—commonly known as ‘3D’—has long been held with major reservations within Archaeology; it is seen strictly as a tool for making fanciful and non-scientific visual reconstructions of the past. Coupled with GIS technology however, multidimensional visualization can be an invaluable tool for quantitatively and qualitatively analyzing complex archaeological sites and issues. This paper provides brief overviews of multidimensional GIS applications at Moche Borago rockshelter in Ethiopia and the Pinnacle Point cave complex in South Africa. The discussion will focus on regional paleo-environmental modeling and site-based modeling of sub-surface archaeological deposits and geological stratigraphy.

Fisher, Erich [100] *see Brandt, Steven*

Fisher, Jacob (University of Washington)

[129] *Archaeology and Biogeography of the Western Pond Turtle (*Actinemys marmorata*) in the Puget Sound Region*

The Western Pond turtle (*Actinemys marmorata*) has nearly disappeared from Washington State, with no wild populations left in the Puget Sound region. Previous research has identified only two prehistoric specimens of *A. marmorata*, although this near-absence may be due to a failure to identify this species rather than to its absence in the region. Previously analyzed faunal assemblages were examined for turtle specimens in order to resolve this issue. The results of this analysis will be important in understanding the role the species played in prehistoric economies, as well as help guide conservation efforts by recognizing prehistoric population dynamics.

Fisher, Lynn (University of Illinois-Springfield), Harris, Susan (University of California, Santa Barbara), Knipper, Corina (University of Tübingen) and Schreg, Rainer (University of Tübingen)

[94] *Chert Sources and Upland Neolithic Landuse on the Swabian Alb (Germany): Excavations at the Sonderbuch-Grund Site*

Chert from the Swabian Alb plateau was the dominant raw material for Neolithic stone tools in neighboring lowlands, but its extraction, early stage processing, and tool production on the plateau have not been investigated. Excavations at the Sonderbuch-Grund site on the southeastern Swabian Alb documented dense Middle Neolithic cultural deposits in the immediate vicinity of a chert source. Abundant stone artifacts represent all stages of production, providing a rich database for comparison with lowland settlements. The excavation is part of a two-year project that combines archaeological and geomagnetic survey, geological investigations, and excavation to explore Neolithic chert exploitation and transport.

Fisher, Victor (Towson University)

[177] *Archaeology Courses in Demand at Universities - And the Situation 75 Years Ago*
The author's recent nationwide study, done through the offices of the AAA's Department of Academic Relations, shed light on the relative popularity of listed archaeology courses. The investigation yielded information on which offerings are drawing strong enrollment and also current plans for future growth. In an additional related inquiry, archivists from selected institutions revealed the status of archaeology course offerings 75 years ago.

Fitzhugh, Ben (University of Washington), Etnier, Mike (Applied Osteology) and Walsh, Matt

[45] *Human-Animal Dynamics in the Kuril Islands*

The Kuril Islands in Far East Asia were occupied by mid-late Holocene maritime hunter-gatherers of Jomon, Okhotsk and Ainu backgrounds. Each group faced similar challenges of semi-isolation in a stormy, earthquake and volcano prone region with limited biotic diversity but faced the challenges of surviving in the Kurils differently. This paper examines these differences, considering the interrelationships between Kuril animal species and each group of colonists. We examine three variables: 1) Dietary diversity as an index of maritime orientation and flexibility; 2) The predatory footprint of each group of colonists; 3) Vulnerability of settler populations to fluctuations in animal resources.

Fitzhugh, Ben [195] see Etnier, Michael

Fitzhugh, Bill (Department of Anthropology, Smithsonian Institution)

[45] *Deer Stones, Kherigsuurs, and Horse Heads: Human-Animal Interactions in the Mongolian Bronze Age*

Recent research on ceremonial structures of the Mongolian Bronze Age reveal the importance of two animals: the maral (Asian elk), and the horse. Maral are used as iconic emblems in iconography on deer stones, anthropomorphic plinths which include flying deer-bird transformation figures. Horses are sacrificial offerings associated with deer stones and kherigsuurs, the stone burial mound constructions found throughout much of Mongolia and the Altai of Russia. Recently dated horse remains indicate that deer stones and kherigsuur are part of a contemporaneous ceremonial complex dating ca. 3000 BP with implications for the early development of Scythian art and culture.

Fitzhugh, William W. [169] see Beaubien, Harriet F. (Rae)

Fitzpatrick, Scott (NC State University)

[22] *Islands of Isolation: Examining the Power of Aquatic Perimeters*

Isolation has contributed over time to the development of humans culturally and biologically. The concept of isolation was popular in earlier discussions of island peoples anthropologically and archaeologically, but has waned in favor of models emphasizing interaction. Although many island peoples around the world developed highly sophisticated techniques for voyaging, this in no way assured them of constant access to other peoples or places. This paper stresses the importance that isolation played in island societies, recognizing that even though the sea may have been a highway, water is still a medium that requires special conditions to overcome.

Flad, Rowan (Harvard University)[109] *Toward a Centrality of the Periphery: Focusing Archaeology in the Three Gorges*

A variety of models exist in archaeological discourse to conceptualize the structure of interactions among communities in adjacent geographical regions. Most focus on areas with politically complex societies as cores, and relegate surrounding areas to peripheral status, the relevance of which are defined entirely in terms of interactions with these core areas. This paper argues for a reorientation of macro-regional interaction toward a multi-scalar model in which different types of interrelationships are concurrently explored. The Three Gorges region of China is presented as an example of a politically peripheral region that can be productively examined using this model.

Flanigan, Darcie [6] *see Baker, Kristin*

Fleisher, Jeffrey (Lehigh University)[219] *Swahili Households and Market Exchange on the Edge of the Indian Ocean World, 8th-16th Centuries AD*

Ancient Swahili towns on the eastern African coast are best known for their dedication to long-distance exchange and mercantilism within the Indian Ocean trade system. Archaeological research has emphasized the dominant role of elite merchants in commercial activity, while relegating non-elites outside the sphere of market exchange. Based on evidence from households in and around the ancient town of Chwaka on Pemba Island, Tanzania, this paper challenges that dichotomy by demonstrating how non-elite households in towns and villages were in fact connected to market forces in ways that seem to question the presumed political economic dominance of Swahili elites.

Fletcher, Laraine [162] *see Kintz, Ellen*

Fletcher, Roland (University of Sydney), Pottier, Christophe (EFEO) and Penny, Dan (University of Sydney)[52] *The Water Management System of Angkor, Cambodia 8th to 16th C AD*

The water management system of Angkor has been the topic of intense debate since the 1970s with opinions spuriously divided between functionalist and ritualist interpretations. New evidence collected by the EFEO and the Greater Angkor Project from remote sensing, field survey and excavations has redefined the debate and identified an immense three part water control and dispersal network spread over a 1000 sq km. The network formed the infrastructure of the urban complex and was also a key component of its low-density, urban residential pattern.

Floresenzier, Diana [173] *see Jackson, Edwin*

Floyd, Robert J. [208] *see Evans, Amanda M.*

Fogel, Aaron (University of Arkansas), Casana, Jesse (University of Arkansas) and Herrmann, Jason (University of Arkansas)[95] *Deep Subsurface Geophysical Prospection at Tell Qarqur, Syria*

In 2006, we began an innovative geophysical survey utilizing low-frequency ground-penetrating radar (GPR) and electrical resistance tomography (ERT) at Tell Qarqur in the Orontes River valley of western Syria. Both methods can reveal architectural features and occupational strata on the interior of tell sites at significant depths. Results of investigations have then been integrated with high-resolution topographic data to create three-dimensional maps of buried geophysical anomalies. These efforts reveal extraordinary insights regarding the history of occupation at Tell Qarqur and serve as a model for geophysical prospection on complex and deeply stratified urban sites.

Fogel, Aaron [31] *see Lowe, Kelsey*

Folan, William (Universidad Autonoma de Campeche) [162] *Discussant*

Folb, Lisa (Michael Baker, Jr., Inc.), Mahoney, Lisa (US-VISIT) and Thyse, DeAnn (Michael Baker Jr., Inc.)

[104] *What To Do When You Don't Know What You're Doing? How US-VISIT Established Their Section 106 Protocol*

Is there a pattern in the style of the buildings that we drive through when crossing the border? US-VISIT implemented a large-scale fieldwork effort to evaluate the historic structures at land ports of entry. This study found that in the 1920s, automobile traffic across the border had increased to a level that created a need for the border to be monitored and current facilities improved. This paper presents a summary of the patterns in the structure styles and the background for the national context that implemented their construction. US-VISIT is evaluating the buildings as a Multiple Property Nomination.

Folb, Lisa [104] see *Newlan, Ralph*

Follensbee, Billie (Missouri State University)

[78] *The Art of Marriage? A Re-Evaluation of Olmec and Olmec-Related "Exogamous Bride" Images*

Although large stone Olmec and Olmec-related anthropomorphic figures tend to be physically androgynous, past scholars asserted them largely or exclusively to represent male elites. Recent studies by various authors confirm that the iconography of certain images indicates that they portray women, with many scholars suggesting that the figures represent exogamous brides who served to help establish and empower patriarchies. A comparative analysis of these female depictions with portrayals of Olmec male elites, however, reveals that exogamy may be too hasty of a conclusion for all female images, and that, as in later Mesoamerican cultures, these could instead represent autonomous elites.

Ford, Anabel (U C Santa Barbara) and Nigh, Ronald (CIESAS)

[178] *The Maya Forest as a Garden: An Alternative Environmental History*

In this paper we examine the remarkable cultural legacy of both ancient and contemporary Maya men and women, that we call the 'Maya forest garden.' We argue that, in terms of floral composition and dynamics, Maya forest ecosystems are largely anthropogenic. We critically examine the evidence used to justify the assertion that the Maya agricultural practices have and are destroying their forest environment and suggest that, on the contrary, the loss of the Amerindian farming traditions such as those practiced by Maya peoples may currently represent the greatest threat to biological diversity in the Neotropics.

Ford, Dabney (NPS Chaco Culture NHP) [8] *Discussant*

Ford, Richard [105] *Discussant*

Forne, Melanie (Sorbonne), Alvarado, Silvia (Universidad de San Carlos) and Monterroso, Mirza (Universidad de San Carlos)

[26] *Understanding Interregional and Local Interactions between the Ancient Maya Highlands and Lowland Civilizations: The Cancuen Ceramic and Artifactual Evidence*

Cancuen is the only well investigated ancient Maya site located in the intermediary zone of the southwestern lowlands, at the direct interface with the Maya highlands. Ceramic studies at Cancuen now permit analysis to focus on interactions between those two regions. Indeed, the Cancuen ceramics include materials and influences traceable from various highland and lowland sub regions. Based on the ceramics, correlated with other evidence, more specific hypotheses are proposed about elite interaction, exchange systems, warfare and population movements along this corridor and the events and the processes that were involved.

Forne, Melanie [26] see *Torres, Paola*

Forrest, Daniel (PAST, Inc.)

[44] *Pit-Houses, Cattails, and Quartz: The Unexpectedly Ancient and Not-So-Light Footprint of Indigenous Cultures at Mashantucket*

Recent excavations by the Mashantucket Pequot Museum at the Sandy Hill site in Connecticut provide strong evidence of repeated long-term habitations during the Early Archaic period, contradicting the view that the early Holocene environment in the Northeast was inhospitable. The remains of numerous pit-houses dating between 9,000 and 8,500 BP have been identified

at the site, along with large lithic and diverse floral assemblages. Sandy Hill and other recently discovered sites in the region suggest the presence of distinctive early-middle Holocene Northeastern Archaic traditions that contrast sharply in technology and settlement patterns with cultures to the south and west.

Forsyth, Donald W. (Brigham Young University)

[35] *The Occupational Sequence in the Mirador Basin After Two and One-Half Decades: Ceramic Conclusions and Problems*

Investigations in the Mirador Basin over more than twenty years have demonstrated that the region was one of intense occupation over a long period of time, particularly during the Preclassic period. Ceramics constitute one line of evidence by means of which certain aspects of the prehispanic occupation of the Mirador Basin can be assessed. An evaluation of the ceramic and other data from sites investigated in the Mirador Basin provides important conclusions that clarify and elucidate the development of a region that developed spectacularly during the Preclassic and subsequent periods.

Forsyth, Donald W. (Brigham Young University) [162] Discussant

Fortin, Louis [5] see Rademaker, Kurt

Fosberg, Stephen (Bureau of Land Management, New Mexico State Office)

[136] *Sin Fronteras: The Bureau of Land Management's Role in Cooperative International Programs for Cultural Resources Management*

Over the past twenty years, the Bureau of Land Management (BLM) has expanded partnerships with a variety of Mexican governmental agencies and universities to stimulate cooperative archaeological programs. This paper will explain how a wide range of research, interpretive, and management projects resulted from the signing of an international accord between the BLM and Mexico's National Institute of Anthropology and History in the year 2000. International teacher training programs and the expansion of Project Archeology to Mexico are explained within the context of the BLM's long-term commitment to the joint management of shared heritage resources along the southwest frontier.

Foster, Catherine (University of Washington)

[195] *Kodiak Island's Prehistoric Fisheries: Human Dietary Response to Climate Change and Resource Availability*

The research presented here uses stable isotope analysis, zooarchaeological remains, and long-term salmon abundance data to examine the effects of climate change and resource availability on prehistoric fisheries along the northeastern Pacific Rim. Using this unique data set, this research tests the idea that prehistoric fishing focus shifted from the riverine to the marine environment as fish availability fluctuated in response to climate change during the late Holocene. The significance of this project lies in the potential of archaeological and paleoenvironmental data to contribute to an understanding of the long-term processes influencing fish ecology and human-environmental interaction in the northeastern Pacific.

Foster, Thomas (Northern Kentucky University)

[142] *Cultural Resilience of the Muskogee Creek People of the Southeastern United States*
Studies of Native Americans have traditionally viewed the native people from the southeastern United States as a monolithic cultural unit and as dramatically altered by European interaction. This paper describes recent archaeological research on the Muskogee Creek that indicates that they were resilient and variable in their response to culture change during the Historic Period (1540-1836). Archaeological and ethnohistoric measures of settlement, architecture, diet, pottery, and political organization all demonstrate measurable consistency during the historic period. I argue that archaeological studies of Southeastern Native Americans should be more holistic and informed by the living ancestors and historic Native Americans.

Foster, Thomas (Northern Kentucky University) [153] Discussant

Fournier, Patricia (INAH MEXICO) [139] Discussant; [46] see Blackman, M. James

Fournier, Patricia (INAH MEXICO) and Blackman, James

[97] *Teotihuacan's Hinterland: The Way of Life in the Tula Region during the Classic Period*
Teotihuacan's influence in developments in the Tula hinterland are studied from circa 150 to 550 AD. Regional settlement patterns, local vernacular and ceremonial architecture, resource exploitation, craft production, as well as consumption trends of goods and raw materials distributed by the core are analyzed to interpret the way of life of the inhabitants of this marginal zone. Based on material correlates, we infer that the economic and political relations established by Teotihuacan as a centralized state with the periphery populations, evidence a series of structural transformations in the region, leading to a high degree of social complexity.

Fowler, Catherine [192] *see Hattori, Eugene*

Fowler, Don (University of Nevada Reno)

[116] *Beyond the Pecos Conference. Synthesizing Southwestern Archaeology 1930- 1970*
Linda Cordell's work has been at the forefront of southwestern archaeological inquiry throughout her career. Her research has always been innovative and soundly based in theory. In her syntheses, especially her book, *Archaeology of the Southwest*, Cordell has built on and critiqued extant data and methods as well as previous attempts to provide synthetic overviews of, and explanations for, southwestern archaeology. This paper reviews research and overviews during the period 1930 to 1970 to provide historical background for discussions of Cordell's contributions to southwestern archaeology.

Fowler, William (Vanderbilt University) and Sheets, Payson (University of Colorado)

[151] *Archaeology in El Salvador: Challenges of the Past and the Future*
Archaeological sites in El Salvador are threatened by development, industrialization, urbanization, and looting. A more ambiguous challenge has emerged in the past few years: The Consejo Nacional para la Cultura y el Arte (CONCULTURA) of El Salvador has recently turned over administrative control and management of important sites to an organization staffed and managed by private collectors. We explore comparative cases, attempting to bring this issue before the international archaeological community and the people of El Salvador and to attempt a balanced assessment. We ask, as many have before us, with a greater sense of urgency, who controls the past?

Fowles, Severin (Barnard College)

[69] *Of Torture in Societies Against the State*
The title of this paper references Pierre Clastres's classic discussion of the flow of power and violence in societies that stand in opposition to a "state" model of coercion. In contrast to the state's use of violence to highlight the inequities between discipliners and disciplined, Clastres argued that violence is used by "primitive" societies to mark political sameness or equivalence—at times in a remarkably brutal manner. Without fully endorsing the contrast between state and anti-state, I explore the heuristic utility of Clastres's model to our understanding of how violence has been differentially implicated in the construction of the social.

Fox, Jake R. [152] *see Drennan, Robert D.*

Fox, Karyn [52] *see Lansing, Steve*

Frahm, Ellery (University of Minnesota)

[30] *Electron Microprobe Analysis in 21st-Century Archaeology: Its Strengths, Its Weaknesses, and the Advancements Useful to Archaeologists*
Electron microprobe analysis (EMPA) is an analytical technique used to establish the chemical composition of small areas on specimens. Additionally, the instrument can function like a scanning electron microscope and acquire highly magnified images of a specimen. EMPA is quite versatile and a dominant analytical technique in geology. Early archaeological applications involved analyses of layered materials and mixtures. Such studies recognized that EMPA is particularly well suited to heterogeneous materials. This detail, though, has been overlooked in some recent archaeological descriptions of EMPA, creating confusion about its strengths. Furthermore, recent advancements make EMPA more useful to archaeologists than ever before.

Frame, Lesley D. (University of Arizona)

[62] *Metal Finds from Godin Tepe, Iran: Metallography and Compositional Analysis*

This study characterizes the chemical, microstructural, and stylistic variability of metal artifacts excavated at Godin Tepe in West-central Iran during the early 1970s. Dating to Godin Periods II-VI (second-fourth millennium BCE), these objects include pins, needles, jewelry, and tools. They have been examined using traditional metallography, as well as microprobe and SEM analyses. The results of these analyses have been compared to stylistic differences among these artifacts, revealing patterns in manufacturing methods and metals trade. This new information regarding early metallurgy adds to our understanding of copper and tin production on the Iranian Plateau during the Bronze and Iron Ages.

Francis, Julie (Wyoming Department of Transportation)

[42] *Life in the Fast Lane: Archaeology at the State DOT*

Archaeologists at state DOTs make daily decisions about which sites are to be preserved, which are to be excavated prior to construction, and which will go under the bulldozer without further work. Such decisions can cost millions of dollars, must be balanced with other cultural resources and integrated with impacts to other types of resources, communities and people under the umbrella of NEPA. This paper identifies several factors which form the foundation for thoughtful decision-making within the multi-disciplinary world of DOT archaeology. It is argued that well-reasoned and defensible decision-making serves as our most effective "streamlining" measure in the face of impending funding crises and increased pressure for improved project delivery.

Francisco, Liz (Mesa Verde National Park) and Bell, Julie (Mesa Verde National Park)

[91] *An Analysis of a Pueblo III Cliff Dwelling Community and its Associated Integrative Architecture in Mesa Verde National Park*

There has been much recent debate on what defines a community within the canyons of Mesa Verde National Park. Large community boundaries have been defined by identifying residential settlement clusters that contain public architecture designed for communal use, such as great houses, great kivas, and reservoir systems. Smaller sub-communities may lack traditionally accepted types of public architecture but will contain integrative architecture which links households either within a site local or between habitations. This study will attempt to identify affiliation of rural communities with large sites based on resource distribution, travel routes, and communication architecture.

Franco, Lalo (Tachi Yokut Tribe)

[119] *Voices of Our Ancestors: The Importance of Basketry Today*

More than just things, baskets hold the essence of our people. They demonstrate on many different levels our civilization and the beauty of our world. Yokut baskets show us the beginning of time and are crucial for keeping us balanced. Museums such as the Museum of American Indian hold beautiful baskets once thought all but gone. Through collaborations many of these baskets can be truly appreciated and their story retold. This paper will express a few ways in which we can work together to fill in documentary gaps for these collected cultural items and at the same time reinvigorate ceremonial life.

Franco, Nora (CONICET)

[79] *The Application of Models for the Understanding of Lithic Technological Organization at the Santa Cruz Basin (Patagonia, Argentina)*

Models and methodology generated and applied at different parts of the world can be useful for researchers working in other areas. In this paper, ethnoarchaeological information and optimization models are applied in order to understand the technological organization of hunter-gatherers living at the north and south of Santa Cruz river (Patagonia, Argentina) from ca. 9700 to 1000 years B.P. A regional methodology for recording lithic raw material distribution and availability in secondary procurement sources was developed and applied. The results obtained were useful at different spatial scales of analysis and have generated new questions that will guide future research.

Franco, Regulo [19] see *Quilter, Jeffrey*

Franklin, Elaine [96] see *McReynolds, Theresa*

Fraresso, Carole (CRP2A -Université Bordeaux III) and Castillo, Luis Jaime (Pontificia Universidad Católica del Perú)

[61] *Social Identities of an Elite Metallurgist from San José de Moro*

The discovery of a series of metallic and stone tools in an unusually rich Middle Moche tomb at the site of San José de Moro generates a series of questions regarding the role of special craftsmen in Moche society. These craftsmen were dedicated to the production of strongly symbolic objects that were essential for ritual performance. Combining the study of the archaeological evidence and the results obtained through methods of material sciences, the objective of this presentation is to demonstrate that the individual buried in Tomb MU-725 was an elite artisan specialized in the decoration techniques of metallic objects.

Fraser-Shapiro, Ian (CSULB) and Gilstrap, Will (CSULB)

[62] *Obsidian Microdebitage Analysis By LA-ICP-MS*

Obsidian is an effective material for the study of prehistoric raw material use and exchange because chemical characterization can link artifacts to specific source locations with a high degree of accuracy. Using laser-ablation ICP-MS it is possible to characterize samples less than 100µm. This technique enables one to identify locations associated with the production of obsidian artifacts with sediment samples. It also allows one to link microdebitage to tools. This technique expands the potential of obsidian characterization in archaeology.

Frederick, Charles (Consultant/University of Texas at Austin), Popper, Virginia (University of California at Los Angeles), Morett, Luis (Universidad Autónoma de Chapingo) and Sanchez, Fernando (Instituto Nacional de Antropología e Historia)

[206] *Dynamic Agricultural Landforms in a Changing Landscape: Chinampa Agriculture in the Southern Basin of Mexico*

Accelerated sedimentation in lake margin environments of the Southern Basin of Mexico in the period since the Spanish Conquest either buried chinampa landscapes outright, or set in motion a complex cultural response geared towards maintaining chinampa agriculture in the face of rapidly aggrading deltas. These dynamic lake margin settings preserve a unique record of changes in chinampa landscapes from the Late Aztec into the Historic period, during which time a significant spatial re-organization occurred. Recent fieldwork in these environments has revealed the changes in chinampa fields as well as some insight on the antiquity of chinampa agriculture in this region.

Frederick, Charles [145] see Borejsza, Aleksander; [34] see Wilder, Michael

Fredlund, Glen G. [159] see Brown, David O.

Freeman, Jacob (University of Texas at San Antonio) and Hard, Robert (University of Texas at San Antonio)

[124] *Projecting Courses of Plant Based Intensification*

We will use observations made of modern hunter-gatherers, horticulturalists, and wild plant distributions to project courses of plant based intensification. We explore the causes and consequences of wild plant intensification with a particular interest in earth oven use. We also consider how different combinations of wild plant resources might affect the pace at which domesticated plants are adopted.

Freidel, David (SMU) [26] Discussant

Freidel, David (SMU) and Escobedo, Hector

[103] *History and Archaeology at El Peru-Waka', an Interim Report*

El Peru-Waka' periodically emerges in Classic Maya history as a strategic player on the larger stage. Four years of archaeological research and analysis at this site provide a basis for a preliminary evaluation of the role of history in the public ritual actions and programs of the ruling elite there. Drawing on discoveries and interpretations of our colleagues in the project, we conclude that the people of Waka' were acutely aware of history and engaged in exalting or damning past rulers to legitimate present authority.

Freidel, Dorothy (Sonoma State University), Jones, John (Washington State University) and Robinson, Eugenia (Montgomery College)

[100] *Human Adaptations at Urias, Valley of Antigua, Guatemala*

This paper considers the interaction and impact of cultural and natural factors such as earthquakes, volcanic eruptions, and drought on population change from the Archaic through the Postclassic periods in the Antigua Valley, Guatemala. Probable maize pollen from sediment cores from the Laguna Quilisimate suggest that agriculture in the region may have taken place by 4,380 B.C. Ceramics and radiocarbon dates show humans were present in the valley again in the Early Preclassic and continued to occupy the zone through the Middle Preclassic. Dry conditions correlate with population decline in the Late Preclassic and Late Classic periods.

Freiwald, Carolyn (University of Wisconsin - Madison) and Yaeger, Jason (University of Wisconsin - Madison)

[202] *Deer Hunting in Changing Landscapes: Chemical Analyses of Deer Remains from the Upper Belize River Valley*

Wild game was integral to the Precolumbian Maya subsistence economy. Strontium and oxygen isotope analyses of deer remains demonstrate that residents of the upper Belize River valley consumed significant quantities of deer from the Maya Mountains during the Late Classic, likely because of high population densities, the resulting landscape, and increased hunting pressure. Carbon isotope measures show mountain deer raided cornfields in adjacent limestone uplands. This study compares the Late Classic period (Xunantunich) with the Middle Preclassic (Cahal Pech) and Postclassic / Colonial (Tipu) periods to assess changing landscapes and deer procurement strategies in light of the region's population history.

Friedman, Jessica [145] see Smith, Jennifer

Friesen, Max (University of Toronto)

[199] *The Past in the Past in the Arctic: A Thule Inuit Reaction to the Pre-Dorset Archaeological Record*

When Thule Inuit arrived in the eastern Arctic around 800 years ago, they moved into a cultural landscape saturated with the remains of earlier, Palaeo-Eskimo peoples. In many ways, these earlier sites must have seemed "foreign"; that is, obviously belonging to people, or other sorts of beings, very different from themselves. In this paper, I will describe a site near Cambridge Bay, Nunavut which contains Thule "offerings" apparently associated with Pre-Dorset structures. This site is interpreted as one where the Palaeo-Eskimo record may have had a direct impact on, and been interpreted through, a Thule ideological framework.

Frink, Lisa (University of Nevada Las Vegas)

[112] *The Little Sisters of the Snow in a Field of Colonial Interaction*

Colonialism can be understood as a sequence of interconnected events occurring in a long-term arena of Indigenous and colonial interaction. Because colonialism was a late development in Arctic Alaska, a rich data set exists for analyzing this process. Research suggests that the early experience of religious colonialism among Yup'ik people in coastal western Alaska is entwined with the protohistoric colonial market. This paper focuses on a Jesuit order of Native women. Their willingness to embrace the church is juxtaposed with men's resistance. This differential can be explained in the context of women's eroded status as a result of colonial mercantilism.

Frink, Lisa (University of Nevada Las Vegas) [179] Discussant; [166] see Harry, Karen

Frischer, Bernard (IATH, U. of Virginia)

[13] *Beyond Illustration: 3D Modeling as a Tool for Discovery in Archaeology*

This paper will trace the history of 3D modeling in archaeology from the 1970s to the present day. It will argue that 3D modeling was at first used as a new means of representation of archaeological data. As 3D representations became more complex, archaeologists realized that they could serve as surrogates for their objects of study in experiments that could bring out unexpected properties in the original and generally fragmentary data.

Frischer, Bernard (IATH, U. of Virginia) [13] Discussant

Fritzsche, Rebecca (University of Wyoming)

[96] *Using Indigenous Perspectives in Archaeology: An Evaluation of Collaboration*

This poster presents an overview of collaborative efforts between archaeologists and indigenous communities in providing frameworks for understanding the past. I explore and evaluate the ways archaeologists have incorporated indigenous histories and views into archaeological inquiry in terms of success in merging scientific and humanistic concerns and overall contributions to archaeological knowledge. I present a history of collaboration based on a review of journal articles in *American Antiquity*, *American Anthropologist*, and *World Archaeology* since the initial publication of these journals. Finally, I consider the implications of collaboration and give special attention to the methodological and theoretical import of community archaeology.

Fruhlinger, Jake (Idaho Army National Guard) and Jacobs, Tedd

[113] *Hunter-Gatherers in a Desert Environment of the Northern Great Basin*

Ecological Studies of Northern Great Basin desert environments describe how resources were distributed and utilized by hunter-gatherers. Traditional views have characterized the Western Snake River Plain as an area with low resource densities and highly varied resource dispersals. A new vegetation reconstruction combining GIS mapping and botanical analysis suggests that productivity and previously determined use levels may need to be reconsidered varying forager models. By identifying potential growth zones we are able to discuss probable values and use of differing sub-areas. Our research suggest suggests a varied, but potentially greater use of the area over time than has previously been thought.

Fry, Robert (Purdue University)

[149] *Changing Models of Lowland Maya Ceramic Production and Distribution*

This paper examines issues of exchange and emulation in assessing resemblances among regional ceramic assemblages. I will examine changing assumptions about the nature of ceramic production and distribution. Interest in exchange has tended to center on widely distributed polychrome serving vessels. Studies of utilitarian ceramics have tended to assume more localized production-consumption systems. This assumption is erroneous in some cases. I will examine the evidence for specialized production and exchange in 2 areas - south central Quintana Roo and Northern Belize. In addition I will discuss the role of emulation in restructuring of both serving and utilitarian vessel ceramic systems.

Frye, Kirk [169] see *Hiebert, Fredrik T.*

Fuhrman, Jesse D. (Eastern New Mexico University)

[157] *Age, Sex, Fertility, and Mortality at Two Sites on the Middle San Juan River*

A skeletal collection from the Tommy and Mine Canyon sites on the south side of the middle San Juan River in Northwest New Mexico were analyzed for this study. The two sites range from Late Pueblo I to Late Pueblo III. Age and sex data were recorded, analyzed, and will be used to infer fertility and mortality rates, and thereby whether the populations were growing or in decline. The results of this analysis will be compared to prevailing views of the population dynamics of the Northern San Juan during the Chacoan and Post-Chacoan periods.

Fuld, Kristen A. (Portland State University) and VanPool, Todd L. (University of Missouri)

[32] *Projectile Points as Temporal Markers in Northern Chihuahua: Projectile Point Analysis from Cerro del Diablo*

Cerro del Diablo, a site near Janos, Chihuahua, has extensive rock art, a substantial flaked stone assemblage, and hundreds of bedrock mortars. The temporal affiliation and use of the site are debated, in part because diagnostic artifacts and features haven't been identified. During in-field lithic analysis during the summer of 2006, 21 projectile points were recorded from the site and the surrounding area. These points are compared to established temporal types from the North American Southwest and a performance analysis of the points is presented. Results indicate the use of arrow points perhaps associated with an Apache occupation.

Fuld, Kristen A. [32] see *Helderman, Laura*

Fuleki, Aaron [5] see *Womack, Andrew*

Fuller, Heidi (Ft. Hood Cultural Resources)

[164] *Restoring the Circle: A History of the Relationship Between Fort Hood and Native Americans*

For more than 15 years, through the implementation of the Native American Graves Protection and Repatriation Act, Native Americans and Fort Hood have developed a mutually significant relationship. Since establishment of the Comanche National Indian Cemetery and rededication of the Leon River Medicine Wheel in the early 1990s, Fort Hood and members of several federally- and non-recognized tribes and other Native American organizations have worked together toward common goals of renewal, repatriation, reburial, and a reciprocal relationship of respect and understanding. This paper provides a history of the relationship between Fort Hood and Native Americans with considerations toward the future.

Fullerton, Ben (University of North Texas), Nagaoka, Lisa (University of North Texas) and Wolverton, Steve (University of North Texas)

[4] *White-Tailed Deer Carcass Exploitation across the Pre-Pottery/Pottery Boundary in Late Holocene Southeast Texas*

The development of pottery in prehistory is typically associated with a sedentary lifestyle focused on food production. In southeast Texas, however, mobile hunter-gatherers were using pottery while exploiting resources from several productive environments. This project seeks to determine if subsistence change precipitated the advent of pottery in this region. In particular, we examine butchery and transport patterns of deer across the pre-pottery/pottery boundary at the Eagle's Ridge site. According to foraging theory, the use of deer should intensify during a resource depression. Here, skeletal element profiles and fragmentation rates are analyzed to determine if this pattern occurred in southeast Texas.

Fullerton, Benjamin [4] see *Welch, Ransley C.*

Funk, Caroline (Richard Stockton College)

[4] *Consequences of Contact on Rat Island, Alaska*

The Aleuts of the Western Aleutian Islands were inundated with promyshlennik ships in the mid-1700sAD. The global market demand for quality furs sent poorly constructed Russian ships, laden with felonious men and *Rattus norvegicus*, to every island. The Russian fur trader presence instigated changes in all aspects of Aleut life, including subsistence practices and domestic organization. The rats and their descendants caused significant ecological change on the islands as the rats subsist on vulnerable migratory waterfowl species. Analyses of the material culture and fauna from site RAT-00081 inform about the contact process on Rat Island.

Funk, Caroline [95] see *Haws, Jonathan*

Gabler, Brandon (University of Arizona/Los Alamos National Laboratory)

[105] *Modeling Landscape Use and Aggregation on the Pajarito Plateau, New Mexico*

Pueblo aggregation on the Pajarito Plateau is often attributed to decreased rainfall, coupled with increased population. Additionally, the redistribution of habitation and agricultural sites has generated significant interest. Using GRASS GIS and agent-based modeling techniques, an experimental 'cultural laboratory' approach is used to address these questions. GRASS is implemented for the development of high-resolution landscape and paleoclimate reconstructions, providing the basis for simulating foraging and agricultural production to determine how populations may have responded to fluctuations in temperature and precipitation throughout the study period. These experiments yield information valuable for understanding the effects of the Great Drought and other processes on Plateau aggregation.

Gaeta, Jerome [195] see *Braje, Todd J.*

Galaty, Michael L. (Millsaps College), Lafe, Ols (Institute of Archaeology, Tirana), Tafilica, Zamir (Shkoder Historical Museum), Schon, Robert (Tufts University) and Watkinson, Charles (American School of Classical Studies at Athens)

[134] *The Shala Valley Project, Northern Albania: Results of the 2006 Field Season*

The Shala Valley Project is a multi-disciplinary regional studies project that operates in northern Albania, the only place in Europe where so-called tribal societies survived into the

20th century. One goal of the project is to understand the history of land use and landscape in Shala. In 2006, we collected evidence for the original settlement of the valley and the foundation and subsequent evolution of its unique social and economic systems. This paper will focus on new results from the sites of Grunas and Dakaj, and ethno-archaeological studies of the villages that still occupy the valley.

Galiano Blanco, Vicentina [216] *see Kosiba, Steven*

Galindo, Mary Jo

[54] *Con un Pie en Cada Lado: Ethnicities and the Archaeology of Spanish Colonial Ranching Communities in South Texas*

Before the Rio Grande valley became a contested border between the United States and Mexico, and between predominantly Latino and Anglo-American societies, it was the northern frontier of Spanish Nuevo Santander and a border between Spanish Mexico and indigenous societies. This presentation examines the complex issues of ethnic identity construction along a contested border through time based on census data, birth, death, and marriage records, and oral history. Its goal is to shed new light on a process of colonization and adaptation to a border context that went on a century before the more-studied Anglo-American colonization of the region.

Galindo, Mary Jo [54] *see Mathews, Ruth*

Gallagher, Daphne (University of Michigan)

[144] *On the Edge of Complexity: Gourmantche Expansion in Southeastern Burkina Faso*

The expansion of the Gourmantche ethnic group into southeastern Burkina Faso during the mid-second millennium AD has been the subject of much historical and ethnographic study. Archaeological data from a full coverage survey on the southeastern edge of the Gourmantche polity provide a "fringe" perspective on the nature of a nominally homogenous ethnic expansion. This paper will examine the evidence for changing political complexity and assess the degree to which these changes can be productively linked with ethnohistorical data to develop a more textured historical narrative and a more complete anthropological understanding of the Gourmantche.

Galle, Jillian (Monticello)

[158] *Conspicuous Consumption and Gendered Social Strategies among Slaves in the 18th Century*

Historical archaeologists have long recognized the presence of fashionable consumer goods on domestic sites occupied by enslaved people in the early-modern Atlantic world. However, systematic study of temporal and spatial variation in consumption by slaves has been missing. I use costly signaling theory to model the demographic, environmental, and historical factors that shaped the co-evolutionary dynamic between signal senders and receivers. Artifact patterns at 25 slave sites in the Caribbean and Chesapeake point to active social advertising within specific contexts and suggest that the types of goods used in signaling systems differed based on the gender of the signaler.

Gallegos, Dennis (Gallegos and Associates)

[98] *California Borderlands Archaeology: The Past 10,000 Years*

As part of California's Borderlands, Otay Mesa and the Tijuana Lagoon/Estuary have been occupied by Native Americans for over 9,800 years. The Otay/Tijuana region contains over 300 archaeological sites including early to late Holocene villages, temporary camps/artifact scatters, lithic scatters and quarries. These archaeological sites demonstrate use of local resources (i.e. plants, mammals, shellfish, and fish); production of large bifaces, atlatls and arrow points; use of shell beads and manos and metates; and evidence of a change in land-use patterning over the past 10,000 years for California's Borderlands.

Gallivan, Martin (College of William & Mary) and McKnight, Justine (Archaeobotanical Consultant)

[64] *Paleoethnobotany of Native Societies in the Chesapeake: A Regional Synthesis and Revised Chronology*

Despite vivid colonial accounts of Native life in the Chesapeake Tidewater, supporting archeobotanical data are both scant and scattered. Research at the Powhatan political center of Werowocomoco has spurred the construction of a regional database to illuminate plant use

and horticultural reliance from the Middle Woodland period through Contact. Drawing on these data and a new suite of AMS dates, we present evidence clarifying the timing and importance of cultigens across Virginia's diverse physiographic and cultural landscapes. The new data provide a basis for describing the regional mosaic of Native subsistence practices that is independent of the biases of colonial sources.

Gallon, Matthew (University of Michigan)

[135] *Iron and Lithic Tools of the Early Iron Age, South India*

Prior to the onset of the Iron Age (1200-300 BCE), the societies of South India relied primarily on lithic and bone materials to make tools. Even after objects began to be made from iron, lithic blades continued to be manufactured. As the functional properties of tools made from either iron or stone are similar, the appearance of iron may have influenced changes in the application and production of lithic tools. This paper explores these impacts and how they relate to changes in the organization of craft production during the Iron Age in South India.

Galloway, Patricia (University of Texas at Austin) [112] *Discussant*

Galm, Jerry (Eastern Washington University) and Gough, Stan (Eastern Washington University)

[34] *Sentinel Gap and Late Pleistocene Landscapes of the Columbia Plateau*

In the Pacific Northwest, the onset of the Younger Dryas (YD) cooling event overlaps major eruptive phases of Mount St. Helens and Glacier Peak volcanoes. The YD also marks the beginning of a 1,300-year period of landform stability as evidenced by soil formation across the Columbia Plateau. This "Clovis" landscape offered adaptive choices significantly different from those available to succeeding late Paleoindian and early "Archaic" groups present in the region by ca. 12,800 cal B.P. The onset of warmer-drier conditions at the Holocene-Pleistocene boundary (ca. 11,600 cal B.P.) correspondingly refocused adaptive strategies on emerging riverine environments.

Gamble, Lynn (San Diego State University)

[146] *Beadmakers, Basketweavers, Cowboys, and Shamans: Chumash Transition and Tradition after 1769*

The colonial institutions of the Spanish mission and rancho system had considerable impacts on Chumash Indian practices in southern California. Despite the disastrous effects of colonization, the Chumash retained a number of traditional customs, while at the same time they adopted selected aspects of European culture, not to become like Europeans, but in an attempt to retain Chumash socioeconomic traditions. Archaeological and ethnohistoric data are used to document how the Chumash navigated the consequences of colonial encounters, and in this process, reformulated their identities. Chumash living in their native settlements after the establishment of missions and ranchos are given special attention.

Gamez, Laura [103] *see Lee, David*

Garber, James (Texas State University) and Awe, Jaime J. (Institute of Archaeology, Belize)

[202] *Middle Formative Ideology and Ritual at Cahal Pech, Belize*

Excavations at the site of Cahal Pech, Belize have revealed a complex sequence of building episodes and ritual deposits initiated at the end of the Early Formative (1100 BC) continuing for several centuries. These investigations revealed information on the ideological concepts and ritual behavior associated with the buildings. Both indicated participation in a pan-Mesoamerican symbol system. This paper examines these patterns, compares them with other examples, and provides a foundation for the understanding of the Middle Formative ideology in the Maya Lowlands.

Garcia, David (Counterpart International), Demarest, Arthur (Vanderbilt University) and del Cid, Mario (Counterpart International)

[26] *Reviving and Returning the Western Trade Route to the Maya: The Cancuen Q'eqchi' Development, Empowerment, and Park Management Project*

For six years the Cancuen Archaeological Project has worked with many communities and institutions to create a model of large scale, culturally-sensitive regional development and

Maya political and economic empowerment. This regional program has created a series of archaeological and ecological parks, managed by adjacent Q'eqchi Maya communities. The project has achieved an unexpected level of success. Here the nature, problems, potential, and ethical imperatives of "Maya-managed Maya archaeology" are described and implications are discussed.

Garcia, Kyle [213] *see Marken, Mitch*

Garcia, Oreto [84] *see Barton, Michael*

García, José María [200] *see López Luján, Leonardo*

Garcia-Des Lauriers, Claudia (University of California, Riverside) and Yacubic, Matthew (University of California, Riverside)

[50] *Classic Period Obsidian Trade on the Chiapas Coast: The Case of Los Horcones*
The Teotihuacan presence at Los Horcones, Chiapas was documented first through the presence of carved monuments reminiscent of the artistic style from the Central Mexican Metropolis. Recent work by the Proyecto Arqueológico Los Horcones has worked to expand our knowledge of the Teotihuacan presence at this site. Part of the new evidence for interactions between Teotihuacan and the Pacific Coast of Chiapas is a relatively high frequencies of green obsidian from Pachuca and other sources which indicate that Los Horcones was engaged in significant trade networks that linked it with larger regions like the Mexican Highlands and the South Coast of Guatemala.

Garcia-Herbst, Arleen (ASM Affiliates, Inc./UC Santa Barbara), Stern, Charles (University of Colorado), Neff, Hector (California State University, Long Beach) and Lanata, Jose Luis (Universidad de Buenos Aires)

[39] *Laser Ablation TOF-ICP-MS Analysis of Obsidian Source Nodules and Archaeological Samples from the Southern Pampas and Northern Patagonia*
We evaluate prehistoric trade of obsidian in the southern Pampas and northern Patagonia, Argentina, during the Holocene. Our GBC Optimass time-of-flight ICP-MS analysis of trace-elements in 92 nodules of obsidian from various sources in northern Patagonia, and 101 obsidian samples from archaeological sites in four separate provinces of the southern Pampas and northern Patagonia indicates several obsidian sources were used. The new data confirm four chemically distinct types of obsidian from the Pampa del Asador source (PDA-I, PDA-II, PDA-IIIa, and PDA-IIIc), and suggest that it is not the only source of obsidian in the region.

Garcia-Herbst, Arleen [158] *see Lanata, Jose Luis*

Gardner, A. Dudley [156] *see Elliott, Gabrielle*

Garduno Ambriz, Mauricio [30] *see Glascock, Michael D.*

Garfinkel, Yosef (Hebrew University)

[101] *'Ubeid Influence in the Southern Levant: The New Excavations at Tel Tsaf, Jordan Valley, Israel*

The recent excavations at Tel Tsaf (2004-2006), Jordan Valley, Israel, unearthed a 5th millennium BC settlement with a number of previously unknown features to this region. However, they are well-known in cultural tradition of Mesopotamia and northern Syria. These features include: rounded dwelling structures, rounded silos, imported 'Ubeid pottery, pottery decorated with net-covered diamonds, massive use of clay sealings, stone seal, obsidian artifacts, and large quantities of beads. These clearly indicate direct connections between the Tel Tsaf community and the 'Ubeid cultural of Mesopotamia and northern Syria. This data opens new horizon for understanding the proto-historic era in the Near East.

Garniewicz, Rex [62] *see Ketchum, Sheena*

Garraty, Christopher (Arizona State University)

[219] *Investigating Market Exchange in Pre-Capitalist Societies*
Market exchange in pre-capitalist economies typically co-occurs with other, non-commercial forms of exchange within a broader economic framework. For this reason, it is important to ask

why and how principles of market exchange developed in some areas of the ancient world and not in others. It is also essential to investigate the extent to which different sectors of the economy (e.g., land, labor, luxury commodities) were exchanged through commercial versus non-commercial channels in different times and places. In this paper, I examine these issues and outline four principal themes related to the study of market exchange in pre-capitalist economies.

Garver, Lydia [81] *see Sievert, April*

Garza, Sergio (University of California, Riverside), Brady, James E. (California, State University, Los Angeles), Christensen, Christian, Cobb, Allan and Mercede, Jennifer (California State University, Los Angeles)

[108] *Quen Santo Revisited*

Eduard Seler's study of Quen Santo is recognized as an important early cave study. Despite the presence of architecture and monumental sculpture, Seler failed to appreciate the caves as the religious foci of the site. Reexamination of the Quen Santo caves documents non-cave specialists' inability to recognize the extensive modifications often present in archaeological caves. Our reanalysis of Seler's Caves 2 and 3 demonstrates that the complex was modified on a scale that suggests appropriation by the surface site's political elite. Ethnographic data indicates that the cave functions as a pilgrimage center for the Chuj and other Maya groups.

Gasco, Janine (CSU-Dominguez Hills)

[178] *Historical Ethnoecology in the Soconusco: The Intersection of Archaeology, Ethnohistory, and Ethnography*

As scientists from many disciplines seek to identify the relationships between human behaviors and global environmental changes, ethnoecological research provides a unique perspective on this issue because of its focus on local ecological knowledge and the ways that indigenous or local populations interact with their environments. Historical data, both archaeological and documentary, can reveal the recent and ancient antecedents of current practices. In this paper I take a historical ethnoecological approach that integrates archaeological, ethnohistorical, and ethnographic evidence to better understand ancient, historic, and contemporary relationships between the people of Soconusco and their environment.

Gaspar, Maria Dulce (Universidade Federal do Rio de Janeiro) and Barbosa, Maria (Universidade Federal do Rio de Janeiro)

[43] *Collapse of Shell Mound Building Societies in Southeastern Brazil*

Complex fisher-gatherer (sambaqui) societies of southeast coastal Brazil maintained a basic cultural continuity and a stable adaptation for over three millennia. Interaction with other South American groups appears to have been minimal. Around 5,000 years ago, however, a series of social transformations started to take place in Amazonia and these changes involving demographic growth, economic strategies, and social organization had important impacts on sambaqui peoples beginning about 2,000 years ago. Intensified social interaction with and ultimate displacement by cultures origination in the Amazon and central Brazil profoundly influenced coastal cultural trajectories.

Gassiot Ballbe, Ermengol [193] *see Steadman, Dawnie*

Gatsov, Ivan (New Bulgarian University)

[87] *Quarries, raw material, tool type and function in the Neolithic and Chalcolithic of Northern and Upper Thrace and South Marmara*

This report presents some results concerning the connection between raw material sources and flint varieties used tools types and functional determination of the artifacts in the territory of South Bulgaria and some parts of NW Turkey. At this stage of research some connections between raw material, typology, function and the type of have been established in frame of prehistorically cultures in the region mentioned above. Additionally some information about the linked – raw material types and some technological features of the artifacts from the stone assemblages investigated have been presented.

Gatsov, Ivan [121] *Discussant*

Gear, W. Michael (Paleoresearch Institute, Inc.), Cummings, Linda (Paleoresearch Institute, Inc.) and Bryson, Reid A. (University of Wisconsin)

[145] *Climate, Agriculture, Sustainability, and Risk - a Look into the Past*

Archaeoclimatic models provide a framework for examining past climatic conditions that would have affected people's choices concerning agriculture. Examination of the prehistoric record and comparison with archaeoclimatic models address climate and sustainability. Agriculture began more than 8000 years ago and may be traced by numerous methods. In some parts of the world agricultural tools have remained unchanged for millennia, arguing for the existence of a sustainable system. Gradual changes in climate or environmental conditions allow for adaptation, while rapid changes result in failure of the system and often abandonment. What constitutes a sustainable system? What are the strategies?

Geletka, Leland [126] see Lukowski, Susan

Geller, Pamela (American University)

[115] *The Sacrifices We Make for/of our Children: Making Sense of a Pre-Columbian Maya Practice*

Contemporary Western society represents the death of a child as a terrible tragedy, a life cut short. As such, we find it especially difficult to reconcile premeditated infanticide. Such violent behavior is criminalized and pathologized. Nonetheless, modern sentiments should not contour interpretations of past phenomena. In this paper, I consider bioarchaeological evidence of infanticide to make sense of this practice and illuminate the cultural beliefs that lent it legitimacy. The pre-Columbian Maya serve as case in point. I argue that rather than a violent act, the ritual sacrifice of a child was a socially acceptable and sacred form of tribute.

Geller, Pamela [85] see Bell, Ellen; [147] see Cagnato, Clarissa

George, Donny (SUNY Stony Brook)

[193] *Iraqi Archaeology after Saddam Hussein*

My paper is based on my experiences as the director of the Archaeological Museum in Baghdad after the U.S. led war against the past Iraqi regime. I will describe developments in the museum related to the initial looting, as well as the dire conditions of site preservation in Iraq and widespread looting due to a lack of security and general societal problems.

Germick, Stephen (USDA-FS-Tonto National Forest)

[82] *ARPA and Archaeology: Operation Heritage and Bow Cave*

In the early 1970's Bow Cave was located during unauthorized exploration on the San Carlos Apache Reservation. During the summer of 1988 the cave's contents including bows, crooked staffs, arrow shafts and ceramics associated with human remains was looted. In 1994 these artifacts were seized during a law enforcement sting, part of an ARPA task force known as Operation Heritage. Study of the assemblage, video and photographs of the cave prior to looting suggests that Bow Cave served as a Shipap cave shrine associated with hunting or war ritual used by the Mogollon between AD 1000 to 1300.

Ghazal, Royal (University of Chicago), Schaffer, Jennifer (University of Chicago) and Lu, Michael (Arizona State University)

[101] *Analyzing Profitless Materials: Spindle Whorls and Textile Production in Early Iron Age Amuq (Turkey) Valley*

Clothing and ornamentation were among the earliest ways human beings expressed their social identity. Due to the perishable nature of cloth, however, studies of textile technologies are largely absent from the archaeological record. Relying upon the historical, ethnographic, and excavated materials, we studied the remains of the textile industry in the Early Iron Age Amuq Valley, Turkey, centering our efforts on a collection of spindle whorls from the sites of Tel Ta'yinat, Judaidah, and Chatal Huyuk. Our aim was to consider the potential uses, types, and significance of textiles themselves and the tools used to make them.

Gibaja, Arminda (Instituto Nacional de Cultura, Cuzco)

[186] *Wari Influenced Architecture of the Late Intermediate Period at Chokepukio, Cuzco, Peru*

Intensive study of Late Intermediate period monumental architecture at Chokepukio reveals survivals of Wari architectural technology and design that shaped the subsequent architecture built by the Lucre peoples. Other elements present in Lucre architecture also foreshadow the

classic Inca style. The monumental buildings at Chokepukio clearly bridge the gap in the evolution from the Wari to the Inca states.

Gibb, Russell [171] *see Holdaway, Simon*

Gibson, Jon [204] *see Anderson, David*

Giesso, Martin (Northeastern Illinois University)

[137] *Specialization in Late Formative Khonkho Wankane*

Inhabitants of the large Late Formative settlement of Khonkho Wankane were involved in a multiplicity of activities dealing with procuring, manufacturing and distributing stone artifacts, from construction materials and monoliths to small flaked tools, using raw materials from a wide range of sources. This paper presents recent analysis of lithic macro and microartifacts from residential, ceremonial, and mortuary contexts to explore some of this diversity that points to a potential specialization in tool manufacturing by areas. Analysis of flotation samples of Khonkho are compared to regional sites to understand changes occurring in these activities during the Late Formative-Tiwanaku IV transition.

Gifford, Chad (Columbia University), Connell, Samuel, Gonzalez, Ana Lucia and Lewis, Brandon

[76] *Fortress Architecture in Pambamarca, Ecuador*

The immense fortresses in the mountains of Pambamarca in Northern Ecuador stand as a notable example of the power that the Inka state could materialize in the face of resistance by indigenous societies. Starting with Gasparini and Margolies (1977), this paper outlines some of the methodologies we have developed in order to investigate this vast complex of some 20 Inka and indigenous fortresses. New archaeological data are also provided that begin to illustrate that while the primary function of the fortresses was clearly military, the logic of their construction and the narrative of their occupation can be surprisingly eclectic and socially diverse.

Gifford, Chad (Columbia University) [88] *Discussant; [9]* *see Lewis, Brandon; [9]* *see Connell, Samuel*

Gifford-Gonzalez, Diane (U. of California - Santa Cruz)

[34] *A Coordinated Approach to Site Formation Analysis in Vertically Dispersed Deposits*

California archaeologists have long believed most mainland sites are stratigraphically mixed by bioturbation. Despite some studies showing burrowing rodents' effects on vertical artifact distributions, few systematic methods have been developed for discerning, describing, and calibrating the extent of archaeological materials' vertical movement. Other vertical dispersal processes discussed in the wider site formation literature have seldom been taken into account. This presentation offers some recommendations for assessing vertical mixing in sites with differing sedimentary matrices, based on exploratory research with coastal sites in the Monterey Bay area. This work may also be relevant to site analysis in other regions.

Gil, Adolfo [124] *see Johnson, Amber*

Gilbert, Louis [23] *see Burke, Ariane*

Gilbert, Rebecca (Cal Poly Pomona) and Allen, Mark (Cal Poly Pomona)

[125] *Lithic Assemblages from the Burnt Corn Community and Beyond*

This poster analyzes flaked stone tool, debitage, and groundstone assemblages from Burnt Corn Pueblo and several smaller sites in the Galisteo Basin. Data include the distribution of surface artifacts and those recovered by limited test excavations inside room blocks. These data are employed to address questions concerning site occupation and duration, as well as economic activities. In addition, the distribution of lithics is examined in the context of site structure. The results of these analyses provide important information to address the major research questions of the Tano Origins Project.

Gilbert, Rebecca [125] *see Allen, Mark*

Giles, Bretton (Binghamton University)[132] *Mapping Complexity at Hopewell, Ohio*

The evolution of complex mnemonic systems is considered a characteristic of social complexity that culminates in written scripts, which often develop in tandem with elaborate bureaucratic institutions. This paper investigates how Ohio Hopewell symbolic systems flowered along a different trajectory and the fuzzy boundaries that emerged between the incorporation of technical and cosmological knowledge. In particular, I will discuss how information was coded through a relational system of spatial logics within Ohio Hopewell iconography and how deciphering these mnemonic systems contributes to understanding the complexity of Hopewell communities in southern Ohio.

Gillam, Christopher [204] *see Anderson, David; see Tabarev, Andrei V. [106]*

Gillam, J. Christopher (University of South Carolina) and Tabarev, Andrei V.[106] *The Far East Archaeological Database (FEAD): A Minimum 1-Minute Resolution Dataset for Exploring the Big Picture*

The Far East Archaeological Database (FEAD) is being developed from site location data in the published literature and through individual and institutional collaborations to provide a minimum 1-minute latitude/longitude (2-kilometers or better) resolution archaeological dataset for exploring patterns of settlement, migration, interaction, and exchange at regional and greater scales of analysis. Combined with global-scale environmental data, such datasets and geographic information system (GIS) analyses offer great potential for investigating fundamental problems in the archaeology of the Far East, neighboring regions, and worldwide.

Gillaspie, Lindsay (Texas A&M University) and Betty, Gerald (San Angelo State University)[47] *El Cópamo and Its Neighbors: 1830s to 1880s*

El Cópamo, inhabited from the 1830's to the 1880's, was a Gulf Coast port town located on the back side of Copano Bay, Texas. This paper provides a review of the archaeology conducted at the site in 2005, detailing the residential complex and community cemetery. The author compliments this field research data with newly obtained archival information about this early European settlement. The paper concludes with commentary about how El Cópamo, along with neighboring settlements in the Copano Bay area, promoted new economic growth in the South Texas region in the mid 1800s.

Gillespie, Susan D. (University of Florida)[68] *Inside and Outside: Residential Burial at Formative Period Chalcatzingo, Mexico*

At Chalcatzingo the common location for burials was under house floors, a practice indicating private ritual, invoking the social memory of the household and contributing to insider knowledge creating social difference vis-à-vis other households. However, certain high-status burials occurred in more open locations, constituting a form of display that may have served integrative and competitive purposes, contributing to memory formation among larger social fields. These latter were also residential burials, occurring within the landed domain of the chiefly houses. Both inside and outside burials drew on claims of ancestral continuity, but it is important to explore the differences they entailed.

Gillette, Donna (UC Berkeley)[214] *Placing the PCN (Pecked Curvilinear Nucleated) Tradition in a Broader Context*

The Hopland Research and Extension Center (HREC) in Mendocino County, California, is the location of 3 clusters of boulders that exhibit visible signs of use, thought to represent fertility ritual. Known as PCNs (Pecked Curvilinear Nucleated elements), these markings are a portion of a broader tradition of cultural markings that are found throughout the Coastal Ranges of California. Unanalyzed artifacts recovered from the HREC area, combined with information from recent excavations near PCN boulders, will provide a broader contextual understanding of the relationship of the PCN tradition and the life history of the site.

Gillis, Nichole [39] *see Sterling, Sarah*

Gilman, Patricia (University of Oklahoma), Schriever, Bernard (University of Oklahoma) and Gruber, Thomas (University of Oklahoma)

[163] *Interaction, Residential Mobility, and Ceramics in the San Simon Basin of the Southern Southwest*

Our research informs questions of identity formation and persistence in areas where residential mobility is practiced by people surrounded by larger, more sedentary groups. Between A.D. 600 and 1000, people were moving into and out of the San Simon Basin in southeastern Arizona from the Hohokam area to the west and the Mimbres area to the east. Hohokam and Mimbres vessels are present in proportions often equal to the local San Simon painted pottery. People living in the San Simon Basin had their own kind of pottery design layout, however, that was different from anywhere else in the southern Southwest.

Gilmore, Zach (Southern Illinois University)

[99] *Bone Processing and Subsistence Security at MD-1, a Toyah Horizon Campsite in South Texas*

Archaeologists often use the intensity of marginal food consumption to measure the relative level of subsistence security experienced by a site's past inhabitants. In this paper, analyses of large mammal skeletal remains from MD-1, a Toyah campsite in South Texas, are used to determine the extent to which Late Prehistoric hunter-gatherers in this region were exploiting marginal bone resources that are usually indicative of stressful conditions. This data is then compared with that from Mustang Branch, a Toyah site in Central Texas, in order to assess the relative level of subsistence stress experienced in each of the two regions.

Gilpin, Dennis (SWCA)

[196] *Historic Landscapes In The Animas-La Plata Project Area, Southwestern Colorado*

Between 1875 and 1975 Euroamericans created changing landscapes in Ridges Basin and Wildcat Canyon based on available natural resources, different modes of production, differential access to wealth, and social relations. Coal outcrops in Wildcat Canyon were exploited to produce an industrial landscape of the Porter Mine and the town of Porter, served by the Rio Grande Southern Railroad. Ridges Basin was homesteaded by some 20 farming and ranching families, who ultimately sold their holdings to two ranches. Archaeology, archival records, and interviews showed how competition to take advantage of the political economy of the region created stereotypical Western landscapes.

Gilpin, Dennis [196] see Knight, Terry

Gilstrap, Will [62] see Fraser-Shapiro, Ian

Ginn, Sarah (University of California, Santa Cruz)

[63] *Gender and Pottery Production in the California Missions: Pathway for Male Social Mobility or Maintenance of Indigenous Gender Ideology?*

Diverse indigenous peoples in the California Missions brought with them a ceramic technology and gender ideology about pottery production. I investigate how the reproduction of certain ceramic technological styles by mission Indians maintained or transformed such gender ideologies. If Mission pottery was made according to the technological style of California's indigenous female-gendered traditions, it is likely that women were making this pottery and maintaining this component of their gender ideology. If we see the Spanish, male-gendered ceramic production methods and vessel styles, it is likely that male neophytes were making pottery, and indigenous gender ideologies changed due to colonial forces.

Giovas, Christina M. [195] see LeFebvre, Michelle J.

Gitt, Donna [33] see Condon, Peter C.

Given, Olivia (University of Pennsylvania)

[94] *Using Technological Evidence to Evaluate Models of Cultural Change: A Case Study from NW Thailand*

Determining the source of ground adze technology may be important for understanding the rise of agricultural lifeways in Southeast Asia. Did adzes develop in situ from preceding flaked cobble technology? Or were they introduced by exogenous agricultural societies? Banyan Valley Cave can help test the competing autochthonous development vs. population

replacement models of culture change in this region because it has flaked cobble and ground adze technology, and its occupation spans the period when settled agriculture appeared in Thailand. This paper attempts to link the technological evidence from a debitage analysis of BVC flakes to these theories of culture change.

Glaab, Rigden

[150] *Experimentation with Silicified Siltstone Lithic Materials from Nine Mile Canyon, Utah*
Nine Mile Canyon, located in northeast central Utah, is a richly complex archaeological landscape abounding in Fremont culture. Little is understood, however, of the Archaic antecedents that walked this region and the differing methods by which they existed. The focus of this paper will be two fold: 1) to describe a unique tool form recently identified by the author; and, 2) to detail the results of replication experiments with silicified siltstone, the principal media from which these implements are made. This presentation will show how Archaic peoples of Nine Mile adapted to limited materials by creating resource specific tools.

Gladwell, Randi (Vanderbilt University)

[137] *Peaks and Valleys: Surveying the Machaca Range between Khonkho Wankane and Tiwanaku (Bolivia)*

Recent survey in the Machaca Range, positioned between the Southern Lake Titicaca Basin and the Desaguadero Drainage, is broadening our understanding of Pacajes/Pacajes-Inca Period high-altitude settlements. This paper presents results of survey work that has broadly focused on interregional pathways, settlement patterns, and resource locations. Drawing on modern Aymara practices of pastoralism, mobility, land-use, and political organization, this paper works toward understanding the significance of this upland range within the context of post-Tiwanaku collapse in which political, economic, and demographic shifts are proposed to reflect an increased focus on regions where pastoralism were most successful.

Glascock, Michael [160] see *Descantes, Christophe*; [194] see *Nichols, Deborah*; [211] see *Levine, Marc*; [61] see *Speakman, Robert J.*; [30] see *Reuther, Joshua D.*; [30] see *Ferguson, Jeffrey R.*; [30] see *Popelka-Filcoff, Rachel S.*; [61] see *Boulanger, Matthew T.*; [61] see *Cecil, Leslie G.*; [39] see *Taylor, Robert*

Glascock, Michael D. (University of Missouri-Columbia), Speakman, Robert J. (University of Missouri-Columbia), Weigand, Phil C. (Colegio de Michoacan), Ohnorsorgen, Michael A. (University of Missouri-St. Louis) and Garduno Ambriz, Mauricio (INAH-Nayarit)

[30] *A Comprehensive Database for Obsidian Sources in Western Mexico*

Like other regions of the world, the prehistoric peoples of Western Mexico showed a preference for obsidian to make their stone tools. Despite the large number of obsidian sources in the region, the quality of source material was variable and it appears that certain sources of obsidian were favored. The success of chemical analysis as a method for determining obsidian provenance is widely known. The main requirement is knowledge of the compositional profiles for sources. We describe our progress in developing a comprehensive database for obsidian sources in Western Mexico using both neutron activation analysis and X-ray fluorescence.

Glaude, Matt (Washington State University)

[38] *Waves in the Desert: Applying the Wave-of-Advance Model to the Spread of Agriculture in the American Southwest*

The origin of agriculture in the American Southwest has been a source of extensive debate, as competing theories of indigenous invention and demic diffusion are used to explain its initial appearance. For the European Neolithic, the existence of the latter has been supported by the application of the Wave-of-Advance model, which successfully predicts a constant radial spread of migrant farmers through time and space. With the use of GIS modeling, this paper discusses both the fit of this model to the Southwestern archaeological record, as well as its suitability for understanding the spread of agricultural economies in the New World.

Glenn Smith, David [157] see *Snow, Meradeth*

Glover, Jeffrey (Georgia State University), Stanton, Travis (Universidad de las Américas, Puebla) and Ardren, Traci (University of Miami)

[168] *The Long Road to the Classic: Assessing the Role of Preclassic Traditions in the Formation of Early Classic Yucatec Cultures*

In the northern Maya lowlands the transition from the Late Preclassic to the Early Classic is poorly understood. Despite the knowledge that ceramic traditions underwent drastic changes, the timing of these changes is difficult to place in absolute terms. Using data from excavations and regional settlement survey we discuss current knowledge of this important transition. We explore the possibility of how changes in settlement patterns, monumental architecture, and ceramics contribute to debates about concepts such as the Terminal Preclassic and Protoclassic, as well as what these changes mean in terms of the cultural transition to the Early Classic.

Glowacki, Donna (ASU/MVNP)

[181] *The Social Landscape of the 13th Century Depopulation of the Northern San Juan*

Analysis of regional settlement shows considerable emigration from the Northern San Juan by A.D. 1260. This timing precedes the severe drought and intense violence in the 1270s and 1280s, often cited to explain regional depopulation. Thus, the initial stages of large-scale emigration appear to have been prompted by a widespread disruption of intraregional social networks and ceremonialism. Unrest may have developed in response to an influx of western immigrants and to rapid changes in settlement organization and ritual practices that indicate a departure from long-standing traditions. The subsequent post-1270s drought and violence completed a process begun in the preceding decades.

Glowacki, Donna [91] see Diederichs, Shanna

Glowacki, Mary (Pre-Columbian Archaeological Research Group, Inc.)

[186] *The Early Lucre and Their Pottery*

Excavations at the site of Cotocotuyoc in the Huaro Valley of Cuzco record the cultural transition from Wari to Lucre society. One data set that supports this cultural shift is pottery. This paper summarizes the definitional characteristics of Lucre pottery as represented at Cotocotuyoc. Additionally, it discusses Lucre's Wari influence and touches on the late developments of this ceramic tradition.

Gnivecki, Perry (Miami University, Oxford and Hamilton)

[71] *Pixel Archaeology: Micromorphometric Analysis of Lucayan Shell Beads*

Recent new technologies of portable microscopes with digital imaging and measurement capabilities have enhanced our ability for in-the-field shell bead digital photography, measurement, and analysis. Such technology increases the accuracy of measurement for shell beads too small to measure with conventional digital calipers. When such technologies are linked to laptop computers with wireless internet connections, data can be sent to colleagues worldwide. This paper investigates the application of such technology to shell beads recovered from the North Storrs Lake Site, San Salvador, Bahamas.

Gobalet, Kenneth W. [195] see Braje, Todd J.

Goebel, Ted [199] see Wygal, Brian

Goetz, Martin (Geo-Marine, Inc.)

[169] *Utilizing the TRU Method on Fort Bliss Military Range*

Using a survey technique called the TRU (Transect Recording Unit) Method and GIS software, archaeologists at the Fort Bliss Military Range are creating spatial data that are opening up new methods of analysis and enabling previously unknown levels of data-sharing between independent contractors. The TRU Method essentially creates a raster database of survey areas. In the lab, cells can be queried and analyzed for purposes of predictive modeling, pattern recognition, and cultural/temporal affiliation. The cells as shape files become part of the deliverables to the client and become part of the larger spatial data for the entire of Fort Bliss.

Goff, Sheila (University of Colorado Museum)[192] *A New Look at Fremont Cordage from Mantle's Cave in Northwest Colorado*

The rich perishables assemblage from Mantle's Cave (5MF1) continues to inform us about the prehistoric people who used the cave. The site was originally determined to be Fremont and used between A.D. 400-800 for storage of food and utilitarian and non-utilitarian items, many of which were found in shallowly buried caches. Recent basketry reanalysis demonstrated Fremont variability and suggested Fremont/Ancstral Puebloan interaction. Now, reanalysis of the cordage suggests that more than one social group used the cave over a longer period of time than originally thought.

Gokee, Cameron (University of Michigan)[144] *Communicating Identity in the Senegambia*

The interplay among political communities and flexible conceptualizations of ethnicity are critically examined with 17th-20th century inter-village dynamics from the Saluum and Rip region of the Senegambia. When projected against a historical backdrop, archaeological evidence from this time and place, including ceramic variability and spatial dimensions of settlement and mobility, may help to outline methodological frameworks necessary to investigate the interpersonal negotiation and time-dependent constructions of ethnicity in the past. The pitfalls and potentials of transmission theories—as archaeological methods usually applied to ethnic “boundaries”—are evaluated against the fluid cultural landscape of the West African historical period.

Gokulraman, Savitha (Department of Anthropology, The Graduate Center, The City University of New York, NY.)[135] *The Megalithic Burials and Their Context in the Cultural Milieu of the Tamil Country - An Overview*

The earliest Megaliths were discovered in the Kerala coast in 1822, and the journey to understand them still continues in the Indian Sub continent. The Focus of the paper would be to understand - The significance of the monuments being strategically located along major River courses and along the Ancient Trade routes of the Tamil Country. An attempt is being made to distinguish different types of burials and their significance on the Cultural landscape of the Tamil country.

Golden, Charles (Brandeis University), Scherer, Andrew (Wagner College) and Munoz, Rene (University of Arizona)[189] *Politics, Boundaries, and Trade in the Classic Period Usumacinta River Basin*

Modeling of trade routes in the Classic period Maya Lowlands typically relies upon cost-benefit analyses that consider absolute distance to resources, topography, and the technology of transportation. Physical factors are critically important, but discussions of trade must also take into account the nature of political boundaries and frontiers between Maya polities, which must have drastically affected the flow of goods across the region. This paper discusses the development of borders, boundaries, and frontiers between the kingdoms of Yaxchilan and Piedras Negras and the consequences of these developments for trade along the Usumacinta River and through its surrounding valleys.

Goldsmith, A. Sean (Bison Historical Services Ltd.)[14] *Ballgames and Big Men: Revisiting the Greater Antillean Batey*

Ballgames developed widely throughout Mesoamerican and circum-Caribbean cultures from the second Millennium B.C. onward. While superficial similarities may mask significant variability in the nature of the game among disparate peoples, it appears likely that social and political undertones rendered the game more than a sporting event in most cases. Ethnohistorical accounts indicate that by the 15th Century AD, the Taino ballgame (batey) was strongly contextualized by displays of wealth, generosity, and rituals intended to focus attention on the central position of the Taino chief. In this way, the batey may implicate the development of social inequality in the Mesoamerican Early Formative.

Goldstein, Lynne (Michigan State University)[201] *Negotiating the Gateway: Working with Multiple Lines of Evidence to Determine Identity*

Using case studies, I examine what happens when archaeologists do and do not work with Native peoples in determining identity. In particular, I examine cases in which there is oral history and other evidence that has been ignored by archaeologists because they did not

know how to deal with it. The Native peoples subsequently use this evidence to question the archaeologists' conclusions, and the case becomes an interesting one of archaeology explaining why it is okay to ignore some information but not others. Using other case studies, I will try to outline approaches that avoid this problematic and unacceptable position.

Goldstein, Lynne [115] Discussant; [24] Discussant

Goldstein, Paul S. (UC San Diego)

[83] *Seated Flexed, East and West: To Die in Diaspora, Moquegua Tiwanaku, AD 600-1000*

The Tiwanaku colonization of Moquegua was characterized by large resident agro-pastoral populations whose domestic lifeways and mortuary practices all indicate enduring cultural and social ties to their homeland counterparts. Nonetheless, comparison of sites and individual cemeteries in the Moquegua Tiwanaku diaspora shows grouped variability within the greater provincial Tiwanaku mortuary tradition. Viewing mortuary practice in light of settlement and household data, I argue that the diversity of Moquegua Tiwanaku mortuary complexes represents distinctive sets of cultural practices and preferences that pertain to distinct cultural identities within the larger Tiwanaku diaspora.

Goldstein, Paul [83] see Baitzel, Sarah I.; [83] see Green, Ulrike M.; [83] see Carbajal S., Barbara

Golitko, Mark (University of Illinois at Chicago), Bosquet, Dominique (Institut Royal de Sciences Naturelles de Belgique), Jadin, Ivan (Institut Royal de Sciences Naturelles de Belgique) and Keeley, Lawrence (University of Illinois at Chicago)

[39] *Chemical Characterization of Belgian Early Neolithic (LBK) Ceramics by LA- ICP-MS*

A variety of modes of production and exchange of goods have been proposed as existing at villages of the early Neolithic Linearbandkeramik or LBK culture of Central and Western Europe. Chemical characterization of clay matrix and temper of ceramics produced at late period Belgian LBK villages using Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS) has allowed us to test models of production and social organization, in particular those proposed by Keeley and Cahen, while at the same time further demonstrating the utility of LA-ICP-MS as a means of chemically characterizing archaeological ceramics.

Gompers, Kathryn [126] see Lukowski, Susan

Gong, J.J.J. [174] see Blackwell, Bonnie A.B.

Goñi, Rafael (Instituto Nacional de Antropología y Pensamiento Latinoamericano - Argentina), Belardi, Juan Bautista (CONICET/UNPA) and Barrientos, Gustavo (CONICET/INAPL)

[100] *The Late Holocene Peopling of Southern Patagonia and its Relationships with Climatic and Environmental Changes*

Southern Patagonia east of the Andes is, mainly, a semidesertic environment with arid to semiarid climatic conditions which evolved during the Holocene, following a rather fluctuating path. The available archaeological evidence strongly supports the idea about a tight relationship between human peopling and climatic changes at the regional level. In this paper we focus on the last 2500 14C years BP, during which marked humidity decreasing events occurred, affecting important organizational properties of hunter-gatherer populations like mobility and demography. In particular, the probable effects of the Medieval Climatic Anomaly will be explored, a global phenomenon well documented in Patagonia.

Gonyea, Thomas (Kenyon College), Goodwin, Whitney (College of Wooster) and Hostenske, Mary

[147] *Living on the Edge: Residential Structures in and Around El Cafetal, El Paraíso Valley, Honduras*

Residents of El Cafetal constructed the center in the style employed by their non-Maya central Honduran neighbors, with the site plan, construction techniques, and organization of interior space resembling those of sites located in the Chamelecon drainage. Structures located in the site core and beyond follow these patterns, suggesting a strong tie to local traditions in the valley. This pattern contrasts strongly with El Paraíso, and even with remodeled structures that date to the end of occupation at El Cafetal. We examine the development of El Cafetal as an autochthonous center and interpret shifts in its layout over time.

Gonzalez, Ana Lucia [76] *see Gifford, Chad*

Gonzalez, Bobby (Caddo Nation Cultural Preservation Department)

[119] *Repatriation and Tribal Reburial Areas*

One of the primary contentions of Native American groups seeking the repatriation of cultural materials presently held in museum and university collections is that these objects are inalienable from their culture. This concept of collective ownership of material culture has important implications for the relationship between artifacts and group identity. This paper will discuss the importance of partnerships between tribal governments and the archaeological community and how in the case of Caddo repatriation research such partnerships work to strengthen any claims they might have to human remains, funerary objects, sacred objects, and items of cultural patrimony as defined by NAGPRA.

Gonzalez, Bobby [1] *see Pertulla, Timothy K.*

Gonzalez Cuesta, Antonio [13] *see Filsinger, Tomas*

Gonzalez Lauck, Rebecca (INAH)

[74] *The Olmec Green Stones at La Venta, Tabasco*

One of the outstanding features of the ancient Olmec city at La Venta, Tabasco, Mexico is the abundant use of green stones. I will outline the different kinds of stones employed in creating different artifacts ranging from exquisitely carved jewelry to monumental size stelae. Most of the green stone artifacts found thus far in this site were part of offerings in its ceremonial center, Complex A, though it was not exclusive to this architectural unit. However, its use in the first millennium before our era by the La Venta Olmec is quite unique in the ancient history of Middle America.

Gonzalez Pozo, Alberto (Universidad Autonoma Metropolitana - Xochimilco)

[206] *Identifying a Still Living Ancient Agricultural System: The "Chinampas" of Xochimilco*

The ancient agricultural system of "chinampas" still survives next to the Metropolitan Area of Mexico City, and was included in the World Cultural Heritage List since 1987 by UNESCO. The system as a whole has been studied by distinguished scholars, especially during the last century, but a systematic identification of each one of the chinampas and their present features was still missing. A research started in 2005 gives now a better understanding of the recent evolution of the chinampas, offers important information about the risks they now face, and suggests measures to improve their preservation.

Gonzalez-Morales, Manuel [134] *see Straus, Lawrence*

Good, Irene (Harvard University)

[109] *Sourcing Beauty: Exploring Inner Eurasia's High Altitude Frontier*

Jade (nephrite and jadeite) from Khotan and lapis lazuli (lazurite, sodalite) from Badakhshan and the Pamir are well-known examples of highly valued materials known and widely used in antiquity. What has not been fully addressed until now, however, is the social impact of their quarrying: what were the consequences of accessing remote source areas for these luxury substances? This paper focuses on various lines of evidence for early interaction in Inner Eurasia, often viewed as dyadic between farmland and steppe zone, and proposes that a third ecozone was a critical part of this interface: the alpine or high altitude frontier.

Goodfellow, Stephanie [202] *see Olsen, Karyn C.*

Goodman, Dean (Geophysical Archaeometry Laboratory), Hongo, Hiromichi (Saitobaru Archaeological Museum, Miyazaki Prefecture, Japan), Higashi, Noriaki (Saitobaru Archaeological Museum, Miyazaki Prefecture, Japan) and Nishimura, Yasushi (Nara National Cultural Properties Research Institute, Japan)

[208] *Rediscovery of Burial Moats Surrounding the Saitobaru Imperial Tombs Osaho and Mesaho from 3D Ground Penetrating Radar Surveys*

Osaho and Mesaho tombs were built in the Kofun Period (300-700 AD). Folklore suggests these mounds contain the graves of the parents of the first Japanese emperor. Although the origin of the entombed is not directly known, the mounds are very important and are designated as properties of the Imperial Family. The moats surrounding the mounds have

undergone alteration since they were built and their exact shapes are critical to understanding the possible relationship to other constructed mounds. Using specialized overlay analysis contained in GPR-SLICE Imaging Software and 3D GPR surveys, the ancient moat construction was re-discovered.

Goodman, Dean [31] *see Dalan, Rinita*

Goodman Elgar, Melissa (Washington State University)

[9] *Terraced Fields as Monumental Landscapes: Agriculture, Ritual and Rule under the Inca*
Historic texts and archaeological evidence indicate that agriculture enjoyed an elevated status under the Inca. Chroniclers report that during the Late Horizon, feasting and elite agrarian ceremonies were carried out in fields. The architecture of several Inca field systems is engineered far beyond the requirements for agriculture. Using this evidence, I suggest that certain Inca fields were used as "monumental landscapes" with roles in state religion and Inca land tenure claims. This view of terraced landscapes as key loci for socio-political negotiations enables a reassessment of fieldwork and interpretative strategies to assess the importance of agrarian landscapes in Andean prehistory.

Goodmaster, Christopher (Archeo-Imaging Lab, Center for Advanced Spatial Technologies, University of Arkansas)

[31] *Multi-Sensor Geophysical Data Fusion: A Case Study from the American Great Plains*
Recent developments in the quality of shallow subsurface geophysical sensors and survey methodologies have led to their increasing use in North American archaeology. Improved survey speed and a suite of available sensors, which allow for the recording of various parameters of the shallow subsurface, are making multi-sensor surveys more commonplace. While data from individual sensors are oftentimes quite informative, data from a suite of sensors provides additional insights. Combining these data through graphical and mathematical methods may further increase the utility of geophysical data in archaeological interpretations and site characterization, as in this case study from the American Great Plains.

Goodwin, Whitney [147] *see Gonyea, Thomas*

Goodyear, Albert (SC Institute of Archaeology), Miller, Shane (University of Tennessee) and Smallwood, Ashley (Texas A&M University)

[110] *Introducing Clovis at the Topper Site, 38AL23, Allendale County, South Carolina*
The Topper site (38AL23) in Allendale County, South Carolina, has been investigated for preClovis and Clovis every year since 1998. A significant Clovis occupation has been revealed ranging from a chert quarry in the Savannah River, the terrace- floodplain, and recently on the hillside. A quarry-habitation site, it is estimated to cover over 30,000 meters square. The assemblage contains typical Clovis point preforms, macro prismatic blades and bladelets, and variety of unifaces including denticulates. At 33 latitude, Topper is the southern most Clovis site excavated in the Southeast and geographically located on a major ecotone.

Goodyear, Albert C. [110] *see Miller, D. Shane*

Goralski, Craig (Pennsylvania State University)

[75] *An Examination of the Uapala Ceramic Sphere Using Chemical Compositional Methods*
This paper will present the results of an examination of the Uapala Ceramic Sphere, a region comprising nearly 20,000 sq km of Honduras and El Salvador. Sites within the sphere have been recognized as having similar ceramic types, most notably Usulután pottery, during the Late Formative to Early Classic transition. Samples of Usulután pottery and other types were subjected to neutron activation analysis in order to assess whether the similarities in ceramic assemblages reflect a single or multiple spheres of ceramic production and distribution. This paper will review these data and suggest what they mean behaviorally.

Gorden, Mary A. (Southern Sierra Archaeological Society), Christian, Duane (Bureau of Land Management) and Pollack, Linda (California Department of Forestry and Fire Protection)

[123] *Protecting and Preserving Our Past - SSAS in California: Volunteers Joining Forces with Government Agencies*

Concerned about the rapid rate of site destruction in California, members of the Southern

Sierra Archaeology Society (SSAS) entered into an MOU with the Bureau of Land Management, Bakersfield to start a volunteer stewardship/monitoring program on the Carrizo Plain, and later the Southern Kern River. SSAS extended its volunteerism to include site recording projects for the California Department of Forestry and Fire Protection, U.S. Forest Service and Sequoia Kings National Park. Cooperation takes time and effort, but it has benefited those government agencies, as well as the volunteers who make a positive impact protecting cultural resources.

Gordon, Adam [37] *see Faith, J. Tyler*

Gorenflo, Larry [194] *see Robertson, Ian*

Gosser, Dennis (Coastal Carolina Research, Inc.) and McCoy, Patrick (Pacific Consulting Services, Inc.)

[51] *The Alchemy of a Ritual Landscape: The Materiality and Meaning of Archaeological Sites in the Summit Region of Mauna Kea*

At 13,796 feet, the summit and upper slopes of Mauna Kea is an alpine desert punctuated by massive cinder cones, lava flows, glacial moraines, outwash deposits, and subtler, modern-day periglacial landforms. In the midst of this terrain are hundreds of stones erected by Hawaiians, sometimes singly or in pairs, but commonly in complex configurations of up to 25 stones or more. These sites, interpreted as shrines based on ethnographic and archaeological evidence, are the most common components of a ritual landscape that includes burials and other remains. This paper summarizes current research on this ritual landscape from a phenomenological perspective.

Gough, Stan [34] *see Galm, Jerry*

Gould, Dick (Brown University & Forensic Archaeology Recovery (FAR))

[102] *The Experience of Forensic Archaeology*

A rush of experiences over the last 5 years is prompting forensic archaeologists to redefine their goals and practices with incredible speed. These experiences challenge our most basic assumptions. They include the WTC (2001 and 2006), "The Station" Nightclub Fire (2003), and Katrina (2005), not mention activities surround the exhumation of mass graves in Iraq and other high-profile events. These experiences have led to a re-examination of forensic archaeology's priorities, especially regarding crime-solving vs. victim identification and family assistance.

Goycochea Díaz, Elena [19] *see Murphy, Melissa*

Graesch, Anthony (UCLA Department of Anthropology)

[146] *Household Economies in Transition: A Comparative Study*

The infusion of European goods into indigenous political economies in western North America prompted some profound changes in labor organization at the level of the household. In this paper I explore how standards of tool efficiency and the exchange value of indigenous crafts were affected by the circulation of particular European objects. I then examine these effects on household allocations of labor to the production of surplus food and goods that fueled extant political economies. Data from household-level archaeological investigations in Historic era sites in the upper Fraser Valley (southern British Columbia) and the northern Channel Islands (southern California) are highlighted.

Graesch, Anthony P. [112] *see Noah, Anna C.*

Graff, Sarah (University of Chicago)

[75] *Technology and Sociology of Ceramic Artifacts*

Different methods of paste preparation are modifications to the ceramic production process. Locations of ceramic production can be identified using chemical and mineralogical identifications but technological methods of paste preparation can only be measured by looking at the relationship between temper, pores and matrix. The method of paste preparation represents one part of the operational sequence used to produce the ceramic and can be compared to other parts such as form, decoration or finishing, and firing to arrive at the material style. This paper demonstrates the value of analyzing paste preparation technology for examining the sociology of ceramic artifacts.

Graham, Elizabeth (University College London (UCL)) [202] Discussant

Graham, Patrick and McGahee, Gaea (New Mexico State University)

[82] *Night and Day in the Dark: A Comparative Analysis of Collections from Feather Cave, Lincoln County, New Mexico*

In 1964, a group of cavers contacted Florence Hawley Ellis to report the discovery of artifacts in a newly discovered back room of Feather Cave, a Jornada Mogollon ceremonial site on the Rio Bonito. The collection from this site probably represents the only fully intact Southwestern ritual cave assemblage ever studied by archaeologists. The reappearance of unpublished excavation records from Paul Reiter's 1950 - 1952 field school in the main chamber of the cave provides a unique opportunity to study the spatial organization of Southwestern ritual cave activity, and suggests surprising differences in activity between the two areas of the cave.

Grant, William

[71] *Molding the Unfertile Refuge: A Semiotics of Landscape, Power, and Production at Polly Hill Plantation*

This paper will examine the transformation of the Polly Hill plantation from its development until post-emancipation occupation in order to understand three questions. One, how does the power structure of plantation politics become articulated on a landscape? Two, how are these 'white' articulations interpreted and reinvented by emancipated residents? And three, how does the history of plantation life and its structures effect later development? These questions will be examined through a new map of the site in relation to artifacts near each structure. Through this data, I will examine the transition between 1790 and 1850 on this San Salvador plantation.

Grave, Alfonso (INAH)

[70] *Investigaciones Arqueológicas en el Río Presidio*

En los últimos años, he tenido la oportunidad de realizar algunas investigaciones en la cuenca baja del río Presidio, posiblemente el Quezala de las fuentes documentales del siglo XVI. A través de cortos recorridos de superficie se han identificado alrededor de 20 asentamientos, los cuales van desde una hasta diez hectáreas de extensión. Tres de los sitios los hemos explorado mediante excavaciones. Estos trabajos nos han permitido establecer algunas propuestas acerca de la secuencia de ocupación tanto local como en la región sur de Sinaloa, así como en lo que respecta a la organización política regional.

Graves, Adam (University of Oklahoma)

[62] *LA-ICP/MS Research to Identify Bison Antiquus Movement and Human Hunting Strategies*

Recent studies conducted at California State University Long Beach indicates that trace element analysis of teeth by the LA-ICP/MS method is appropriate for examining animal movement. These studies also indicate that the dietary uptake of *Bison bison* and *Bison antiquus* is directly related to the elemental concentration of the associated bedrock geology. Because modern bison are restricted residential herds, the elements in modern bison teeth provide a map from which *Bison antiquus* herd movement may be reconstructed. This study reveals the dimension of hunting structure reflected in the use of migratory or resident bison herds to understand seasonal variability in human/bison interactions.

Graves, Michael [167] see Field, Julie; [167] see Stephen, Jesse

Gray, Jeff (Thunder Bay National Marine Sanctuary and Underwater Preserve) [118] Discussant

Gray, Nadine

[62] *Late Classic Ceramics and Political Economy at the Ancient Maya Centre of Minanha, Belize*

An analysis of Minanha pottery has revealed ceramic patterns that reflect how the polity operated and how the various social groups within the site interacted. This assemblage provides the means to discuss how the inhabitants of the polity produced, distributed and used

ceramics during the Late Classic Period (A.D. 600 – 900). Using a combination of type-variety and petrographic analysis, there is new evidence for local production and elite emulation of specific styles of vessels.

Grayson, Donald (University of Washington) [114] *Discussant*

Green, Debra (University of Illinois, Chicago) and Junker, Laura (University of Illinois, Chicago)

[106] *Modeling Past Landuse and Settlement Practices in the Prehispanic Philippines: New Perspectives Using Geoarchaeology and GIS*

Archaeological studies of settlement patterns of swidden farmers and interior hunter-gatherers in the prehispanic Philippines have tended to give primacy to political economic factors in shaping regional landscapes. However, this research has not considered the full range of dynamic processes associated with culturally mediated landuse practices and the potential impact of both social factors and an evolving floodplain on the distribution of archaeological sites. This paper presents preliminary geoarchaeological and GIS investigations in the Bais-Tanjay river valley in an effort to generate more comprehensive models of landuse and environmental change in settlement practices over the last 1000 years.

Green, Harold H. (Independent Scholar)

[143] *Implications of Solar Observations of the Eastern Horizon at Chocóla, Suchitepéquez, Guatemala*

Observations made from Mound 1 at the Preclassic site at Chocóla, Suchitepéquez, Guatemala of sunrises at the eastern horizon reveal a solar horizon calendar where zenith and nadir passage appear to be the key reference poles, and the vernal midpoints between zenith passage and equinox and between nadir passage and equinox appear to have been marked anciently by prominent peaks on the horizon. These observations may have important implications for the origin of the 260-day sacred count, the significance of the 360-day (tun) count, a new interpretation of later-constructed E-groups, and possibly the origins of Maya political organization.

Green, Roger C. [167] *see Jones, Terry L.*

Green, Ulrike M. (University of California San Diego; Department of Anthropology), Baitzel, Sarah I. (University of California San Diego; Department of Anthropology), Munoz R., Lizette (PUCP), Palacios F., Patricia (Museo Contisuyo) and Goldstein, Paul (University of California San Diego; Department of Anthropology)

[83] *Rock-Domed Tombs at Rio Muerto: An Omo Style Variant of Tiwanaku Mortuary Architecture in the Moquegua Valley, Peru*

This paper focuses on new evidence for a variant type of Tiwanaku mortuary architecture discovered at the M70B cemetery of the Rio Muerto site, Moquegua. Tombs excavated in 2006 included a previously unknown form of tomb construction consisting of a below-ground slab cist chamber with an above-ground stone superstructure built of domed or layered slabs. Following a description of the construction of such tombs, we address the temporal and social significance of this distinct Tiwanaku tomb type and its implications for the comparative study of provincial Tiwanaku burial practices.

Green, Ulrike M. [83] *see Carbajal S., Barbara*

Green, William (Logan Museum of Anthropology, Beloit College)

[10] *Late Prehistoric Archaeobotanical Variability in Western Iowa*

Archaeobotanists have analyzed plant remains from numerous Great Oasis, Mill Creek, Glenwood, and Oneota components dating to ca. A.D. 950-1650 in western Iowa. Beyond the common use of maize, components exhibit variability in the presence and abundance of "Eastern Agricultural Complex" seeds, common beans, and other plants. Exploratory data analysis examines this variability and seeks to identify temporal, spatial, and cultural patterns in plant use. Examining each dimension independently allows us to trace continuities and changes through time, within and between regions, and within and between cultural variants or phases. This analysis illustrates the value of a multidimensional paleoethnobotanical perspective.

Greene, Gregory (Cal Poly Pomona)

[125] *Grinding With A View: The Spatial Relationship of Grinding-Slicks and Ceremony in the Galisteo Basin*

Experimental archaeology and residue analysis techniques have long been utilized to reconstruct the formation and use of grinding-slicks at Ancestral Puebloan settlements. However, when considering non-portable groundstone, very little is known about the selection criteria, or why certain stones were chosen in favor of others. Aside from stone composition, slope and aspect may have played key roles in such decisions. This poster provides an in-depth GIS analysis of more than 500 groundstone facets surrounding the Burnt Corn Pueblo, relating groundstone position and orientation to ceremonial shrines, topographic features and the cardinal directions.

Greene, Gregory [125] see *Leckman, Phil*

Greene, Lance (University of North Carolina)

[148] *Negotiation in a Post-Removal Cherokee Household, 1838-1850*

This paper investigates a metis couple who actively resisted Cherokee Removal and who, after Removal, served as patrons to an illicit community of fullblood Cherokees in the mountains of North Carolina. A rich set of archaeological and archival data illustrates how this family negotiated the tenuous political terrain of the 1840s. Instead of becoming socially or economically marginalized, they maintained traditional Cherokee practices on a largely self-sufficient estate that mimicked local plantations. The family maintained a variety of relationships with the groups on their farm: patron-client, landlord-tenant, master-slave, thus creating a unique blend of traditional and westernized economic practices.

Greene, Michelle (Eastern New Mexico University)

[157] *Exploring the Patterns of Craniometric Trait Variation Between Small-House and Great-House Communities*

The Mine Canyon and Tommy Sites, dating from the Pueblo II to Pueblo III time periods, have been documented on the B-Square Ranch located near Farmington, New Mexico. Craniometric measurements have been recorded and analyzed from skeletal samples at these two ancient puebloan sites. Craniometric traits are indicative of genetic affinities within a population. Patterns of craniometric variation at the Mine Canyon and Tommy Sites are utilized to discern genetic relations, or affinities, with temporally similar small-house and great-house communities in the local area and across the Chaco region.

Greenspan, Aaron [169] see *Eren, Metin*

Greer, John (Greer Services, Casper, WY) and Greer, Mavis

[82] *Rock Art Associated with Ritual Cave Use in the Southwest and Northern Mexico*

Painted rock art is often associated with what is considered to be ritual cave use. Examples from selected sites in the American Southwest and northern Mexico show different approaches to such paintings, kinds of motifs, complexity, and placement within the cave. Some variation could be due to different site use, but some appears to be the result of regional differences in graphics styles and the approaches and reasons for painting.

Greer, John [154] see *Greer, Mavis*

Greer, Mavis (Greer Services, Casper, WY) and Greer, John (Greer Services, Casper, WY)

[154] *Lookout Cave, An Example of Ritual Cave Use in Montana*

Lookout Cave is high on the mountainside with a large open shelter-like entrance room and a smaller interior enclosed room. Pictographs cover the walls of both rooms, and both were filled with cultural deposits. Excavations in the 1960s revealed arrowpoints, arrow shafts (some with feathers attached), an incised reed flute, a decorated turtle shell, and a belemnite ornament, but no hearths or lithic manufacturing debris. Pictographs include a variety of human and animal forms, handprints, and abstract and geometric figures. The artifact assemblage and pictograph content support ritual use of the high cave rather than habitation.

Greer, Mavis [82] see *Greer, John*

Gregory, David [171] *see* Dobson, Steve; [38] *see* Nials, Fred

Grenda, Donn R. [146] *see* Douglass, John G.; [213] *see* Ciolek-Torrello, Richard

Greubel, Rand A. (Alpine Archaeology)

[203] *Social Organization at the Weimer Ranch Sites*

Recent analyses of materials excavated in the mid-1970s from several sites within the Weimer Ranch site complex in west-central Colorado have allowed a reexamination of social organization within a prehistoric farming community on the northern Anasazi periphery. Site structure, use of space, assemblage composition, and Puebloan analogues are used to construct a simple model of social interaction and integration at the sites. The model is discussed briefly in the context of contemporary developments in the Northern San Juan region and the San Rafael Fremont culture area.

Greubel, Rand A. [203] *see* Andrews, Bradford W.

Grice, Kliti [86] *see* Dodson, John

Griffis, Nick and Covey, Alan (Southern Methodist University)

[216] *Preceramic Occupation of the Xaquixaguana Plain (Cusco, Peru)*

Recent survey work to the northwest of Cusco identified 16 preceramic sites within a region of approximately 460 km². Initial descriptions of lithic artifacts from surface collections and the absence of subsequent ceramic period occupation in close proximity to the primary site cluster, permits the elaboration of regional perspectives on Archaic Period settlement in the Cusco region. This paper provides preliminary description of the regional settlement pattern, as well as results of general and intensive collection. This continuing research contributes to a growing understanding of the peopling of the central Andean highlands.

Griffith, Cameron (Indiana University)

[108] *Recent Advances in the Study of Ancient Maya Cave Use in the Macal Valley, Belize*

Over the past four decades, archaeological, ethnographic, and iconographic studies have provided evidence for the ancient use of caves in the Maya area. However, research focusing on the cave use in a regional context has been limited. Investigations by the WBRCP have enabled us to examine the differential use of particular spaces within individual cave sites and compare and contrast these sites within and outside the Macal Valley. This paper presents examples of how certain spaces were demarcated and used in the Macal Valley in an attempt to more comprehensively explore ancient Maya cave utilization on the regional level.

Griffitts, Janet (University of Arizona)

[129] *Metal Tools and Bone Working: Experimentation in Bone Tool Manufacture and Use on the Middle Missouri*

Post-contact technological change in the Americas is often described using simple models that assume swift replacement of older technologies. This study uses bone artifacts from Middle Missouri sites to examine technological choice in the eighteenth and nineteenth centuries. When metal tools were adopted on the Northern Plains, people experimented with the new technologies as they worked with bone, making tools using new methods, old tools in new forms, and new tools altogether. These observations provide insights to the lives of dynamic, active people working with stone, bone, and metal, examining their options, and experimenting with combining old and new technologies.

Grillo, Katherine (Washington University in St. Louis)

[58] *Complexity and Craft Production in Pastoralist Societies*

Although much anthropological research has been devoted to describing the ostensibly egalitarian nature of many pastoralist societies, little work has focused on ways in which we might begin to describe the relative "complexity" of pastoralist political, economic, and cultural organization as manifested in the archaeological record. This paper will explore this issue in reference to pottery production and use by mobile pastoralist groups. I argue that ethnoarchaeological data could help define: 1) factors limiting and/or encouraging craft production in smaller-scale pastoralist economies; and 2) roles that interactions with craft-producing hunter/gatherer groups have played in the historical development of pastoralist systems.

Griswold, William (Northeast Region Archeology Program - National Park Service)[171] *The Role of Geophysics in ASMIS Registration*

The Archeological Sites Management Information System (ASMIS) is a national database used to record sites on National Park Service properties. This database requires the collection of specific information about a site, often with little more than visual examination. Under certain conditions, geophysical investigations can be used to delineate site boundaries and assess the archeological integrity of sites far better than visual inspection. This process often provides more complete information about a site and promotes better care and stewardship of historical archeological sites. This paper presents several examples from the Northeast Region.

Grocke, Darren [62] *see Kingston, Andrew*

Grofe, Michael (U.C. Davis)[143] *Glyphs G and F: An Astronomical Interpretation of the Cycle of Nine*

The majority of the glyphs in the Supplementary Series record information concerning the movement of the moon, while glyphs G and F record a repeating cycle of nine days that has thus far not shown any discernable astronomical utility. Four of the nine forms of Glyph G contain numerical coefficients that suggest some form of counting. As the idealized starting and ending point of the cycle, glyph G9 appears to represent a solar eclipse. This paper proposes that Glyph G was used to predict both solar and lunar eclipses by tracking the position of the moon relative to the lunar nodes.

Gronenborn, Detlef (Roemisch-Germanisches Zentralmuseum)[197] *Trajectories to Complexity in Temperate Woodland Environments*

Temperate Europe and Eastern North America share similar woodland environments, and - with a certain temporal delay - analogous culture histories. Archaic to Mississippian and Mesolithic to Eneolithic trajectories are compared, differences and similarities discussed.

Grove, David (University of Florida)[194] *The Shifting Patterns of Interaction in Formative Period Morelos*

Throughout the Formative period the material culture of sites in Morelos seems closely related to that of the western Basin of Mexico. However, closer examination discloses significant periods of interactions with Puebla (east), Guerrero (south), and Michoacan (west), that change over time. Early Formative interactions are primarily with adjacent areas to the north and west, Middle Formative interaction with areas to the east and south, while the north and west interactions are again stressed in the Late Formative.

Grove, David (University of Florida) [206] *Discussant*

Grove, Matt (Royal Holloway, University of London)[56] *Lower Palaeolithic land use: a comprehensive method and results from Olduvai Gorge, Tanzania*

The paper reconstructs early hominin range area, population size, and land use based on spatial analyses of the archaeological sites of Olduvai Gorge. A variant of Ripley's K statistic, applied to digitised site maps, is used to estimate a total range area sufficient to encompass all localities. This area is multiplied by an allometric estimate of species-specific population density to produce a population size estimate and, finally, is converted to a probability density function to produce a comprehensive map of land use. The results are the most detailed reconstructions of Lower Palaeolithic land use yet produced.

Gruber, Thomas [163] *see Gilman, Patricia*

Gruhn, Ruth (University of Alberta) [184] *Discussant*

Guatelli-Steinberg, Debbie [100] *see Chambers, Erica*

Guderjan, Thomas[189] *Developing Models of Maya Trade*

Many archaeologists are still skeptical of the notion that Maya trade operated with a large-scale, institutionalized framework. However, the evidence does not support the idea of casual

interaction. Using data from Ambergris Caye on the north coast of Belize and Blue Creek at the headwaters of the Rio Hondo, it is argued that the institutional framework was strong and enduring, moving commodities as well as sumptuous goods among polities. What can be demonstrated and what can be extrapolated about ancient Maya trade are also summarized.
Guderjan, Thomas [202] *see Hanratty, C. Colleen*

Gudino, Alejandra [76] *see Lippi, Ronald*

Gunter, Stanley (Southern Methodist University)

[103] *The Monumental History of El Peru*

More than 40 carved monuments are known for the site of El Peru but until recently their eroded texts have been little known or studied. This paper will outline the monumental history of the site as revealed through hieroglyphic texts and excavations of the monuments themselves and their associated structures.

Guernsey, Julia (University of Texas at Austin), Reese-Taylor, Kathryn (University of Calgary) and Mathews, Peter (La Trobe University)

[16] *The Queens of Naachtun*

Why were queens so prominent in certain royal lineages, but not in others? Given the quantity of queens depicted on stelae and recorded in texts, it is no longer adequate to dismiss their presence as simply royal consorts or "place keepers" in dynastic successions. It is clear that royal women played politically significant and varied roles in some royal courts. Specifically, at Naachtun, royal women are portrayed on stelae in roles normally claimed by kings. This paper discusses the possible offices held by these women, their modes of representation, and their importance within the Late Classic social and political environment.

Guerrero, Emma (Univ. of Notre Dame), Kuijt, Ian (Univ. of Notre Dame), Molist, Miquel and Anfruns, Josep

[68] *Seated Memory: Social Reproduction, Identity and Residential Burials at Tell Halula, Syria*

The social reproduction of memory, ancestry and identity is often centred on the physical placement and social treatment of the dead in sedentary villages. In the context of the Neolithic village of Tell Halula people chose to bury their dead inside of residences.

Excavation of the MPPNB phase has uncovered 16 houses where 127 individuals were buried individually in a seated position. We explore the implications for this variable treatment of the dead, possible connections within the physical and symbolic organization of burial practices, and the formation of collective house memory.

Gullapalli, Praveena (University of Pennsylvania)

[135] *Iron Production at Early Historic Balathal, Rajasthan*

This paper presents the results of a study season investigating the iron production material from Balathal. The site has yielded extensive and intriguing evidence for iron production, including a series of potential furnaces. However the material has not yet been systematically investigated for its potential to illuminate the organization of iron production during the Early Historic period in northwestern India. The material is contextualized within regional survey data to highlight potential variation in production practices. Variation in organization is used to better understand the ways in which regional – and possibly imperial – power dynamics were made manifest.

Gumerman, George (SAR & SFI) and Lekson, Stephen

[116] *Linda Cordell's Excellent Southwestern Adventure*

Linda Cordell's career spans a period of remarkable growth in our knowledge of Southwestern archaeology. It's been a growth market: more archaeologists are spending more money to learn more new things about the Southwest. Southwestern archaeology is remarkably different today than it was when Cordell received her doctorate. More than anyone, Cordell has tried to capture and understand the explosive growth of new data and insights, most notably in the editions of her classic textbook. We review Linda's research and publications, her involvement in research consortia, her role in directing institutions and mentoring students, and her leadership in Southwestern archaeology.

Gunn, Christopher [55] *see Ringle, William; [78]* *see Smith, J Gregory*

Gunn, Joel (University of North Carolina at Greensboro)

[162] *The Contribution of Dr. William J. Folan to the Study of Climate and Culture Change in the Maya Lowlands*

Dr. Folan began climate change studies in 1980 while we shared an office at UT San Antonio. His first commentary on Maya Lowland climate and cultural change appeared almost immediately in *Current Anthropology*, soon followed by an important article in *Journal of Field Archaeology*. He has since provided a stable, ongoing venue in the state of Campeche with immense rewards in modeling ancient climates from modern weather processes, study of ethnohistorical nuances of human-climate interaction, and application of those models to the Pre-Columbian era. This accompanied a storm of activities that literally put Campeche on the archaeological and conservation maps.

Gusick, Amy (University of California, Santa Barbara) and Davis, Loren (Oregon State University)

[184] *Mal de Mer no Mas: Searching for Early Underwater Sites in the Sea of Cortez*

New World archaeological research of submerged late Pleistocene terrains and the early sites they may contain is largely limited to the subtropical waters of the American southeast and in protected areas of the British Columbian archipelago. Archaeological investigation in Baja California indicates the presence of early maritime peoples pursuing activities distal to their ancient shoreline. Because Mexico's Sea of Cortez offers advantageous environmental conditions for the preservation and study of early sites, the region offers advantages unparalleled elsewhere along the Pacific Coast. We propose to develop paleolandscape and archaeological site prediction models suited for a program of targeted underwater research.

Gust, John (UC-Riverside)

[104] *A Catchment Analysis of San Pedro Siris, Belize*

The San Pedro Maya moved south in 1857 into present-day Belize in response to tension resulting from the Caste War of the Yucatán Peninsula. Once in Belize they established the village San Pedro Siris. Contrary to the wishes of the British colonizers, the San Pedro Maya stayed relatively autonomous for much of the time they were settled in the area. This study investigated the catchment of the village. This was accomplished by first identifying and delimiting the area of impact and then estimating its capability to meet the needs of the village of San Pedro.

Gutierrez, Gerardo (CIESAS-MEXICO) and Pye, Mary E (NWAU-BYU)

[211] *Chronology for Eastern Guerrero: Preliminary Findings*

In 2004, the Project Arqueología y Etnohistoria en la Montaña de Guerrero undertook excavations at the sites of Contlalco and Cerro Quemado, both located in the Tlapa Valley of Eastern Guerrero. Artifacts recovered from this work have been the subject of analysis, including radiocarbon dating. Here, we present our preliminary findings on the chronology for the area. In addition to the known Postclassic presence in this region as described in the Azoyu codices, a significant Preclassic occupation has also been uncovered.

Gutierrez, Madeliz (UNAM)

[160] *El Modelo Analítico a la Luz de la Práctica Arqueológica Puertorriquena*

El ensayo aborda las nociones que los arqueólogos puertorriqueños manejan en la actualidad en torno a los conceptos del modelo analítico y como ello contrasta con las proposiciones del Dr. Irving Rouse.

Gutierrez, Maria (CONICET, Facultad de Ciencias Sociales (UNCPBA) Argentina)

[79] *A Bridge Over Troubled Waters. Is There Any Use in a North-South Archaeological Dialogue?*

Paleo-Indian concept is firmly established both as a synthetic and analytic units for explaining peopling of America. Although this concept was defined to understand North American early occupations, it is also used to approach South America peopling. This paper will discuss the utility of the paleoindian concept as analytical unit to characterize early occupations elsewhere. Several features are analyzed in sites of the Pampean region of Argentina: chronology, subsistence, lithic technology, and megafaunal extinction. Paleoindian term is not fully applicable for explaining the archaeological variability observed on the early evidence of human occupation in the Pampean region.

Guy Hays, Heidi (SWCA Environmental Consultants) and Baer, Sarah (SWCA Environmental Consultants)

[204] *Prehistoric Copycats: Rock Art Indicative of Localized Adaptation of the Tavaputs Plateau and Surrounding Region*

Rock art in the East Tavaputs Plateau and surrounding region may indicate a regional adaptation ranging from the Archaic through the Late Prehistoric periods. This localized adaptation is seen through superimposition/replication of rock art, continued stylistic characteristics, and modification of older rock art. The location and placement of rock art panels may indicate continuously utilized pathways allowing for generational movement through the region. Imitative rock art elements can provide archaeologists with vital information of the populations that utilized this region, the resources they exploited, their ideology, and, potentially, their adaptation to the dramatic local environment.

Guzzy, Gabriela [74] see Barba, Luis

Gyucha, Attila (Békés County Museum), Parkinson, William (Florida State University) and Yerkes, Richard (Ohio State University)

[21] *Neolithic and Copper Age Social Organization in the Körös River Valley*

This paper discusses changes in settlement organization that occurred on the Great Hungarian Plain during the transition from the Neolithic to the Copper Age, ca. 4,500 BC (cal). The paper explores variability in settlement variability at three scales: the macro-regional scale, the regional scale, and at the local scale. The paper synthesizes settlement data collected during systematic surface survey projects since the 1960s, and by the Körös Regional Archaeological Project's more recent investigations in the Körös River Valley.

Gyucha, Attila [21] see Yerkes, Richard

Haakanson, Sven

[119] *Alutiiq Masks in France: Alaska Native Heritage Revival through International Collaboration*

The Chateau Musée in Bolougne-sur-Mer, France holds the world's largest, most extensively documented collection of Alutiiq masks. Seventy nineteenth century carvings represent some of the last ceremonial artifacts produced in Alaska's Kodiak Archipelago, and they contain invaluable information on classical artistic techniques and spiritual belief. For the past five years, the Alutiiq Museum, an Alaska Native cultural center, has developed a partnership with the Chateau Musée to share this information. Collaboration and mutual respect have allowed the Alutiiq community to take a leadership role in studying the collection, and sharing its content both at home and abroad.

Haas, Jonathan (The Field Museum)

[69] *The Possible Role of Violence at the Beginnings of Andean Civilization*

In the 3rd millennium B.C., the Norte Chico region of Peru witnessed the emergence of complex society with monumental labor projects, centralized decision making, organized religion, and a social hierarchy. Within a core area of 3500 sq km among more than 30 large ceremonial/residential centers, there is no evidence of warfare or conflict. Outside this area of emergent development, however, there are signs of violence and conflict at a number of small maritime sites along the coast. This paper examines possible relationships between the violence at the small sites and the explosive cultural development in the Norte Chico.

Habicht-Mauche, Judith A. (University of California, Santa Cruz), Eckert, Suzanne L. (Texas A&M University) and Huntley, Deborah L. (Southwest Archaeological Consultants)

[131] *The Origin of Western Style Glaze Ware at Tijeras Pueblo: Implications for Migration and Community Formation*

The emergence of Tijeras Pueblo as a nucleated community around A.D.1300 was associated with the transition from black-on-white decorated ceramics to glaze wares. The earliest known examples of Rio Grande Glaze Ware come from this site, and many of these show strong ties to Western styles. We employ a combination of petrography and INAA to determine the origin of Western-style glaze ware from Tijeras, using local clays and known Zuni glazes for comparison. These data have implications for understanding patterns of migration and community formation during the PIV period in the Rio Grande.

Habicht-Mauche, Judith A. (University of California, Santa Cruz) [163] *Discussant*

Habu, Junko (University of California Berkeley)

[166] *Jomon Pottery Production, Circulation, and Hunter-Gatherer Residential Mobility*

The Jomon of Japan are known as a prehistoric hunter-gatherer culture characterized by an abundance of sophisticated pottery. Chemical analyses of potsherds and clay figurines excavated from Jomon sites can shed new light on the production and circulation of Jomon pottery. Using data from the Tohoku region, northern Japan, this paper attempts to determine whether pottery recovered from several Early and Middle Jomon sites were produced locally or were brought in from other areas. The results will be used to infer long-term changes in Jomon subsistence-settlement systems and social organization.

Habu, Junko [45] *see* Katayama, Mio

Haeusler, Werner [62] *see* Wagner, Ursel

Hageman, Jon (Northeastern Illinois University)

[11] *Where the Ancestors Live: Shrines and their Meaning among Rural Classic Maya*

Archaeologists agree that ancestors figured prominently in the lives of the Classic Maya (AD 600-900), but most data are from monumental site centers where lavish burials of royalty were interred in large pyramids. Much less is known of the meaning ancestors, buried in rural shrines, had for commoners. This paper explores the meaning of hinterland shrines and argues that, as the homes of ancestors, shrines were bound up with the creation and continued recreation of place, rights to resources, identity, and legitimation of inequality. Shrines embodied social memory and were permanent, conspicuous reminders of continuity with the past.

Hagopian, Janet (SWCA) and Allison, James (BYU)

[196] *Early Pueblo I Ceramic Variability and Cultural Diversity*

Early Pueblo I ceramics are predominately undecorated gray utility ware with much smaller amounts of painted white ware and red ware. Although many archaeologists have emphasized the lack of variability in Pueblo I ceramic assemblages, close examination of Animas-La Plata Project assemblages reveals significant variation in clays, temper materials, and vessel shape and size. At a larger scale, at least three distinct early Pueblo I ceramic traditions can be defined across the northern San Juan region. This paper examines ceramic variability among Animas-La Plata sites and relates it to cultural diversity within the project area and in the broader region.

Hailey, Tommy (Northwestern State University)

[84] *The View from Above: Aerial Photography as an Archaeological Research Tool for Site Discovery, Documentation, and Preservation*

Aerial photography is an invaluable, though frequently underutilized tool in archaeological research. This is unfortunate, since the aerial perspective offers archaeologists the opportunity to see aspects of the landscape that are impossible to view from the ground, providing the researcher with a means of discovering new sites and the ability to document and assess known sites relatively quickly and easily. In this paper, different approaches for acquiring aerial images are considered in terms of their relative strengths and weaknesses, including suitability for different applications and costs, with a range of examples provided from the United States and abroad.

Hains, Billie [32] *see* Jones, Teresa M.

Haley, Brian D. (SUNY Oneonta)

[201] *The Ethics of Not Questioning Indigeneity*

As North American archaeologists gravitate toward the collaborative mode of applied anthropology, they face new challenges. Professional authority is a key element of most collaborations, yet also can be why they fail. North American archaeologists are increasing their collaborations with indigenous groups, but encounter difficulty when their results conflict with the self-identity of their collaborators. My presentation will illustrate how many of these difficulties are inherent in the nature of identity generally, and are aggravated by the larger social contexts in which indigeneity itself has advantageous meaning.

Haley, Brian D. (SUNY Oneonta) [146] *Discussant*

Hall, Grant (Texas Tech University-Junction) [73] *Discussant*

Hall, John (Statistical Research Inc.), Wegener, Robert (Statistical Research Inc.) and Shackley, Steven (University of California at Berkeley)

[155] *Where's the Obsidian: A Non-Riverine Red Mountain Phase Settlement Situated near the Superior Obsidian Source*

As part of an Arizona Department of Transportation sponsored project, Statistical Research Inc., excavated a large, non-riverine Red Mountain phase (A.D. 1–400) settlement in Queen Valley, Arizona. Interestingly, no obsidian artifacts were recovered from this Red Mountain phase settlement, although the Superior obsidian source is located only 13 km to the east, and many nearby sites occupied between A.D. 700–ca. 1350 contain relatively large quantities of the material. In this paper we discuss regional trends in the aboriginal procurement and use of Superior Obsidian in south-central Arizona.

Hall, John [38] *see Wegener, Robert*

Hall, Scott [34] *see Johnson, William*

Hall, Simon L. [127] *see Rosenstein, Dana Drake*

Hall, Stephen A. (Red Rock Geological Enterprises)

[36] *Pre-Anasazi Cornfield at Chaco Canyon: Pollen Evidence from Fossil Woodrat Middens*
Zea-bearing organic detritus from two woodrat middens at the west end of Chaco Canyon is AMS-dated ca. 500 BC. The large numbers and concentration of Zea pollen indicate the presence of a cornfield on the canyon floor. The cornfield is likely buried by younger alluvium and not exposed in the modern arroyo bank. The Chaco Canyon case study is one of many examples of pre-2000 year old corn in the Southwest.

Halligan, Jessi (Texas A and M University)

[183] *Geomorphic Effects upon Prehistoric Archaeological Site Visibility and Location, Powder River Basin, Wyoming*

The Powder River Basin was extensively occupied throughout prehistory. In many places, the entire landscape surface has been extensively surveyed due to recent mineral development. This allows for regional comparisons of site types and locations, which are made for a portion of the Powder River Basin south of Gillette, Wyoming. These sites are mapped and compared to local geomorphology. Site density is very high in portions of the study area, while nearby areas that are similarly situated in terms of slope or water availability much lower densities. This is as much a factor of local geomorphological conditions as cultural choice.

Hally, David (University of Georgia)

[115] *Sex, Age, and Achieved Status: Factors in the Mortuary Treatment of Individuals in a Late Mississippian Community*

Mortuary analysis of a large burial sample from the early historic King site in northwestern Georgia has focused on deceased individuals' social statuses and social group affiliations. Several types of evidence used in this analysis—single-year age estimates, architectural context, historically relevant ethnographic analogies—and the assumption that most grave goods were used to mark important social statuses held by the deceased at the time of death have provided unusual insights into the social organization and belief systems of the King site community. These approaches are described, justified, and illustrated with results from the analysis.

Halperin, Christina T. [18] *see Faust, Katherine A.*

Hamann, Byron [46] *see Joyce, Arthur*

Hambrecht, George [195] *see Brewington, Seth D.*

Hamerow, Helena [39] *see Hull, Bradley*

Hamilakis, Yannis (University of Southampton, UK)[193] *The "Embedded Archaeologist": Archaeological Ethics, War and Neo-Colonisation*

This paper examines the involvement of archaeologists in the recent neo-colonial wars in the Middle East, and primary in the 2003, US-led invasion and colonisation of Iraq. It is argued that this event may have signaled the re-emergence of the phenomenon of the archaeologist who is "embedded" in military structures and war machines (well-known from the colonial wars in the previous centuries, and going at least as far back as the Napoleonic expeditions). It is argued that this involvement presents us with a huge ethical challenge that strikes at the core of what archaeology is and what it is for.

Hamilton, Fran (Northwest Archaeological Associates, Inc.) and Miss, Christian (Northwest Archaeological Associates, Inc.)[155] *Assessing the Relative Effectiveness of Local Historic Preservation Regulations*

Historic preservation regulations exist at all scales of government. Using examples from Washington State, we compare regulatory effects on several project types. Shoreline oriented protection efforts in western Washington, when implemented in connection with permitting, seems particularly effective. Local permitting and regulatory efforts can have significant impacts in protecting and preserving cultural resources.

Hamilton, Nathan (University of Southern Maine) and Pollock, Stephen (University of Southern Maine)[160] *Geoarchaeology of Precolumbian Ceramics from Haiti*

Geoarchaeological investigations including detailed petrographic and x-ray diffraction analysis examine select ceramic vessels from excavated contexts in Haiti. Utilizing museum collections from previous excavations the study attempts to examine ceramic production over time and in diverse geological settings. A focus on diagnostic decorative and stylistic attributes of vessels will include stratified and single component sites. Petrographic thin section analysis and powder x-ray diffraction examined vessel composition and potentials for geological sourcing of vessel paste and temper. The analysis will examine regional ceramic paste and temper source variability as related to local geology and examine intra site patterns in Haiti.

Hammerstedt, Scott (University of Tennessee)[129] *Experimental Reconstruction of a Mississippian Palisade*

Studies of Mississippian social organization often focus on the labor required to construct earthen platform mounds. Comparably little attention is paid to the effort necessary to build palisades. As a step towards a better understanding of the role of these fortifications, a small section of a palisade was constructed using a groundstone axe, a Mill Creek chert hoe, and deer scapulae. Observations on the relative effectiveness of these tools and the construction techniques used are provided. Labor estimates from previous studies are compared to ethnographic information and revised in light of this experiment.

Hammerstedt, Scott [215] see Burgett, Jessica**Hammond, Gail [167] see Stockdale, Neil****Hammond, Norman (Boston University) [35] Discussant; [67] Discussant****Hammons, Catherine (University of Memphis)**[5] *A Stylistic Analysis of the Hunchback Effigy in the Central Mississippi Valley*

In this presentation, I will present on the hunchback effigies that appeared in Central Mississippi Valley during the Middle Mississippian period. In my research, I utilized several different methods to understand the vessels. The poster will display the results of the structural analysis on the figures, the statistical analysis on the different attributes of the vessels, and the map that was produced through GIS to examine the spatial dimensions. These results, along with an ethnographic comparison, helped in classifying and understanding the hunchback effigy of this region.

Hancock, John E [13] see Bartley, Elizabeth. A

Hanes, Phil (SWCA Environmental Consultants Inc.) and Saar, Erin (SWCA Environmental Consultants Inc.)

[5] *Digital Mapping as Means to Connect Architectural Design with Creation Stories at San Lazaro*

Digital mapping can add valuable information to the interpretation of a site. For example, digital mapping has revealed that the San Lazaro Pueblo in the Galisteo Basin of New Mexico was not built according to the creation story as told by the Tewa of the San Juan Basin. However, a neighboring protohistoric pueblo was built abiding the construction layout provided in the creation story. These results indicate that perhaps the San Lazaro Pueblo was built before the origin of the creation story. Digital mapping provided information about architectural construction methods; radiocarbon data confirmed these hypotheses.

Hanes, Phil [5] see Saar, Erin

Hanks, Bryan (University of Pittsburgh)

[45] *Fractured Realities: Zooarchaeological Limitations in Modeling Prehistoric Mobile Pastoralism*

This paper will address problems of contemporary field methodology and theoretical modeling connected with archaeological reconstructions of prehistoric mobile pastoralist economies. The discussion will draw on data from several field seasons in Western Siberia in addition to ethnographic information to illustrate problems of herd reconstruction, site use and abandonment, seasonality, and community scale estimations. While the focus of the paper will be based on sites dating from the 5th – 3rd centuries BC and the Early Iron Age, the conceptual issues addressed will be applicable to broader comparative studies on prehistoric mobile pastoralism.

Hannon, Brian (Los Alamos National Laboratory)

[105] *Two Late Nineteenth-/Early Twentieth-Century Apache Camp Sites, Los Alamos, New Mexico*

As part of the Land Conveyance and Transfer Project two late nineteenth-/early twentieth-century tipi ring/wickiup sites were excavated (LA85864 and LA85869). Historic records and archeological data indicate that these sites are probably associated with the Jicarilla Apache. The results of the excavations are presented in the context of Jicarilla history and in comparison to similar sites in Northern New Mexico.

Hanratty, C. Colleen (Southern Methodist University) and Guderjan, Thomas (Maya Research Program)

[202] *Factors of Stress and Processes Leading to the End of the Classic Period at Blue Creek*
Fifteen years of investigations at the Maya site of Blue Creek in Northwestern Belize offer special opportunities for the investigation of the processes leading to the end of the Classic Maya period. In this paper, we discuss the stressful dynamics of Late Classic period, including rapidly increasing population, declining soil quality, and expansion of agricultural systems to their maximum. We then discuss the specific responses that are documented for the Terminal Classic period at Blue Creek and how the remnant populations of the Early Postclassic made use of the Classic period agricultural infrastructure.

Hansen, Eric (UCLA Cotsen Institute of Archaeology)

[67] *Cultural and Conservation Implications of Technology Used in the Production of Ancient Maya Stucco Facades at Nakbe, Guatemala*

The general technology likely used by the ancient Maya to produce mortars, plasters and stuccos can be suggested from available archaeological evidence, laboratory analysis of ancient materials, replication of technology experiments, and ethnoarchaeology. The variety of technological styles used in the production of stucco architectural sculpture at Nakbe during the Middle and Late Preclassic periods provide data relevant to interpretations of socio-political development of the Maya in the El Mirador Basin. In addition, the identification of technological styles is crucial for effective conservation strategies of the masks and facades.

Hansen, Richard D. (Idaho State University / FARES Foundation) [162] *Discussant*

Hansen, Richard D. (Idaho State University / FARES Foundation) and Suyuc, Edgar (FARES Foundation / Mirador Basin Project)

[35] *Early Maya Polity Formation, Enviro-Cultural Dynamics, and Demographic Demise: Multi-Disciplinary Investigations in the Mirador Basin, Guatemala*

Scientific investigations in the Mirador Basin of northern Guatemala have generated new perspectives on the rise, processual dynamics, and demographic reductions of early complex societies in the northern Peten of Guatemala. A compendium of the various multi-disciplinary studies presents a range of environmental and societal factors that contributed to the precocious cultural florescence, continuity, and ultimate demographic reductions that occurred in the Mirador Basin. The resultant data demonstrate the intertwined roles of environmental response, societal interactions, and cultural behaviors in crafting explanatory models for incipient complex societies in the Maya Preclassic and Classic periods

Hansen, Richard D. [35] see *Elkins, Zachary*; [35] see *Morales-Aguilar, Carlos*; [35] see *Balcarcel, Beatriz*; [35] see *Castañeda, Cesar*; [35] see *Lopez, Francisco*; [35] see *Bishop, Ronald L.*

Hansen-Speer, Karla (Indiana State University) and Stafford, Russell (Indiana State University)

[64] *Paleoethnobotanical Analysis of the Bluegrass Site, Indiana*

The Bluegrass site is a late Middle Archaic base camp in the interior uplands of southern Indiana. Previous faunal analysis by Stafford et al. (2000) revealed an abundance of small mammal and reptile bones, in contrast to the profusion of aquatic resources at equivalent sites, leading researchers to suggest that a change in forest composition was influential in the shift to a logistic collector strategy. In the current analysis, the paleoethnobotanical samples were dominated by thick hickory, with only a smattering of other nuts and seeds. The preponderance of hickory is consistent with middle Holocene trends at other Midwestern sites.

Hantman, Jeffrey (University of Virginia)

[112] *Historical Contingencies and Hybrid Identities in the Chesapeake: A Long-Term Perspective on Jamestown, A.D. 1400-1700*

This year, 2007, marks the 400th anniversary of the establishment of the Jamestown colony, the first permanent English settlement in North America. An ongoing national commemoration has helped to expand our collective understanding of that event beyond the immediate theater and year in which it took place. In this paper I will consider the importance of long-term indigenous political relationships in the larger Chesapeake world for understanding this colonial event as well as the varied and diverse influences which Indians and English had on each other. Evidence for continuity and change before and after 1607 will also be stressed.

Hard, Robert [124] see *Freeman, Jacob*; [38] see *MacWilliams, Arthur*

Hard, Robert J. (University of Texas, San Antonio)

[1] *Why is Texas Archaeology Interesting?*

Extremely high hunter-gatherer population densities were present on parts of the Texas Coastal Plain at contact. Yet farming did not develop until the arrival of the Spanish. Binford's "Frames of Reference" ecological models may provide a useful approach to understand the persistence of hunting and gathering and the high population densities and to place these adaptations within broader contexts.

Harding, Anthony (University of Exeter)

[53] *What would a Bronze Age World System Really Look Like?*

Andrew Sherratt wrote several times about World Systems, with specific reference to the European Bronze Age. These papers were full of insights and a great improvement on earlier attempts to cover the same ground. There remain, however, doubts about how such "systems" might have operated, indeed whether they could have existed at all in the form proposed. Recent discoveries have shed new light on how interactions occurred in Bronze Age Europe. This paper will review recent work and suggest how Andrew's work on the topic can be taken forward.

Hardy, Jessica [202] see *Wrobel, Gabriel*

Hardy, Meredith D. (National Park Service)

[160] *The Vescelius Collection, St. Croix Archeological Survey: A Re-Evaluation of the Usefulness of Old Collections*

In 1951, a joint archeological survey was conducted on St. Croix, U.S. Virgin Islands, by Yale University and the St. Croix Museum Commission. Thirty-five archeological sites were selected for further evaluation, and twelve of these were subjected to controlled excavations. The artifacts that were recovered were used to refine the island's prehistoric chronology. Following the survey, many of these archaeological sites were destroyed. In these cases, the Vescelius Collection serves as the only archaeological record. This paper illustrates how careful reevaluation and examination of old collections can provide new data and insights on now destroyed cultural resources.

Hargrave, Michael (ERDC CERL)

[215] *Optimizing the Benefits of Geophysical Surveys at Complex Sites*

Some questions about the nature and development of relatively complex societies in North America can best be addressed by investigations of the largest, most complex sites. WPA and CRM projects provided opportunities for large-scale excavations at some such sites, but future research will increasingly be restricted to small-scale hand excavations. Geophysical techniques can provide valuable information about the internal organization of large settlements. Optimizing the information return from geophysical survey will require the recognition of its biases and limitations, and its thorough integration into research design and excavation strategy.

Hargrave, Michael [31] *see* Clay, Berle; [31] *see* Ernenwein, Eileen

Harmon, Frank [128] *see* Benson, Buck

Harmon, James (National Park Service), Leone, Mark (University of Maryland) and Prince, Steve (University of Maryland)

[171] *LiDAR for Archaeological Landscape Analysis: A Case Study of Two 18th Century Chesapeake Plantation Sites*

Archaeologists concerned with the analysis of historical landscapes have long grappled with problems of scale. This paper presents an approach to this issue that utilizes LiDAR data and allied GIS techniques in an examination of two 18th century Chesapeake plantations. Images and topographic maps derived from the LiDAR data allow the archaeologist to examine the nature of the built landscape, and also may reveal surface indications of archaeological deposits unnoticed when using more conventional discovery techniques. LiDAR data and derived imagery need to be integrated with existing forms of archaeological data for their full potential to be realized.

Harmon, Marcel J. [32] *see* VanPool, Christine S.

Harms, Haley (Mesa Verde National Park)

[91] *Independent Neighborhoods and Their Roles in Larger Communities*

Although the eight sites presented are not named and do not reside in a named canyon of Mesa Verde National Park, their geographic separation provides a unique opportunity for research. These sites are not only part of a larger community, which may included Balcony House and Hemenway House, but are also part of a smaller neighborhood. When all their attributes are taken into account they display a communal independence and self reliant nature. The sites all have features that contribute to the neighborhood, but if any site is taken out an aspect of function for the neighborhood is lost.

Harper, Veronica (California State University Long Beach), Neff, Hector (California State University Long Beach) and Lipo, Carl (California State University Long Beach)

[92] *Basalt Artifact Sourcing on Easter Island*

Much of the material culture of Rapa Nui (Easter Island) is composed of basalt. Basalt artifacts include adzes, hand axes, bifaces, fishhooks, and large architectural blocks. Sources of basalt are found throughout Rapa Nui. Using laser-ablation time-of-flight ICP-MS it is possible to characterize the composition of basalt flows as well as individual artifacts. By studying this geologic data, basalt artifact sources are determined which provide information about resource acquisition across the landscape of Easter Island.

Harris, Susan [94] *see Fisher, Lynn*

Harrison, Ramona [195] *see Brewington, Seth D.*

Harrison-Buck, Eleanor (Boston University) and McAnany, Patricia (Boston University)
[188] *Re-Thinking Chichén Itzá's Regional Expansion: An Eastern Caribbean Network in the 8th and 9th Centuries AD*

Despite chronological revisions, most scholars insist regional expansion of Chichen Itza occurred after AD 900, once power had supposedly been consolidated. Distributional patterns of Yucatec-style architecture, found as far south as the Sibun Valley (Belize), suggest Chichen's "eastern Caribbean network" was established by AD 750. Excavations presented offer evidence that support this early date. Abandoned by AD 900, Chichen's withdrawal from this area suggests a shift in economic and political organization, with northern expansion occurring elsewhere in the tenth and eleventh centuries. This study highlights problems inherent in a linear, evolutionary approach to the development of complex societies in archaeology.

Harrower, Michael (University of Toronto)

[101] *Environmental or Social Factors: What Was Most Important to the Origins of Irrigation Agriculture in Southwest Arabia (Yemen)?*

The importance of environmental versus social factors in shaping human choices at the cusp of agriculture is a long-standing center-point of controversy. In arid Southwest Arabia one might expect that environmental conditions (particularly water availability) played a crucial role in shaping ancient agriculture, but as a process that transforms modes and relations of production early farming was also subject to social contingencies. This paper outlines results of archaeological survey, geomatics, and ethnoarchaeological investigations that explore the origins of agriculture in Southwest Arabia and evaluate the relative importance of hydrology, socio-logistics, territory, and ideology in shaping the lives of early farmers.

Harry, Karen (University of Nevada Las Vegas) and Frink, Lisa (University of Nevada Las Vegas)

[166] *The Alaskan Cooking Pot: Why was It Adopted?*

The adoption of ceramic cooking pots is typically associated with the processing of starchy seeds and with (at least seasonally) warm and dry climates. Neither of these conditions, however, characterized aboriginal western Alaska. There, such pots were produced and used despite an absence of starchy seeds, and despite the difficulties of making pots in cold and humid weather. This paper explores the factors that encouraged pottery use in this region, and concludes that the answer lies not in dietary food processing requirements, but in the problems posed by other cooking methods given the social and environmental contexts of food production.

Harry, Karen [72] *see Haynes, Gregory*

Hart, Dave [122] *see Kober, Brent*

Hart, David (Northland Research, Inc.) and Kober, Brent

[122] *GIS Based Overview of MCAGCC Cultural Resources*

Northland Research, Inc. has worked closely with the Natural Resources and Environmental Affairs (NREA) office and the Army Corp of Engineers over the last seven years to inventory cultural resources of the Marine Corps Air Ground Combat Center (MCAGCC), Twentynine Palms, California. GIS is an essential tool in the analysis, evaluation, and management of cultural resources in large, spatially bounded areas. This poster uses the GIS database to provide an interactive overview of cultural resources in their respective geographic, topographic, and geologic settings.

Hart, Siobhan (University of Massachusetts Amherst)

[142] *Challenging Historical Erasures through Community-Based Archaeology in Deerfield, Massachusetts*

Community-based approaches to archaeology can be powerful tools for confronting dominant

histories. These approaches also present unique challenges in cases where there are multiple stakeholders with interests in archaeological projects, including descendant communities, landowners, and local residents. In this paper, I explore the complexities of working with diverse stakeholders in order to confront historical erasures of Native peoples in the New England interior through a case-study involving archaeology at a seventeenth century Native American site in Deerfield, Massachusetts. I advocate for an approach that develops a "community of stakeholders" to plan for the preservation and stewardship of the site.

Hartman, Gideon (Harvard University)

[217] *Do Increased $\Delta^{13}C$ Values Measured in Herbivorous Animals Primarily Indicate the Dietary Signal of C4 Plants?*

Carbon isotope analysis of herbivorous animals and humans is commonly used to evaluate the relative contribution of C4 versus C3 plants to their diet. It is often assumed that an increase in the $\delta^{13}C$ values of herbivorous animals is caused by an increase in the proportion of C4 plants in their diet. Alternatively, it has been hypothesized that water stress in C3 plants may increase $\delta^{13}C$ values in the animals that consume them. This study tests the alternative hypothesis by measuring the $\delta^{13}C$ values of plants and goats along precipitation gradients in the southern Levant.

Hartman, Lynn [33] *see Horton, Kristina*

Hassan, Fekri (University College London)

[52] *Water Management in Egyptian Civilization*

There is no centralized management of Nile floods during the early stages of Egyptian civilization from 3200 to 2200 BC. By 2185 BC, drastic reduction in Nile floods led to the collapse of centralized government and period of anarchy that lasted for almost two centuries. Rulers of the Middle Kingdom who re-unified the country and re-established centralized government initiated a national water project in the Faiyum which included the construction of a dam. The dam was destroyed later as a result of catastrophically high floods and no significant water works were undertaken until the Ptolemaic period.

Hastorf, Christine A. (University of California-Berkeley)

[10] *Where Concepts and Methods Meet: The Hard Work of the Analyst*

I hope to discuss how powerful the PEB hard won information is when we link our questions about the past with our data. Breakthroughs have been with coprolites for examples, to see annual seasonal cycles and meals, opening up food archaeology, or by contextualizing botanical data with other material, the PEB data tell us more, or pushing phytolith analysis has helped starch analysis. By tacking back and forth we can continue to push the boundaries of both our disciplines as well as archaeological understanding. I will use specific examples with this (brief!) discussion.

Hastorf, Christine A. (University of California-Berkeley) [130] *Discussant*

Hatchett, Jennifer [129] *see Kimbell, Bennett*

Hatfield, Virginia

[94] *A Simple Application of Evolutionary Archaeology: Identifying Historical Continuity Based on Flakes, Blades, Microblades, and Bifaces in the Aleutians*

The relationship of the prehistoric occupants of the Aleutian Islands has been a matter of research and speculation for centuries. However, very few researchers have actually compared site assemblages along the chain. Since these islands span 1000 miles, their relationship is far from obvious. I compared chipped stone debris and tools from eastern, central, and western Aleutian sites dating between 3000 and 9000 calendar years ago to determine if they represent related or different populations. This comparison illustrates comparable technologies, based on the presence of macroblade, microblade, and bifacial technology across the Aleutian archipelago, and thus demonstrates historical continuity.

Hattori, Eugene (Nevada State Museum) and Fowler, Catherine (University of Nevada, Reno)

[192] *Defining Boundaries in the Prehistoric Western Great Basin*

North America's Western Great Basin has one of the longest records of New World fiber artifacts beginning over 10,000 B.P. This is a good area to test hypotheses on the contribution

of textiles to the definition of prehistoric cultures and lifeways. The textile sequence includes early plainweave and plain twined mats and bags, Catlow Twine, coiled trays and feather decorated hats, Lovelock Wickerware, and ethnographic diagonal twining. Distributional patterns in space and time reveal external and internal relationships. These distributions are compared to some from other artifact types to suggest yet broader movements of early populations in the region.

Hawkins, Ben

[47] *Internal Organization of a Late Prehistoric Base Camp: Site MD-1, Lower Nueces River Valley, South Texas*

Excavations in the Lower Nueces River Valley over the past four years have been focused at a Late Prehistoric (AD 1000-1750) base camp, Site MD-1, located along the margins of the Nueces River. This paper describes the overall site design and discusses the most recent testing program designed to compare the habitation localities within the site. The author discusses the testing results and offers conclusions about habitation diversity within the settlement along with possible site formation scenarios. Final comments will focus on recommendations for future testing at these site midden areas in order to enhance understanding of residential patterns.

Haws, Jonathan (University of Louisville), Funk, Caroline (Stockton College), Bicho, Nuno (Universidade do Algarve), Benedetti, Michael (UNC- Wilmington) and Daniels, Michael (University of Wyoming)

[95] *The Neandertal Seascape of West-Central Portugal*

In 2005, we began a systematic survey to investigate Paleolithic coastal settlement patterns. The project is designed to answer two main questions: 1) what is the antiquity of coastal resource use in Portugal?, and 2) did people intensively occupy the coast to exploit a rich marine ecotone created by pulses of coastal upwelling during cold periods of the Late Pleistocene? To date, we have identified over 60 sites located in Pleistocene dunes, on raised beaches and in caves/rockshelters. These sites confirm the human presence since at least OIS 3. Here we present detailed analysis of a Late Middle Paleolithic site, Mira Nascente.

Hayashi, Kazuhiro (Graduate School of Humanities and Sociology, The University of Tokyo)

[209] *Tool Manufacturing and the Use of Lithic Raw Materials in the Late Upper Paleolithic of Southern Kyushu*

The late Upper Paleolithic assemblages in the Kyushu region of southwestern Japan are characterized by very rich and highly variable stone tool classes. This paper is an overview of a current study of the late Upper Paleolithic assemblages in southern Kyushu. It focuses on the analysis of stone tool manufacturing, the reduction sequences of utilized raw materials, and the changes made in raw material selections. In conclusion, this study will suggest a change in mobility patterns of Southern Kyushu as a response to increasing resource procurement on a regional scale.

Hayashida, Frances (University of Missouri)

[145] *The Political Ecology of Water on the North Coast of Peru*

Political ecology examines the links between culture, relations of power, and the environment at varying scales, from local to global. Archaeology provides a long-term perspective on these dynamics that complements historical and ethnographic accounts. An example is drawn from fieldwork on the Pampa de Chaparrí on the desert north coast of Peru. Here, stable, long-term local management of extensive prehispanic canal systems was replaced by more centralized decision making following the Chimú, Inka, and Spanish conquests, resulting in dramatic changes in the everyday lives of local inhabitants.

Hayes, Sue Eileen (Sonoma State University)

[15] *Reconstructing the Agricultural Past on the South Coast of Peru*

Can agricultural practices be inferred for ancient populations when land modification for current agriculture has obliterated the evidence for prior land use? Analysis of soil productivity and irrigation potential is utilized to reconstruct agricultural productivity and estimated sustainable population for three Inka period sites in southern coastal Peru.

Hayeur Smith, Michele (Carleton University)

[142] *Iouskeha's Legacy and the Warrior's Skin: Chevrons, Zigzags and Arrow Tattoos in 17th Century Iroquoia*

Tattoos were commonplace in 17th century Iroquoia. Certain motifs stand out in historic representations and archaeological material: chevrons, zigzags and arrows. This paper will address these motifs that appear to have been reserved for warriors and Sachems and may have had ramifications extending across many social institutions such as religion and spirituality, social status, rank, and gender. These designs and their associated clusters of meanings may have represented connections and allegiances warriors and men had with the sun deity and war god, Iouskeha with additional links to agriculture, crops, prisoners, as well as human and arrow sacrifice.

Haymans, Dylan [50] see OBoyle, Robert

Haynes, Gary [34] see Krasinski, Kathryn

Haynes, Gregory (UNLV), Espinda, Leilani (UNLV) and Harry, Karen (UNLV)

[72] *Current Research at the Edge of the Anasazi World: The Lost City Complex of Southeastern Nevada*

The Lost City refers to a group of Virgin Anasazi sites located in southeastern Nevada. With the current recession of Lake Mead, Puebloan sites once isolated by the lake are now accessible. The University of Nevada Las Vegas, in partnership with the National Park Service, is conducting new investigations along the former shoreline. An Archival component includes an interpretive summary of past research and a concordance for artifact collections obtained before Lake Mead. The field component includes survey around the receded shoreline, coupled with excavations that focus on extramural locations. The results of these two interrelated investigations will be presented.

Hays-Gilpin, Kelley (Northern Arizona University)

[131] *In Awat'ovi's Shadow: Kawayka'a in the history of Southwestern Archaeology*

The ancestral Hopi village of Awat'ovi, with its Spanish mission, kiva murals, and Harvard Peabody expedition, figures prominently in the history of Southwestern archaeology. Its shorter-lived and lesser-known sister community, Kawayka'a, has also inspired significant research, including the 1901 discovery of a Pueblo IV period kiva mural by Walter Hough and subsequent mural studies by Watson Smith. Earl Morris's 1928 at Kawayka'a excavations resulted in a collection of 13th - 15th century ceramics curated at the University of Colorado Museum. This collection has inspired – and continues to inspire—research on identifying individual potters, cultural affiliation, and fourteenth century population aggregation.

Hayward, Michele (Panamerican Consultants), Cinquino, Michael (Panamerican Consultants) and Schieppati, Frank (Panamerican Consultants)

[11] *Ancestors: Their Role in Past Caribbean Societies*

Ethnohistorical accounts of native religion, and ethnographic studies of culturally cognate lowland South American cultures, suggest that ancestors played a central role in the individual and collective lives of pre-Columbian Caribbean societies. Ancestors represented a particular class of supernatural beings and forces which continued to remain influential even after death. Their physical expression, it has been argued, is especially evident in the rock art of the area, with its abundant anthropomorphic images. In our review of this topic, we suggest that certain interpretations need to be more nuanced to better fit a non-western pre-modern view of one's antecedents.

Head, Genevieve N. (Cabezon Consulting) and Munson, Marit K. (Trent University)

[125] *Surveying Petroglyph Hill: Community, Space, and Place in the 13th-14th Century Galisteo Basin*

This poster examines the use of space and the creation of place at Petroglyph Hill, part of the Burnt Corn Community. It provides an overview of Ancestral Puebloan use of the landscape around Petroglyph Hill, integrating data from two years of pedestrian survey with intensive recording of the rock art. These data combine to provide insight into the ways in which the residents of Burnt Corn used the physical landscape and, in doing so, how they transformed it into a meaningful cultural landscape.

Headrick, Annabeth (Vanderbilt)[198] *Colossal Sculptures: Teotihuacan's Answer to the Maya Stelae*

The colossal Teotihuacan sculpture in the Museo Nacional de Antropología is commonly interpreted as a public sculpture of the so-called Great Goddess. Largely assumed to be from the Moon Pyramid plaza, an historiographic investigation into the sculpture's original location reveals a far more private original location. This revelation challenges its use as an overtly public state monument. Furthermore, analysis of the monument's costume through gender and iconographic perspectives reveals new possibilities for identifying the personage depicted on the monument—suggesting that this sculpture and the other two colossal sculptures from the site possibly depict portraits of rulers.

Heath, Margaret (Megg) (Bureau of Land Management)[111] *Getting People to Stop, Look, and Listen in America's Backyard: The Changing Face of the BLM Heritage Education Program*

If the Smithsonian is America's attic, the West is America's backyard. The Bureau of Land Management must reach out to ever-increasing numbers of people recreating on public lands. BLM's Heritage Education Program began in the 1990s in response to looting and vandalism. Beginning in 2003, the heritage education program began shift to web based materials and marketing. In this paper I will discuss how archaeologists began working more closely with BLM public affairs and interpretive specialists in an effort to reach recreational audiences. I will relate new trends for information gathering by an increasingly technologically savvy population that support this shift.

Heckenberger, Michael (University of Florida)[25] *Archaeology & the Body in Amazonia: Cultural Self-Scaling, Materiality, and Historical Iterations of the Fractal Person*

Archaeologists have long wrestled with issues of temporal and spatial scale, but insufficient attention is given to the patterns of social and symbolic "self-organization" that underlie change in all cultural systems. Specifically, an archaeology of the body or "habitus," which extends to deep history, must be able to address not only actual human beings or behaviors, but particularly culturally specific notions of what are commonly glossed as time-space, materiality, and personhood. Using Roy Wagner's metaphor of the "fractal person," questions of historicity, "self-scaling," and deep-time archaeology are discussed with respect to some Amazonian indigenous histories.

Heckenberger, Michael [192] see Toney, Joshua**Hedgepeth, Jessica (University of Colorado)**[211] *The Early Postclassic in the Oaxaca Highlands: New Clues from Ceramic Style Research on the Pacific Coast*

Oaxaca highland ceramic styles in the Early Postclassic period are the subject of ongoing debate. Recent studies of ceramics from Rio Viejo on the Pacific coast of Oaxaca, Mexico have identified stylistic similarities between Early Postclassic Rio Viejo and Mixtec highland ceramics, indicating interregional interaction between these regions. This paper will review the methods used to refine the Early Postclassic ceramic phase at Rio Viejo, including radiocarbon dates and the determination of type categories based on statistical analysis. The Rio Viejo typology has great potential to serve as a tool in clarifying Early Postclassic ceramic styles in the Oaxaca highlands.

Hedges, Robert [39] see Hull, Bradley**Hegmon, Michelle (Arizona State University), Nelson, Margaret (Arizona State University), Peeples, Matthew (Arizona State University), Meegan, Cathryn (Arizona State University) and Kinzig, Ann (Arizona State University)**[116] *Human and Regional-Scale Perspectives on Social Transformation in the US Southwest: Hohokam, Mimbres, and Mesa Verde*

Three cases form the basis for investigating interrelationships between the nature of growth and the severity of transformation. Growth periods are characterized regarding (1) cultural elaboration; (2) social/technological complexification; (3) aggregation and population growth; (4) subsistence stress. Transformations are characterized regarding the degree of change (e.g., dispersal or regional depopulation) and human suffering (e.g., violence, disease). We

assess the general hypothesis that the longer people try to hang on to the status quo (despite signs of problems) the harsher the eventual transformation, a hypothesis that has relevance to today's world at least as much as the past.

Heinz, Marlies (Albert-Ludwigs University)

[193] *Archaeological Research in Conflict Areas - Practice and Responsibilities*

Every scenario of war or crisis is characterized by complex events and a multitude of actors and interests. Decisions on whether to carry out archaeological research in such situations depend on particular circumstances. Attempts to establish universally valid criteria for evaluation of whether archaeological engagement in war zones is possible can only fail. Ideally, researchers need to reflect on the consequences of her or his actions in each case. At stake are the potential instrumentalization of research results, as well as the symbolic implications of one's own presence in a conflict region. These issues should determine options for one's actions.

Heitman, Carolyn (University of Virginia) [8] Discussant

Heitman, Carolyn [172] see Watson, Adam

Helderman, Laura (University of Missouri), VanPool, Todd L. (University of Missouri), Fuld, Kristen A. (Portland State University), Royall, Travis J. (University of Missouri) and Cordero Hernández, Tulio (Escuela Nacional de Antropología e Historia)

[32] *Flake Stone Reduction at Cerro del Diablo, Chihuahua, Mexico*

The site of Cerro del Diablo contain a dense scatter of flaked stone artifacts extending from a basalt outcrop covered in rock art and bedrock metates. Attributes of over 800 of these artifacts were recorded during in-field analysis during the summer of 2006. The resulting data are analyzed to identify the various flaked stone technologies used and the intensity of reduction. This information in turn provides a more complete behavioral context with which to understand the rock art and the use of the bedrock mortars that dominate the site.

Heller, Andy (Indiana University of Pennsylvania)

[126] *The Dividing Ridge Project: A Comparison of Geophysical Techniques at a Late Prehistoric Village*

Geophysical prospecting is becoming a popular technique for archaeological investigation. It offers the archaeologist the ability to cover an entire site and locate potential archaeological features without the need for a invasive sampling strategy. Three geophysical techniques, electrical resistivity, magnetic gradiometry, and magnetic susceptibility, are compared at varying sample intervals to determine their effectiveness at a Late Prehistoric village in western Pennsylvania.

Helms, Mary (University of North Carolina Greensboro) [11] Discussant

Hemmings, C. Andrew (The Gault Project at U. Texas) and Bradley, Bruce (University of Exeter)

[190] *A New World of Evidence: Clovis Biface Reduction Strategies*

Manufacturing debris and finished tools diagnostic of Clovis technology have been found across most, but not all, of North and Central America and as far south as Venezuela. By examining manufacturing data from more than 100 sites across this geographic range, clearly patterned behavior becomes apparent that is not readily discernible on individual, used, projectile points. The diagnostic Clovis preform characteristics are presented and contrasted with individual Clovis points and Non-Clovis preforms.

Henderson, Gwynn [60] see Pollack, David

Henderson, John [169] see Tchakirides, Tiffany

Heneke, Jenni (Stony Brook University)

[77] *Local Cuisine: Analysis of the Ubaid Animal Bones from Kenan Tepe*

The study of the Ubaid has often concentrated on ceramics and architecture, and the widespread and relatively uniform Ubaid assemblage is often interpreted as a direct correlate for Southern Mesopotamian influence. Evidence from the Ubaid settlement at Kenan Tepe,

however, emphasizes local adaptation within a broad cultural framework. This paper will examine the faunal assemblage from three domestic structures. This data will be used to illuminate important aspects of local culture as well as regional patterns within the upper Tigris area. This analysis will contribute to a reevaluation of the significance of the appearance of Ubaid material culture in local communities.

Henry, Donald [207] see *Bergin, Sean*; [207] see *Albert, Rosa Maria*; [207] see *Kalchgruber, Regina*; [207] see *Cordova, Carlos*

Herbert, Joseph (Cultural Resources Program, Fort Bragg)

[60] *Shell Tempered Pottery of the Middle Atlantic*

The Late Woodland Townsend series is generally understood as the shell-tempered ceramic tradition of Algonkian immigrants to the Chesapeake region around A.D. 800. The Mockley series (A.D. 200—960) is variously interpreted as evidence of a prior Algonkian migratory event, or local innovation. The mysterious Currituck Beaker ware, possibly flourishing prior to A.D. 400, appears to represent an indigenous shell-tempering tradition in the Albemarle region of North Carolina. Replication experiments are employed to explore technological differences and evaluate possible relationships and competing hypotheses of migration, diffusion and innovation to account for the appearance, adoption and geographic distribution of these traditions.

Herbich, Ingrid [11] see *Dietler, Michael*

Herbster, Holly (PAL)

[44] *Hold the Trowel: Archaeology without the Dirt*

As more and more New England communities approach build-out thresholds they seek new ways to control development and preserve their history. Where there is no federal or state archaeological review, residents often see few options to maintain open space and cultural resources. This paper explores ways in which CRM professionals can work for local and regional agencies, descendant groups, and historic and environmental organizations to identify important objects, sites, and landscapes before they are impacted by archaeologists or bulldozers.

Heredia, Verence (El Colegio de Michoacán) and Kuttruff, Carl (El Colegio de Michoacán)

[211] *The Houses of the Common Class of Yucundaa*

Excavations were carried out at Pueblo Viejo on three terraces downslope from the elite residences, public buildings and Dominican church and convent situated on the crest of the ridge. This area of Pueblo Viejo had been selected for excavation in order to provide evidence of the structures and artifacts associated with habitation areas of inhabitants comprising the lower socioeconomic status present at the site. This was important in that this information would provide additional information relating to the various socioeconomic groups that comprised the overall settlement of Pueblo Viejo.

Herlihy, Peter [18] see *Caretta, Nicolas*

Hermann, Willi [33] see *Condon, Peter C.*

Hermon, Sorin (Vast-Lab, PIN, University of Florence, Italy) and Niccolucci, Franco (Vast-Lab, PIN, University of Florence, Italy)

[169] *A Fuzzy Logic Approach to Archaeological Research*

The paper discusses a new approach to basic archaeological research, classification of material culture, taking into consideration concepts of fuzzy logic, whenever fuzzy sets are recognized in the investigated material and Boolean logic, normally adopted, is inapplicable. This will enable the researcher to numerically express its uncertainties related to the classification process; in the same time, it allows to quantify the reliability of the archaeological material, by assigning a "reliability index" to each object and to the whole assemblage. The paper will also discuss the implications of recognizing and treating as such "fuzzy concepts" on the interpretation of archaeological material.

Hernandez, Christine (MARI, Tulane University) and Vail, Gabrielle (New College of Florida)

[143] *Astronomical Interpretations of Maya Almanacs: A View from the Late Postclassic Maya Codices*

In recent years, researchers studying the Maya codices have greatly expanded the data set of texts and iconography found to reference celestial and astronomical themes. This paper investigates the glyphs and images occurring in astronomical contexts in Maya almanacs as well as their relationship to calendrical structures. The results of this analysis refine our knowledge of emic understandings of the sky and how these ideas were related to Late Postclassic Maya rituals, beliefs, and time-keeping practices.

Hernandez, Cynthia [98] *see Muranaka, Therese*

Hernandez, Enrique (Universidad de San Carlos, Guatemala / Mirador Basin Project), Schreiner, Thomas (Archaeological Research Facility, University of California, Berkeley) and Wahl, David (United States Geological Survey/ USGS Menlo Park)

[35] *The Tintal-Mirador Causeway: A Monumental Prehispanic Sacbe in the Mirador Basin, Guatemala*

Aerial photography and satellite images have revealed the existence of a causeway connecting El Mirador and Tintal – perhaps the two largest cities of Maya civilization during the Late Preclassic period. Surface exploration and excavations reveal an impressive, elevated causeway sequentially raised and paved with thick lime cement. The causeway traverses seasonally inundated bajos and upland terrain. Associated monuments, platforms, and large ceremonial architecture define important stretches where it functioned as a processional boulevard. In wetland crossings, the structure also served as a water control facility.

Heron, Carl (University of Bradford), Craig, Oliver (University of York), Fischer, Anders (Kultuursstyrelsen, Fortidsmindeenheden, Denmark) and Anderson, Soren (Nationalmuseet, Oldriden, Denmark)

[166] *Evaluating Hunter-Gatherer Pottery Use Through Molecular and Isotopic Analysis of Organic Residues*

This paper will consider the use of Ertebolle ceramics from inland and coastal sites in Southern Scandinavia. A combined molecular and isotopic methodology is applied to "food crusts" and absorbed organic matter associated with pottery vessel fragments. A range of food and other organic substances are shown to be preserved. Such evidence is vital to understanding the range and uses of pottery produced by hunter-gatherers and offers opportunities of evaluating changes in use through time.

Herr, Sarah [34] *see Anderson, R. Scott; [72]* *see Brodbeck, Mark*

Herrmann, Jason (University of Arkansas), Ernenwein, Eileen (University of Arkansas), Koons, Michele (Harvard University), Aylward, Dan (University of Reading) and McKinnon, Duncan (University of Arkansas)

[65] *Geophysics at Tiwanaku: Results from the 2006 Field Season*

Geophysical methods have become an integral part of the ongoing archaeological investigations at the site of Tiwanaku. For the past several years GPR has been used with great success, and the current project is expanding this effort by using additional geophysical methods and increasing the geographic extent of the surveys. The multi-sensor method has greatly aided interpretation and has led to the discovery of several previously unknown buried structures, some yet to be tested with excavation. Continued GPR, magnetic susceptibility, and magnetometry surveys are planned for 2007, as this combination of methods has proven most successful in the Tiwanaku landscape.

Herrmann, Jason [95] *see Fogel, Aaron*

Hertel, Fritz [4] *see Delaney-Rivera, Colleen*

Hester, Thomas R. [73] *Discussant*

Hickey, Elizabeth (Laboratory of Paleoethnobotany, Department of Anthropology, Northern Arizona University)

[38] *Subsistence and Agricultural Instability at New Caves Pueblo: A Paleoethnobotanical Analysis*

As determined through broad paleoecological studies, northern Arizona experienced periods of climatic change between A.D. 1060 and A.D. 1275. For the Northern Sinagua living in the area, this meant a time of shifting subsistence patterns. By comparing the paleoethnobotanical and paleoclimatic records a deeper understanding of the interaction between climate and prehistoric agricultural conditions is gleaned. In this study recently analyzed macrobotanical data from New Caves Pueblo is combined with previous botanical studies from three other northern Sinagua sites, Elden Pueblo, Bench Pueblo and Lizard Man Village and compared to the paleoclimatic record yielding a reconstruction of the changing conditions.

Hicks, Patricia [33] *see Slaughter, Mark*

Hiebert, Fredrik T. (National Geographic Society), Frye, Kirk (Taraco Archaeological Project) and Austermuhle, Stefan (Asociacion Mundo Azul)

[169] *Sonar Research on Potential Ancient Settlements Below Current Southern Titicaca Lake Levels: Three Interesting Targets*

In July 2006, the National Geographic Society funded an experimental survey program in the potential of identifying finding archaeological sites that are presently submerged. Challenges in identifying submerged landscapes include lakebed sedimentation and survey interference from modern vegetation. In this case, modified sediment sonar was employed in the shallow waters of Lake Titicaca along the Taraco peninsula to survey the ancient lakeshore region. This sonar penetrated through both dense modern vegetation and as much as 3 m of sediment. In three cases, the density signals suggest features corresponding to archeological structures similar to adjacent excavated sites.

Higashi, Noriaki [208] *see Goodman, Dean*

Hilbert, Klaus (PUCRS) and Hilbert, Peter

[75] *Early Formative Sites from the Trombetas and Nhamundá River, Lower Amazon*

This research on Early Formative sites from the Trombetas e Nhamundá River, contributes to the debate about the relationship between several Amazonian ceramic complexes known as "Incised Rim Horizon", identified from the Central and Lower Amazon Region and the "Barrancoid Series" of the Lower Orinoco. "Terra-Preta"- sites such as Pocó, with red on white painted pottery, incised and modeled carinated bowls and radiocarbon dates from about 2.000 BP, show clear reminiscent of the Barrancoid Tradition. Besides this, these sites predate the local Incised Rim complexes such as the Japurá, Manacapurú, Silves or Itacoatiara Phases of the Lower Amazon.

Hilbert, Peter [75] *see Hilbert, Klaus*

Hildebrand, Elisabeth [100] *see Brandt, Steven*

Hill, Brett (Center for Desert Archaeology), Clark, Jeffery (Center for Desert Archaeology) and Doelle, William (Center for Desert Archaeology)

[181] *Depopulation of the Northern Southwest: The View from the South and Beyond*

Depopulation of the northern Southwest was one in a series of demographic changes that swept the greater Southwest during the 13th-15th centuries. Using the Coalescent Communities Database we illustrate changes in the larger region that followed declines in Mesa Verde and neighboring areas, and suggest substantial migration. This macro-scale review demonstrates the integration of demographic processes throughout this region. We conclude with a discussion of events in the southern Southwest where depopulation seems to have been only indirectly related to climate in a different region, underscoring the complex and multivariate character of population change throughout the Southwest.

Hill, Brett [38] *see Nials, Fred*

Hill, Erica (University of Alaska Museum)

[11] *Images of Ancestors: Identifying the Revered Dead in Moche Iconography*

The Peruvian Moche (AD 1 – 750) were a complex society with a religious system that involved elaborate treatment of the dead. In this paper, I examine a recurrent set of images in Moche iconography—bundled figures seated under gabled-roof structures. I evaluate the idea that these seated figures represent the revered dead—individuals singled out for special treatment as ancestors. Funerary materials provide a second line of evidence with which to evaluate the idea that the Moche viewed ancestors as powerful entities in daily life. I conclude by evaluating the utility of iconography in the study of ancient ancestors.

Hill, Mark (Washington State University)

[50] *Craft Specialization and Ceremonial Exchange: Metric Analysis of Red Ocher Mortuary Bifaces from the Riverside Site*

Cache and mortuary bifaces circulated throughout the upper Midwest and Great Lakes during the late archaic and transitional early woodland periods. These artifacts have been used to hypothesize regional religious cults and the presence of a ceremonial exchange network. A metric and source analysis of mortuary bifaces from several features at the Riverside Site in the northern Lake Michigan basin will be used to explore issues relating to craft specialization in their production, the nature of the ceremonial exchange network that resulted in their mortuary deposition, and ritual modes of production in Red Ocher society.

Hill, Matthew [165] see Holliday, Vance; [4] see Boehm, Andrew

Hill, Matthew E. (University of Arizona), Weber, Robert H. (New Mexico Bureau of Geology & Mineral Resources) and Holliday, Vance T. (University of Arizona)

[165] *Paleoindian Occupation and Land Use of the San Agustin Basin, New Mexico*

Using data from an extant surface artifact collection and a recent pedestrian survey this paper explores Paleoindian land use strategies along the edge of paleo-lake basins of the Plains of San Agustin in west-central New Mexico. Information used in this paper comes from 75 Paleoindian localities that have been identified in this basin over the last 45 years. Combining information from these two datasets, we are able to provide new insights into residential mobility, raw material exploitation patterns, and occupational intensity of groups living along the margins of a series of high altitude paleo-lakes.

Hill, Matthew G. (Iowa State University) and Rapson, David J. (Iowa State University)

[165] *The Pull of the Place: Late Paleoindian Residential Mobility and Subsistence Behavior as Viewed from the Clary Ranch Sites*

Bison kill/butchery sites, quarry/workshops, and short-term campsites/hunting stations have traditionally served as the primary interpretive sources for Paleoindian adaptations on the Great Plains. The Clary Ranch and O.V. Clary sites represent complementary poses of a single, spatially differentiated settlement/subsistence system situated along a major intermittent tributary of the North Platte River. They provide the opportunity to evaluate, refine, and extend our knowledge of Late Paleoindian mobility tactics, subsistence behaviors, and technological organization in the region. The riverine orientation of the system is reflected in toolstone exploitation and re-use of situationally-favored microhabitats.

Hill, Rebecca [55] see Ringle, William

Hilliard, Jerry [60] see Sabo, George; [154] see Lockhart, Jami

Hingley, Richard (Durham University)

[11] *Ancestors and Spirits in Later Prehistoric Britain*

This paper assesses the idea that people during later prehistory across Britain had an active idea of a past—one that included people who had lived in different ways from contemporary populations. Two case studies are discussed: the re-analysis of information for the re-use of Neolithic/Bronze Age monuments in northern Britain and my current work on Bronze Age bronze objects in later prehistoric contexts in southern Britain. These studies are used to argue (counter Whitley) that ideas about an ancient past in later prehistoric society focused on ancestry and defined this former world as different from current times.

Hinrichsen, Kellen [126] see DeMaio, Justin

Hirai, Corinne [147] *see Barnes, Edwin*

Hirshman, Amy (West Virginia University) and Pollard, Helen (Michigan State University)
[63] *Firing Variability and Paste Construction in Tarascan Fine Ware Ceramics: a Preliminary Assessment*

Visual inspection and compositional analysis of sherds from Tzintzuntzan, the capital of the western Mesoamerican Late Postclassic Tarascan state, and Urichu, a tertiary Tarascan administrative center, provided conflicting evidence regarding paste variability in fine ware paste recipes. In the absence of direct evidence for firing technology, a refiring experiment should provide an important indication of the importance of firing temperature to the visible identification of ceramic paste variability.

Hirst, K. Kris (About.com)

[111] *View from the Perimeter: Public Archaeology Outside the Mainstream*

In July of 2007, the Archaeology at About.com website will turn 10 years old. Technological advances and increasing penetration of the medium of the Internet has driven changes both in the way public archaeology is addressed, and in the way the discipline of archaeology is conducted and perceived in the greater world. This paper will briefly summarize the history of About.com and the archaeology webpage, and then describe how public archaeology on the Internet both inside and outside of the profession has changed over the past 10 years, including the use of weblogs, podcasts and Flickr collections.

Hirth, Kenneth (Penn State University)

[107] *Specialization, Household Economy and Domestic Craft Production in Mesoamerica*

Most investigators discuss domestic craft production in terms of full-time or part-time activities. While this approach is descriptively accurate it contributes little to an analytical understanding of the organization of household economies. This presentation models domestic craft production using a household economy and risk management approach. This approach permits modeling craft production in terms of domestic time budgets, managing subsistence risk, and intensifying resource production. The advantage of a household economy model is that it incorporates diversified craft production and multi-crafting in a single analytical framework. Obsidian craft production at Xochicalco is used to illustrate the advantages of this approach.

Hirth, Kenneth (Penn State University) [219] Discussant

Hixson, David R. (Tulane University)

[13] *Unreal Chunchucmil: Merging Archaeological Data and Artistic Imagination to Create an Immersive and Educational Virtual Landscape*

This paper examines recent developments in communications technology that arose out of the video game industry, and the applications of this technology for archaeology. Through these advances, archaeological maps, artifact illustrations, and remotely sensed data can be merged with 3D artistic renderings to create real-time walkthroughs of ancient sites using widely available and inexpensive software. Additional benefits of this technology are also examined, including interactivity, cooperative learning, file sharing, and the potential for creative educators to expand beyond the limitations of reality. The Unreal engine is examined in detail, with illustrative examples drawn from the ancient Maya.

Hixson, David R. [55] *see Mazeau, Daniel E.*

Hoag, Elizabeth (Cuyahoga Community College)

[55] *Ceramics, Style, and the Archaeology of Social Identity in the Mixtequilla Region of Veracruz, Mexico*

In this paper I explore the complex relationship between style and expressions of identity. Differences and similarities on decorated ceramic vessels were analyzed from Late Preclassic and Early Classic sites collected through an extensive survey of the Mixtequilla Region. Design hierarchy was documented on vessels to identify variations in execution that might correspond to different social identities present in the region. Taking a contextual approach, this research seeks to identify social identities by placing style and identity within larger social, political and hierarchical environment, rather than using the style distribution alone to define social interaction or boundaries.

Hoard, Robert (Kansas State Historical Society), Bevitt, C. Tod (R. Christopher Goodwin & Associates) and McLean, Janice A. (R. Christopher Goodwin & Associates)

[39] *Obsidian Source Data from Kansas and Nebraska*

Recent chemical source identifications for obsidian artifacts from Kansas and Nebraska clarify the movement and use of this exotic material on the Central Plains. Artifacts recovered from well-dated local sequences make it possible to identify patterning in Central Plains obsidian use at multiple levels. This study provides a foundation for future research on obsidian use in the region and serves as a comparative baseline for integrative studies of exchange and lithic resource use.

Hockett, Bryan (BLM — Elko Field Office)

[23] *Variability in Dietary Choice by the Middle Paleolithic Societies of Central Portugal*

Dietary choice in Europe prior to 30,000 - 40,000 BP centered on large, terrestrial herbivores. However, some coastal locations offered opportunities for marine resource exploitation. Diets of Neandertal populations in the Estremadura region of central Portugal may have been more diversified. Excavations led by Tony Marks at the inland cave Galeria Pesada, as well as other sites such as Figueira Brava and Mira Nascente, suggest that coastal resources were on the menu between 36,000 and 31,000 BP. These data may hold clues regarding the nature and timing of the genetic swamping of Neandertals by incoming AMHS populations after ca. 28,000 BP.

Hocking, Ashlie B. [104] see Martin, W.N.

Hodder, Ian (Stanford University)

[68] *Entangled with the Living Dead: Catalhoyuk and Middle East*

The role of the dead in constructing ancestry in the early sedentary villages of the Middle East and Anatolia is closely tied to the larger-scale process of the construction of house-based memories. The repetition of houses in one place is intimately tied to the construction of 'histories' in which dead people are also involved. Past houses and past people are thoroughly entangled in the social strategies of these early agricultural societies, as new forms of production and reproduction emerge very slowly over the long term.

Hodder, Ian [179] Discussant; [25] Discussant; [53] Discussant

Hodge, Christina [48] see Loren, Diana

Hodgetts, Lisa (The University of Western Ontario)

[199] *Spatial Organization of Activities around an Early Pre-Dorset Hearth Feature, Northern Manitoba, Canada*

Ethnographic accounts from circumpolar societies indicate strong spatial separation of activities within dwellings, with different tasks often taking place in specific locations relative to a central hearth. The distribution of artifacts around a 4000 year old linear hearth feature near Churchill, Manitoba, suggests that Pre-Dorset people also organized their interior spaces in this way. Lithic debitage and retouched flakes concentrate on one side of this hearth, while formal tool types tend to cluster, indicating spatial patterning of associated activities.

Hodgins, Gregory (University of Arizona), Andrus, C. Fred T. (University of Alabama), Chu, Alejandro J. (University of Pittsburgh), Etayo-Cadavid, Miguel F. (University of Alabama) and Jones, Kevin B. (University of Arizona)

[175] *Reconstructing the Marine Radiocarbon Reservoir along Coastal Peru: Data from the Preceramic Site of Bandurria, Huaura Valley, Peru*

The radiocarbon content of terrestrial and marine environments is different. In coastal Peru, this difference (the marine radiocarbon reservoir) is large and potentially variable through time. We are attempting to quantify this variation at different latitudes of the Peruvian coast throughout the Holocene by measuring radiocarbon content of contemporary terrestrial and marine organic materials from coastal archaeological sites. Here we estimate the magnitude of the marine reservoir at (11°11' South, 77°35' West) ca. 5000 y Cal BP using samples from Bandurria, a coastal Preceramic site. We present data and arguments for assessing the reliability of our marine reservoir determination.

Hodgson, John Garwood (New World Archaeological Foundation) and Clark, John Edward (New World Archaeological Foundation)

[178] *New Evidence for Archaic Period Occupations in the Soconusco, Chiapas, Mexico*
Archaeological survey and excavations conducted by the authors over the past 7 years in the western Soconusco of coastal Chiapas, Mexico, has identified five previously unreported shell mounds located in the central areas of the Pampa Cantileña. Combined with earlier discoveries of Late Archaic occupation at the inland site of San Carlos in the Mazatan region, observations of Archaic settlement patterns suggest more complicated cultural adaptations for the period than previously reported. This paper builds on Barbara Voorhies's research of Archaic sites in the Soconusco and offers a current synthesis of the Archaic period Chantuto people and their lifeways.

Hoekman-Sites, Hanneke (Florida State University)

[21] *How were Dairy Products used on the Great Hungarian Plain during the Neolithic and Copper Age? Phase 1 Research*

Residue analysis was conducted on 339 ceramic samples from 10 Neolithic and Copper Age sites in the Koros region in order to explore the extent and nature of early dairy product use. In this paper, the results of the first phase of research (presence or absence of C16:0 and C18:0) will be considered.

Hoerig, Karl [201] see Welch, John R.

Hoffecker, John (University of Colorado) [28] Discussant

Hoffman, Brian (Hamline University), Chisholm, Linda (University of Minnesota), Smith, Ross (Portland State University) and Coons, Gina (Hamline University)

[4] *Coastal Critters: Taphonomic Analysis of Shell, Bone, and Stone Accumulations Made by Non-Human Agents in Coastal Southwest Alaska*

Non-human predators and scavengers living in coastal settings have long been known to create accumulations of aquatic faunal remains that at least superficially mimic the shell and bone middens of human occupations. The task for archaeologists is to identify distinguishing signatures of these natural accumulations. During recent fieldwork along the Alaska Peninsula's Pacific coast, we collected faunal remains associated with two eagle nests and a river otter den. Although these natural sites were impressive, containing hundreds of identifiable remains, the taxon harvested, bone breakage patterns, and other evidence clearly distinguish these assemblages as non-human middens.

Hofman, Corinne (Leiden University), Keegan, William F. (University of Florida), Hoogland, Menno L. P. (Leiden University) and Boomert, Arie (Leiden University)

[22] *Insular Caribbean Society: A Dynamic Relationship between People, Goods and Ideas during Late Pre-Colonial Times*

This paper considers the interactions and feedback loops of the dynamic relationship among the material, social and ideological dimensions of the pre-colonial insular Caribbean culture during the late Ceramic Age (AD 800 – 1492). The Lesser Antilles, including also Trinidad and the Virgin Islands, represent the core region of investigation. This area is considered ideal because of its geographical constitution as a chain of islands between the landmasses of the South American mainland and the Greater Antilles. Both areas seem to have had a major impact on the development, exchange relationships and the depopulation of the Lesser Antilles that began about AD 1200.

Hofman, Jack (University of Kansas)

[197] *The Evolution and Diversity of Mortuary Behavior in Northern Latitudes During the Early and Middle Holocene*

Cemeteries are recurrent in the early and middle Holocene archaeological record of eastern North America. The origins of fixed places for burials and development of mortuary complexity among Holocene hunter-gatherers is reviewed. Key interpretive problems are identified regarding explanations of mortuary variability during this period. Comparisons are also made with mortuary records among Holocene sites in Western Europe. Potential relationships between variable mortuary behavior and changing land use patterns are highlighted. A simple model to aid the interpretation of hunter-gatherer mortuary behavior is offered.

Hogue, S. Homes (Mississippi State University)

[49] *Traumatic Injuries as They Relate to Mississippian/Protohistoric Settlement Types in Oktibbeha County, Mississippi*

This research compares traumatic injuries recorded for a palisaded village group to similar data documented for groups living in small farmsteads. The sample includes burials recovered from the Lyon's Bluff single-mound village, a palisaded site occupied between A. D. 1200 to 1650 and skeletal series recovered from small nearby farmstead sites. Evidence for interpersonal conflict is expected to occur more frequently if palisades were built for defense against raiding. It is expected that traumatic stress will occur in greater frequency in the Lyon's Bluff skeletal population when compared with the farmstead series.

Holbrook, Neil (Cotswold Archaeology, UK)

[210] *Pulling Grey Literature into the Academic Mainstream: The Case of Roman Britain*

The study of Roman Britain has a strong academic tradition of excavator/scholars. The changes in the way that archaeology is practiced in the UK over the last 15 years now make such multi-faceted individuals a rarity. So how can academics (the primary producers of synthesis) access, and make sense of, the myriad of data now available? A new project is attempting to examine the research dividend that can be gained from a study of grey literature. The paper will explore the problems and potential of pulling grey literature into the academic mainstream of Roman Britain.

Holdaway, Simon (University of Auckland) and Gibb, Russell (Geometria)

[171] *GIS as a Strategic Tool for Excavating Artifact and Feature Rich Historic Sites in New Zealand*

Historic sites in New Zealand frequently reveal large numbers of artifacts and features. This poses a challenge for archaeologists when excavation serves to mitigate development and time is limited. The excavation of a mid 19th century Maori village from Taranaki, New Zealand made use of a GIS based recording system which, together with the use of several total stations, permitted rapid and precise location of around 50,000 artifacts and 3500 features across a continuous area excavation of 3000 sq. m. The GIS proved critical to understand the sequence of feature construction and the nature of artifact abandonment at the village.

Holeman, Abigail (University of Virginia)

[182] *Material Culture as Metaphor: Intra-Site Analysis of the Cosmography of Social Organization at Paquimé, Chihuahua, Mexico*

Social difference becomes clearest at the intersection of economic, ritual, and political power where difference is created and negotiated. Scholars in many areas have shown that these differences can be interpreted through reading architecture and the associated material culture as a metaphor of a particular cosmology or worldview. As a preliminary test of this holistic model of social organization, I draw on cosmological ideas that are widespread in the U.S. Southwest and Mesoamerica to analyze room assemblages and architecture in order to assess how cosmology and social organization inform each other at Paquimé, Chihuahua, Mexico, 1200- 1450 A.D.

Holeman, Abigail [172] see Watson, Adam

Holen, Steven (Denver Museum of Nature & Science)

[110] *Clovis Lithic Procurement and Mobility on the High Plains of Eastern Colorado*

Several Clovis sites have been excavated and numerous surface finds of Clovis artifacts have been documented in eastern Colorado. Each Clovis site is discussed and the distribution of documented Clovis projectile points is presented. Geomorphic and climatic variables are responsible for concentrations of Clovis projectile points in eastern Colorado. Lithic procurement patterns derived from the study of projectile points and associated lithic artifacts indicate that chalcidony from Flattop Butte in northeast Colorado and Alibates agatized dolomite from the Panhandle of Texas are the primary lithic source areas used by Clovis peoples living in what is now eastern Colorado.

Holland, Thomas [48] see Byrd, John

Hollenback, Kacy (University of Arizona)

[127] *Catastrophes and Technology: Building a Model for Understanding Technological Change*

In the past, most archaeological studies of catastrophes have undertaken analysis of technology in order to understand or reconstruct the catastrophic event. This poster seeks to accomplish the opposite; namely understanding how catastrophes effect the reproduction of technology. I specifically consider how catastrophes that result in large scale population decimation or disruption can dramatically hinder or alter ritual/craft specialization. Using case studies from the 18th and 19th century Northern Plains, I will discuss how smallpox impacted and changed technological learning frameworks and the production of ceramic technology.

Holliday, Vance (University of Arizona), Hill, Matthew (University of Arizona) and Weber, Robert (New Mexico Bureau of Geology)

[165] *Paleoindian Geoarchaeology of the San Agustin Basin, West-Central New Mexico*

Extensive artifact collections from the San Agustin Basin show that this paleo-lake setting was attractive to Paleoindians. The area is composed of three sub-basins. As the post-Full Glacial lake level declined, the two smaller and higher sub-basins drained one into another and then into the main basin, creating an evolving series of micro- and macroenvironments. During the Paleoindian occupation these environments included marshlands, local ponds or lakes, and water in the channels that drained the sub-basins. Surrounding these settings were well-drained beach- ridges and dune fields. Locally, springs or seeps may have been active in piedmont settings.

Holliday, Vance [165] see *Huckell, Bruce*; **[165]** see *Hill, Matthew E.*

Hollinger, R. Eric (Smithsonian Institution, National Museum of Natural History) and Ousley, Stephen (Smithsonian Institution, National Museum of Natural History)

[48] *The Nature of Evidence in the Repatriation Process: Evidence in Practice*

Because decisions in the repatriation process depend on a preponderance of the evidence, the acquisition, review, and weighing of evidence are critical to implementation of the process. For museums, federal agencies and tribes carrying out the process, consideration and critical evaluation of the available evidence, in all its forms, poses immense and sometimes daunting challenges. Examples from repatriation cases of the Smithsonian's National Museum of Natural History illustrate the complexities of evidence in practice in the repatriation process.

Hollinger, R. Eric [48] see *Ousley, Stephen*; **[48]** see *Botic, Cheri*; **[48]** see *Sieg, Lauren*

Hollowell, Julie (University of British Columbia) and Nicholas, George (Simon Fraser University)

[201] *Archaeological Capital as Cultural Knowledge*

As "producers" of Native American pasts, archaeologists have acted as gatekeepers, controlling flows of information and objects from a distant Native "other" to worlds of museums and scholarship often inaccessible to Native people. In these transculturations, archaeologists appropriated the past as social and economic capital and as intellectual and cultural property. Today, this role is challenged as Indigenous peoples (re)claim archaeological pasts. Archaeologists no longer fully control uses or interpretations of things deemed archaeological, sometimes even data itself. We discuss implications of this transformation and how questions about political correctness obscure deeper issues of power, access, and benefit-sharing.

Holman, Darryl [195] see *Etnier, Michael*

Holmes, Amy (PCR Services Corporation), Vader, Michael D. (PCR Services Corporation) and Marken, Mitch (PCR Services Corporation)

[213] *Origin and Meaning of Nahachish Rocks*

Features termed "cupule rocks", "pit-and-groove rocks", and "Nahachish Rocks" have been identified in association with Late Prehistoric archaeological sites in southern California. Several Nahachish Rocks have recently been recorded across western Riverside County. Interviews with the locally affiliated Luiseno Indians have indicated that these cupule rocks have spiritual significance and may represent a bloodletting ritual or the transformed body of

an ancestor. This paper synthesizes the available archaeological, ethnographic, and geologic data in order to explore the origin and meaning of Nahachish Rocks.

Holmlund, James (Western Mapping Co.) and Nordby, Larry (Western Mapping Co.)

[185] *Vanishing Treasures Architectural Documentation Using 3D LiDAR Scanning*

The advent of 3D LiDAR has created the opportunity to derive high-resolution, high-accuracy mapping data for historic architecture, the focus of the National Park Services' Vanishing Treasures Initiative. Over the past 6 years, Western Mapping Company has tested a variety of LiDAR scanners, developed field methodologies for these scanners, and created a host of products specifically suited to the mapping, documentation, management, visualization, and interpretation of these resources. We present, here, an overview of the technology, a review of CAD, GIS, interactive 3D model, and animation products, and showcase an on-going project at Tonto National Monument in Arizona.

Holst, Irene (Smithsonian Tropical Research Institute), Piperno, Dolores (Smithsonian Institution), Iriarte, Jose (University of Exeter), Zhao, Zhijun (Chinese Academy of Social Sciences) and Pearsall, Deborah (University of Missouri, Columbia)

[156] *Identifying Phytoliths and Starch Grains from Crop Plants: Case Studies from Central and South America*

Research carried out by a number of investigators has demonstrated that phytoliths and starch grains from a variety of domesticated plants native to the Americas can be identified. They include staple foods such as maize, squashes, manioc, and yams, now-minor cultivars, and important utilitarian plants (e.g., bottle gourd). Phytoliths and starch grains from some of these crops can be distinguished from those of their wild ancestors. This paper will review recent advances in the application of these microfossils to agricultural origins and dispersals in the New World. Case studies from Central and South America will be presented.

Honeychurch, William [183] see Wright, Joshua

Hongo, Hiromichi [208] see Goodman, Dean

Hood, Larkin (University of Washington)

[166] *Pottery as a Tool for Understanding Variability in Hunter-Gatherer Subsistence and Settlement: New Information from the Upper Texas Coastal Plain*

Perhaps one of the greatest merits of hunter-gatherer pottery studies in general is that they can contribute to archaeological understanding of the immense variability in hunter-gatherer adaptations. Prehistoric inhabitants of the upper Texas coastal plain (UTCP) made and used pottery beginning around 2,000 years BP. However, the archaeological record of the region shows no evidence of cultigens, wild starchy seeds, or highly sedentary village settlements common in the Woodland Southeast. In this paper I discuss the functions of these ceramic vessels and what this information tells us about the nature of hunter-gatherer subsistence, mobility, and food storage in this region.

Hoogland, Menno L. P. [22] see Hofman, Corinne

Hooper, John (Arizona State University)

[14] *Energetic Investment in the Acropolis at Yalbac, Belize: A Comparative Approach*

This paper presents the results of the profiling of looter's trenches penetrating the monumental Acropolis at the Maya site of Yalbac, Belize. The results are used to analyze the amount of labor invested in various aspects of the construction of the structure. The figures generated by this analysis are interpreted in order to draw comparisons between energetic investment at Yalbac and similar investment at the major sites of Copán and Tikal. Based on these comparisons, some possibilities are postulated regarding the differences in elite power among the three sites, and regarding the position of Yalbac in Maya political history.

Hoover, Anna (L&L Environmental, Inc) and Blevins, Kristie (L&L Environmental, Inc.)

[94] *Lithic Sources of the Mead Valley in Western Riverside County, CA*

Multiple tool-source material locations have been identified within close proximity to large habitation areas in the Mead Valley. This preliminary research study attempts to identify the relationship between these source materials as one of the factors for habitation location choice. Also examined are the potential patterns related to specific material types, habitations

and specialized activity components. Projections are also included for mapped geologic formations that may have provided resources for aboriginal inhabitants that have not been archaeologically recorded.

Hopwood, David (Binghamton University (SUNY))

[77] *Disease, Trauma and Burial Practices at the Site of Kenan Tepe, Turkey*

Eighteen burials were analysed during the 2006 field season at Kenan Tepe, Turkey. Burials represent three time periods including the Ubaid, the Chalcolithic and the Late Bronze Age. The burials analyzed represent four infants, three children, five young adults and six middle-aged to old adults. This paper will discuss the presence of disease in these individuals. In particular two children and two adults possess cranial lesions that will be addressed further. In addition, I will discuss the burial practices present at Kenan Tepe. I will focus specifically on the practice of burying individuals in pots, principally infants.

Hopwood, Marie (Binghamton University, SUNY)

[77] *The Ubaid Ground Stone Assemblage from Kenan Tepe, Turkey*

Ground stone tools are often overlooked in archaeological research, yet they can provide detailed data about the daily lives of people in the past. This paper will examine ground stone artifacts found in association with three Ubaid structures at the site of Kenan Tepe, Turkey. I will investigate the use-life of these artifacts and how they impacted the lives of the ancient inhabitants. Ground stone artifacts recovered from Ubaid contexts include those used for food processing, tool manufacture, adornment, and food procurement, all activities that can lead to a better understanding of daily life.

Horn, Sally (University of Tennessee), Lane, Chad (University of Tennessee), Mora, Claudia (University of Tennessee), Orvis, Kenneth (University of Tennessee) and Taylor, Zachary (University of Tennessee)

[86] *Paleoecological Reconstruction of Early Agriculture and Landscape Change in Costa Rica and the Dominican Republic: Approaches to Improve Spatial Resolution*

Analyses of pollen and microscopic charcoal in sediment profiles complement and extend archaeological studies in Costa Rica and the Dominican Republic. Such analyses are particularly valuable in documenting the timing of early agriculture and forest clearance. However, determining the geography and scale of prehistoric impacts from pollen and microscopic charcoal alone can be problematic. Here we explore supplementary analyses of stable carbon isotopes, macroscopic charcoal, mineral fractions, and diatoms in sediment cores, and stratigraphic analyses of watershed soils, as means to more closely tie reconstructions of prehistoric impact to particular watersheds and to better link paleoecological data with archaeological data.

Horowitz, Mara (Columbia University)

[133] *Early/Middle Bronze Mortuary Landscapes in the World of Cyprus's North Troodos Foothills*

It has long been proposed that prehistoric peoples used mortuary landscapes to surround and lay claim to their territories. Although many hundreds of Early-Middle Bronze Cypriot tombs are known, few contemporary settlements have been discovered. Two ongoing projects, in which I am participating, have begun to generate enough data to examine the relationship between settlements and their mortuary components in two north Troodos valleys: the Karkotis and the Pedaios. The placement of settlements and their mortuary satellites, and a comparison to neighboring and previously excavated sites, is beginning to reveal a pattern of potential use in locating other settlement sites.

Horsburgh, K Ann

[120] *Ancient DNA Identification of Domestic Dogs and Cattle in the Western Cape Province, South Africa*

Southern African pastoral peoples of the Later Stone Age kept cattle, sheep and dogs. These species are by necessity immigrants to the region, their wild ancestors residing no closer than North Africa. Attempts to establish a chronology for the arrival of cattle and dogs have been frustrated by the morphological similarity between cattle and buffalo, and between dogs and black-backed jackals. Analyzing DNA preserved in canid and bovine allows the secure identification of domesticated dog and cattle remains, which are then to be submitted to direct radiocarbon dating, thereby constructing a secure chronology for their arrival in the region.

Hortega, Allan [162] *see* Tiesler, Vera

Horton, Beth (Washington State University)

[6] *Meat the Neighbors: Class Structure as Reflected through Consumption in Three Nineteenth Century Households in Upstate New York*

Excavations at Waterford Village, a nineteenth century community located at the junction of the Erie Canal, Hudson and Mohawk Rivers in upstate New York, provided an opportunity to examine the impact of modernization on the diets of two residential households and a hotel. Between 1792 and 1919 the community underwent changes associated with the regional economic shift to industrialization. Household assemblages reflect varying strategies in meat consumption responding to cultural redefinitions of class and economic space.

Horton, Kristina (SWCA Environmental Consultants), Hartman, Lynn (Ute Mountain Ute Tribe), Reeder, Trent (SWCA Environmental Consultants), Knight, Terry (Ute Mountain Ute Tribe) and Thompson, Kevin (SWCA Environmental Consultants)

[33] *Cultural Resource Work on the Animas-La Plata Project*

This poster summarizes the cultural resources work conducted as part of the Animas-La Plata reservoir project in southwest Colorado. This project involved the treatment/excavation of 72 archaeological sites, NHPA and NAGPRA consultation with 26 Native American Tribes, public outreach, a Native American student internship program, and a Native American archaeological training program.

Horton, Kristina [5] *see* Reeder, Trent

Hosler, Dorothy (MIT) and Cabrera, Ruben (Instituto Nacional de Antropología e Historia, Mexico)

[178] *A Non-Mesoamerican Copper Figurine from a Post-Teotihuacan Context at Atetelco Teotihuacán: Description and Implications*

Rubén Cabrera excavated a copper human figurine from Mazapa burial 23 at Atetelco Teotihuacán. Mazapa style ceramic artifacts appear in the same burial. The artifact dates to between 800-950 d.C. Dorothy Hosler has undertaken studies of figurine chemistry, fabrication techniques and stylistic characteristics. The figurine is lost wax cast, and the earliest copper-arsenic alloy object recovered in Mesoamerica. Stylistic attributes suggest a lower Central America origin for this artifact. Apart from the descriptive and analytical data the authors discuss the implications of this find in understanding movements of people and goods following Teotihuacán's collapse.

Hostenske, Mary [147] *see* Gonyea, Thomas

Hotujec, Cynthia (University of Georgia)

[90] *Ornament Analysis of Chaco-Era Outlying Communities*

Hundreds of ornamental artifacts in various stages of production have been recovered during survey and excavation at the Chaco-Era Puebloan community of Blue J. Systematic analyses provided information on various ornament attributes, including raw material, type of modification, and phase of manufacture. This classification system proved ideal not only for comparing Blue J households with one another, but also for comparison with similar data sets from other Chaco-Era communities. The results of this comparison contribute to the understanding of why a community such as Blue J would not have a great house despite clearly having the resources to build one.

Hough, Ian (Grand Canyon National Park) and Brennan, Ellen (Grand Canyon National Park)

[185] *Architectural Documentation and Preservation of Navajo and Havasupai Wooden Pole Structures at Grand Canyon National Park, AZ*

In 2006, Vanishing Treasures archaeologists conducted an architectural documentation and preservation project on 10 historic wooden pole structures at Grand Canyon National Park. The structures include Navajo and Havasupai sweat lodges, hogans and wikiups and are currently at high risk of damage from natural deterioration, forest fires and vandalism. This project provided an opportunity to document a unique resource from an under-studied archaeological time period and provided a means for testing new methods for documenting

wooden pole structures. Archaeologists used a Leica Geosystems HDS2500 laser scanner to capture architectural attribute data at a resolution of 4mm (1 point collected every 4mm over the surface scanned). Western Mapping, Inc. of Tucson, AZ processed the scans from each site to create three-dimensional models of four structures. Tabular architectural data were also collected on each structure. Combined, the three-dimensional models and attribute data can be used to define cultural patterns in historic period Navajo and Havasupai architecture. The Navajo Nation and the Havasupai Tribe have close affinity to these and similar structures on the south rim of the park and suggest passive preservation is the desired method for protection.

Houk, Brett (Texas Tech University) and Miller, Kevin (SWCA)

[204] *The Late Archaic to Late Prehistoric Transition on the Eastern Edwards Plateau of Central Texas*

Recent data recovery excavations at 41WM1126, the Siren site, in Williamson County, Texas, documented a stratified Native American campsite with occupations spanning 2600 B.P. to 990 B.P., an interval straddling the transition from the Late Archaic to Late Prehistoric. The Siren site data, which are in the initial stages of analysis, have tremendous potential for examining the nature of the cultural "transition" during this interval along the eastern Edwards Plateau. This paper reviews the current understanding of prehistoric adaptations in the area during this significant period and identifies the research questions that the Siren site data can address.

Houle, Jean-Luc (University of Pittsburgh)

[188] *Ritual and Mortuary Complexes of Central Mongolia: Some Problems with Interpreting the Nature of the Late Bronze Age Societies*

Interpretations regarding the nature of Bronze Age societies of central Mongolia are based almost solely upon funerary structures and archaeological evidence of ritual landscapes. The critical peculiarity of these societies is that their monumental structures suggest a degree of social hierarchy, with possible hints of incipient hereditary principles, and supra-local centralized organization consistent with a chiefdom-like societal structure, yet other formal indicators characteristic of "chiefdoms" are apparently missing. This paper will discuss some of the current issues and problems related to the interpretations of these monuments and will address the enduring question of societal complexity development in this region.

Houston, Stephen (Brown University)

[168] *Things Fall Apart: The First Maya Collapse*

Scholarship places great emphasis, rightly so, on the renowned Maya "collapse" of the 8th and 9th centuries CE. But there is another collapse that deserves renewed focus: the dramatic shifts and ruptures in demography, society, and culture that took place in the early first millennium CE. This paper reviews the evidence for this collapse, suggests signal continuities and discontinuities with subsequent periods, and posits possible reasons for changes that represent real divides in the grand narrative of Maya dynastic civilization.

Houston, Stephen (Brown University) [103] *Discussant*

Howard, Andy [27] *see Challis, Keith*

Howard, Laura J. (Beyond Touring Inc.)

[111] *Archaeology & Ecotourism: A Creative Partnership between Beyond Touring Inc., Lamanai Archaeological Project (LAP), & the Community of Indian Church Village, Belize*

Through the practice of sustainable tourism and the facilitation of partnerships, Beyond Touring Inc. and the Lamanai Archaeological Project provide opportunities for the traveling public and local communities to interact on a mutually beneficial level. These types of partnerships create meaningful cultural attractions and venues that further sustainable economic and social development in areas where archaeological research is conducted. This paper will examine the past, present, and future endeavors of Beyond Touring Inc. and the Lamanai Archaeological Project and how they relate to the field of archaeology and the tourism industry.

Howell, R. Emerson (University of Arizona)

[104] *Stealing Stones and Bones: Rock Quarries, Burials, and the Foundations of Tucson*
Time has forgotten one of the most important economic and material contributors to the foundation (quite literally) of Tucson, Arizona. Stone quarrying in the late nineteenth century was important for providing a large portion of the building material for the foundations and façades of many of Tucson's earliest buildings and residences. While documenting stone quarries on the hills near Tucson, several historic burials, most likely Tohono O'odham in origin, were discovered. Given the nature and placement of the burials, it is highly plausible that Anglo miners were unaware that their quarrying activities were dismantling Native burial grounds.

Howell, R. Emerson [33] see Meegan, Cathryn

Howey, Meghan (Wayne State University)

[132] *(Re)thinking Tribal Processes: Regional Ritual Organization in Northern Michigan*
Research in Northern Michigan found Native American communities developed a regional network with an intricate ritual system entailing both inter- and intra-tribal monument centers to negotiate the social and environmental challenges of the Late Prehistoric period (AD 1200-1600). This regional research has broader implications for understanding both historical processes such as European Contact (ca. AD 1600) as well as conceptual theories about "tribes" in anthropology. Rather than dismiss the utility of the term "tribal", this paper argues that, by developing expanded appreciations of tribal cultural processes, we can move away from the categorical while retaining a useful comparative framework.

Howey, Meghan (Wayne State University) [153] Discussant

Howie, Linda (University of Sheffield)

[202] *Temple Trash or Trashed Temples? Two Terminal Classic Middens at Lamanai, Belize*
As with other lowland Maya city centres, the Terminal Classic period at Lamanai is marked by the sudden appearance of large refuse deposits in the immediate vicinity of ceremonial structures and adjacent plazas. Representing a significant departure from previous patterns of refuse disposal, these accumulations are often considered to relate to termination rituals performed upon the abandonment of these structures. This interpretation is considered in light of the evidence from Lamanai, where extensive excavation of such deposits has enabled a detailed examination of the history and nature of their accumulation and contents, particularly with regard to the pottery they contain.

Howie, Linda [149] see Day, Peter

Hritz, Carrie (Washington University in St. Louis)

[27] *Relict Landscapes and New Technologies: Reconstructing Channel and Settlement Patterns in Southern Mesopotamia Using Remote Sensing*

The archaeological landscape of southern Mesopotamia is characterized by traces of relict river channels and archaeological sites preserved in the modern landscape of southern Iraq. Archaeological survey data has been used to illustrate a picture of changing channel and settlement systems in southern Mesopotamia. However, past archaeological surveys have covered only 1/3 of the alluvial plain, leaving large unmapped areas. New technologies such as Corona satellite photography can be used in junction with past survey, maps and soil data to reconstruct channel and settlement patterns and enhance our picture of the dynamic settlement and landscape structure in ancient southern Mesopotamia.

Hruby, Zachary (UC Riverside)

[103] *Royal Debitage: Ritual Uses of Flakes, Blades, and Cores at El Perú, Guatemala*

It has long been noted that large quantities of obsidian debitage were deposited in some Classic Maya tombs. The best-known examples come from Tikal, where thousands of obsidian flakes were deposited in massive lenses above royal crypts. The question remains: if flakes produced during the reduction of blade cores is considered refuse, then why would the Maya cover their kings in garbage? Using a detailed technological and contextual analysis of similar deposits from El Perú, the actual nature of the obsidian debitage is revealed. It is argued that these deposits do not represent elaborate refuse disposal methods.

Hruby, Zachary (UC Riverside) [74] Discussant

Hsing, Yue-yi [20] see Li, Kuangti

Huang, Tsui-mei (Graduate Institute of Art History and Art Criticism, Tainan National University of the Arts)

[109] *"Central" History and "Peripheral" Memory: Diverse Modes of Expression and Multiple Imports in Shang Jades*

Massive historical texts, oracle bone documentation, and excavations of Anyang since the 1930s have all suggested that the Central Plains were the source of Chinese civilization. CP jades were regarded, alongside bronzes, as implements of ritual import and as artistic matrix for the period. However, since excavations stretched beyond the Central Plains in the 1980s, CP standards could no longer adequately measure outside cultural developments, triggering notions of "Center & Periphery" and "Cultural Latecomer". This paper demonstrates with Sanxingdui phenomena that such notions miss the evidence of cultural pluralism in which disparate but parallel cultures flourished since the thirteenth century BCE.

Hubbard, Duane (Tonto National Monument)

[185] *A Century of Preservation Efforts at Tonto National Monument - Lessons Learned and Future Directions*

The preservation of Tonto National Monument began in 1907 to protect prehistoric cliff dwellings of great ethnographic, scientific and educational interest. In an effort to curtail impacts caused by rodents, erosion, gravity and visitor disturbance, a wide array of preservation materials and methods have been implemented at the cliff dwellings. Some of these methods were simple and appropriate, while others have directly impacted the integrity of these structures in adverse ways. The lessons learned, both positive and negative, have resulted in a comprehensive ruins preservation plan and progressive documentation techniques that will guide future preservation efforts for the next century.

Huckell, Bruce (University of New Mexico) and Holliday, Vance (University of Arizona)

[165] *Investigations at Two Folsom Sites in the Middle Rio Grande Valley, New Mexico*

From 2001-2006, archaeological and geological investigations were conducted at Boca Negra Wash and Deann's site, two small Folsom bison processing camps. Research problem domains were reconstruction of land use, lithic technological organization, and past environment. Both sites are adjacent to small playas containing late glacial through Holocene stratigraphic records. Lithic analysis suggests exploitation of material sources in the northwestern quarter of New Mexico and very conservative use of stone. Stable isotope data from bison tooth enamel indicate that bison diet was dominated by warm season (C4) grasses, implying that Younger Dryas environmental conditions favored such a grassland community.

Huckell, Bruce [165] see Reitze, William; [62] see Mullen, Patrick

Huckerby, Cheryl (National Guard Bureau)

[164] *CRM: A Help or a Hindrance to the Preservation of the Nation's Heritage?*

Cultural Resource Management (CRM) has been at odds with the academic archaeological community essentially since the phrase was coined in the 1970s in support of the National Historic Preservation Act in 1966. CRM was and in some cases still is, equated with salvage archaeology with the results of the work considered not useful for "real" archaeological study let alone providing contributions to local, regional, and national archaeological knowledge bases. Experience has shown this is a viewpoint and not reality. This paper provides an overview of CRM projects that have made contributions to the various archaeological knowledge bases and beyond.

Hudler, Dale [208] see Wilson, Samuel

Hudson, Corey (University of Missouri-Columbia)

[124] *Keeping Stock: A Frames of Reference Approach to Explaining Variability in Herd Demography*

Although the animals that pastoralists herd share a number of morphological features, each of these species has its own unique physiological responses to the environments they occupy. This poster argues that the proportion of small-bodied to large-bodied stock reflects the herders' desire to mitigate capital loss, given uncertain environmental conditions. Furthermore, one of the cultural manifestations of this fluid demographic reality is the variable proportions of milk and meat in the pastoral diet. It will also show that groups whose environmental

conditions predicate limited plant dependence and primarily large-bodied stock tend to adopt methods of processing lactose prior to consumption.

Hughes, Susan S. (Seattle University), Nagaoka, Lisa (North Texas University) and Linse, Angela (Temple University)

[81] *Are there Gender Differences in Completion Rates? An Example from One Research I University*

Since 1999, graduate students in the archaeology program at the University of Washington have gathered long-term data on degree completion rates. These data include year of entry, year of completion or program termination, and gender. The statistics illustrate interesting long-term trends in the graduate school experience, particularly, that women traditionally take longer to complete their degree than men. These statistics are presented and discussed. While these statistics provide one example, they may reflect a broader national trend.

Hull, Bradley (Research Lab for Archaeology, University of Oxford, UK), Hedges, Robert (Research Lab for Archaeology, University of Oxford, UK) and Hamerow, Helena (Institute of Archaeology, University of Oxford, UK)

[39] *Social Differentiation and Diet in Early Anglo-Saxon England: Stable Isotope Analysis of Archaeological Human and Animal Remains*

The diet of the early Anglo-Saxons (410-700 AD) in Britain presents archaeology with a moderate amount of circumstantial information about diet, but not a concrete understanding of the process involved in production and consumption during this Dark Age period. The current study will look at the stable isotopes, $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$, recorded in bone collagen of more than 450 humans and 350 animals. The stable isotope evidence will be compared to the evidence from Anglo-Saxon inhumations: dietary evidence reflecting biological criteria (sex, age and height) and dietary patterns representing cultural differentiation (grave goods, body position, and grave orientation).

Hull, Kathleen (University of California, Merced)

[146] *Defining Identity in Interior Colonial California: A View from the Sierra Nevada*

Much anthropological focus on the colonial experience of California native peoples has centered on the coast and adjacent mountains. As documented by both archaeology and native oral history, however, the influences of the Spanish and Russian presence were felt well beyond this zone of direct interaction. In hinterland areas such as the high Sierra, native people were enduring demographic shifts, in particular, and negotiating and defining new identities with their neighbors in the wake of such change. Ethnohistoric data are especially important in revealing and clarifying this process.

Humphrey, Emma (University of Toronto)

[101] *Menu Decisions at Urkan er-Rubb: Preliminary Faunal Analysis of a Lower Jordan Valley Epipalaeolithic Site*

Within the context of the Epipalaeolithic of the Lower Jordan Valley, few pre-Natufian sites in this area have received extensive taphonomic treatment. This paper will present preliminary results of a comprehensive zooarchaeological and taphonomic analysis of faunal remains from the site of Urkan er-Rubb IIa, dated to approximately 15,000 years BP. This site represents an important Kebaran site with two occupation episodes. Although *Gazella gazella* remains dominate in all levels and areas of the site, a preliminary comparative analysis of these and other fauna from the site indicate possible changes in site function over time.

Hunt, Kevin [155] see Wesson, Alex

Hunt, Terry (University of Hawaii) and Lipo, Carl (California State University Long Beach)

[92] *Dating the Colonization of Rapa Nui (Easter Island)*

Archaeologists have long accepted an early colonization date for Rapa Nui. Based on few radiocarbon dates and bolstered by assumptions from historical linguistics, dates of ca. 400 or 800 AD seemed to fit a regional model. However, a new suite of radiocarbon dates from stratigraphic excavations at Anakena have established a chronology beginning around 1200 AD. Critical analysis of earlier radiocarbon determinations shows little reliable evidence for a longer chronology. In this poster we examine the corpus of pre-750 BP dates and consider the implications for dating the first human colonization of Rapa Nui.

Hunt, Terry [92] *see Esh, Kelley; [92] see Boutain, Jeff; [92] see Bell, Matthew; [92] see Safi, Kristin*

Hunter, Andrea A. (Northern Arizona University)

[201] *Wa-zha'-zhe (Osage Identity) We Came from the Stars*

According to oral tradition, the Wa-zha'-zhe (Osages) came from the stars, from among the stars and of the stars. We have a detailed account of how and why our people came to the Sacred One (Earth) and how the tribe formed. As gatekeepers of scientific knowledge, archaeologists have rendered interpretations of Osage identity. As an enrolled member of the Osage Nation and an archaeologist, I will compare and contrast the wisdom of our elders, scientific interpretations, and my humble view of Wa-zha'-zhe identity; including how these perceptions are received by the Wa-zha'-zhe and archaeological communities.

Huntley, Deborah (SW Arch. Consultants), Scheick, Cherie (SW Arch. Consultants) and Deyloff, Glenda (SW Arch. Consultants)

[90] *The Areas in Between: Small Sites on the Chaco Periphery*

Recognizing the importance of looking beyond the Chaco core, many archaeologists focus on outlier communities and their relationship to developments in the core. This Chaco-centric focus emphasizes large, dramatic sites to the exclusion of smaller, nonarchitectural sites in the areas in between the core and outliers. Nearly 30 years of survey and excavation in the southeast San Juan Basin and periphery provides limited evidence for Chaco-related developments and highlights the variability and complexity of small sites. Using GIS, we examine local settlement histories and their implications for Chaco regional models.

Huntley, Deborah L. [131] *see Habicht-Mauche, Judith A.*

Hurst, W. Jeffrey [39] *see Powis, Terry*

Hurtado, Araceli [162] *see Tiesler, Vera*

Hutira, Johna (Northland Research)

[122] *Twenty-Nine Plants at Twenty-Nine Palms*

Cultural resource investigations at the Twenty-Nine Palms Marine Corps Air Ground Combat Center have yielded information about the subsistence practices of the prehistoric inhabitants. This poster examines the various plant resources represented in the archaeological record.

Hutson, Scott [200] *see Stanton, Travis*

Hwang, Ming-chorng (Institute of History and Philology, Academia Sinica, Taiwan)

[109] *Herders and Farmers: Interaction between the Northern Qingjian/Shilou Bronze Culture and the Shang Civilization*

This author argues that bronze artifacts, archaeological contexts, and bronze production methods suggest that the dwellers at Qingjian, Shaanxi and Shilou, Shanxi, were herders. Their material culture came from further north and the southward movement followed the shifting of the steppe/forest line after the great warming period. Shang-style bronzes from this area, on the other hand, were imported. Although the bronze-using culture at Qingjian and Shilou was not pristine, it became one of the most prosperous bronze cultures of the Northern Zone because of its close interaction with the Shang, the most successive agrarian civilization during the second millennium BC.

Hyde, David (University of Texas-Austin)

[49] *Artificial Cranial Modification on the Maya Frontier*

This paper discusses patterns of artificial cranial modification among the prehistoric Maya. The tabular oblique form was common throughout the Maya area during the Late Preclassic, while by the Late Classic, the tabular erect form became dominate. An exception to this is found at the frontier sites of Palenque and Copan where the traditional tabular oblique form remained dominate. A potential explanation for this phenomenon is that along frontiers, where identity is more threatened by the presence of other culture groups, there is a trend to be exceedingly traditional and less progressive relative to heartland inhabitants.

Iannone, Gyles (Trent University)

[202] *The Ritual Termination of Elite Residences during the Terminal Classic Period: Implications for Understanding Ancient Maya Societal Structure*

A number of researchers have recently argued that Lévi-Strauss' "house society" model is applicable to the ancient Maya. Although it is too vague to serve as the panacea to all our interpretive problems, current excavations in Belize have highlighted a pattern of destruction and/or ritual termination of elite residences during the Terminal Classic period which provides support for the underlying foundations of this construct. It is concluded that no inherent contradictions emerge if we emphasize the centrality of the royal "house" in conjunction with the more widely accepted city-state model.

Iizuka, Fumie (University of Arizona), Vandiver, Pamela (University of Arizona) and Cooke, Richard (Smithsonian Tropical Research Institute)

[63] *Comparison of the Properties of Monagrillo Ceramics to Clays Gathered at Monagrillo Sites* Monagrillo pottery (ca 4800-3200 BP) of central Panama is the oldest ceramic in Central America. Many ethnographic and archaeological studies have shown that potters use local clay sources. In order to study the technology of Monagrillo production, clays from Monagrillo sites were collected and the range of their physical properties was tested and compared to the microstructure, bulk composition and firing characteristics of sherds from coastal and inland Monagrillo sites. The results provide insight into the range of clay resources available and understanding of problems solved and choices made by Monagrillo potters.

Illingworth, Jeff [192] see Adovasio, James M.**Immich, Jennifer (University of Minnesota)**

[12] *Iconography and Faunal Remains: Imagery and Consumption in Late Prehistoric Europe* The cemeteries and settlement at the Iron Age site of the Dürrenberg bei Hallein, Austria, have provided a variety of iconographic material. This paper will focus on animal representations in comparison to the faunal record found on the site. Specific attention to context of both types of artifacts will highlight the correlation between production of wearable identifiers (fibulae) and animals employed in ritual or dietary practices.

Ingram, Scott (Arizona State University)

[38] *Hohokam Settlement Pattern Changes and Climate in Central Arizona*

Settlement patterns in central Arizona were dramatically reorganized from about A.D. 1100 to 1450. Settlements north and east of the irrigation-intensive Hohokam villages of the Phoenix basin became more tightly clustered and formerly occupied areas were abandoned. Conflict between confederacies of settlements has been hypothesized. This paper examines the relationship between these settlement pattern changes and variation in agricultural potential as inferred from paleoclimate data and access to water. Retrodicted precipitation, streamflow, and temperature from tree-ring records and historic climate variability throughout central Arizona are examined in the context of the reorganization of the settlement landscape.

Inomata, Takeshi (University of Arizona) [103] Discussant**Inurreta, Armando (Universidad Autonoma de Yucatan)**

[189] *Isla Piedras: A Northern Campeche Coast Seaport as Part of a Regional Polity*

Archaeological studies realized on the north Campeche coast have increased our knowledge of economic and political interactions among the coastal communities in the region. Recently, an investigation carried out at the archaeological site of Isla Piedras has shown it to be a site involved in a coastal trade economy that moved local as well as non-local goods. Ceramic analysis dates the principal occupation of the site to the Late Classic, when Isla Piedras was likely linked through trade to other sites in the region, forming a polity that embraced the coastline and inland areas of the north Campeche coastal zone.

Iovita, Radu (University of Pennsylvania)

[56] *Relations Between Bifacial and Unifacial Industries in the European Middle Paleolithic: A Morphometric Approach to Resharpener Patterns*

Resharpener has been used to explain lithic variability within Paleolithic, Paleoindian, and Australian contexts, by proposing that morphological types represent stages in a continuum of

re-use. Such continua can be quantitatively described through multivariate allometry and Fourier analysis. Further, these characterizations will be used to assess use- and maintenance-related differences and similarities between bifacial and core-and-flake industries within the Middle Paleolithic of Europe. In particular, reduction in Quina scrapers will be compared with that found in Micoquian and Mousterian of Acheulean Tradition bifacial tools. This method allows a first comparison of bifacial and unifacial industries on a common ground.

Iriarte, Jose (University of Exeter)

[10] *Landscape Dynamics in the La Plata Basin During the Mid and Late Holocene*

New paleoecological data from the La Plata Basin is begging to allow archaeologists to investigate the dynamic interactions between human populations and the environment in more precise ways. This paper explores the different constraints and opportunities that the changing mid and late Holocene landscapes posed to pre-Hispanic populations in this region. Three case studies including the wetlands of southeastern Uruguay, the southern Brazilian Highlands, and the Pantanal wetlands are compared and discussed. The evidence for the onset of and landscape transformation associated to the beginning of food-production in the region is also considered.

Iriarte, Jose [10] see Dillehay, Tom; [156] see Holst, Irene

Isbell, William (SUNY - Binghamton) [130] Discussant; [76] Discussant

Ishihara, Reiko (University of California, Riverside)

[108] *Gender Processes in the Formation of and Negotiation of Power in the Main Chasm, Aguateca, Guatemala*

Archaeological investigations in the prominent chasm at the Late Classic period Maya center of Aguateca revealed shifts in religious use of the subterranean feature in relation to key political events that affected the Dos Pilas-Aguateca twin dynasty. During such politically unstable times, the Aguateca religious authorities conducted ceremonies in specific locales within the chasm in order to negotiate with the supernatural powers accessed through the earth's opening. Based on the evidence of such ritual activities, this paper examines gender relations as an integral aspect in the formation of and negotiation of power at crucial political moments for the Aguateca dynasty.

Isla, Johnny (Instituto Andino de Estudios Arqueologicos (INDEA))

[17] *Paracas and Initial Period Sites in Palpa on the South Coast of Peru*

During our recent investigations of archaeological sites in the valleys of Palpa, on the south coast of Peru, we excavated several undisturbed settlements and funerary contexts and recorded geoglyphs and petroglyphs of the Paracas and Initial period cultures. Our series of well documented radiocarbon dates from stratified architectural contexts confirms that the occupation started at the end of the Initial Period (1100 BC) and covered all phases of the Paracas culture (800-200 BC). These new results bear important implications for the interpretation of the cultural history of the Palpa-Nasca region and the chronology of the south coast of Peru.

Itzstein-Davey, Freea [86] see Taylor, David; [86] see Dodson, John

Ivas, Alice (University of South Alabama) and Carr, Philip (University of South Alabama)

[177] *A Vexing Variety of Viewpoints: Understanding the Interested Public in Alabama*

Diverse people outside the profession of archaeology have an interest in artifacts and the past. Various labeled looters, amateur archaeologists, and so on, these folks can have both positive and negative effects on the discipline of archaeology. Recently, members of the Alabama Archaeological Society have begun a movement to repeal ARPA because sites are being eroded away and they cannot save the artifacts from losing site context before ending up downriver. There is a need to understand the various viewpoints of the public and develop strategies for educating both sides and saving archaeological sites.

Ives, John W. (Jack) (Provincial Archaeologist, Alberta)

[163] *Insights into the Apachean Transition from the Subarctic using Ceramic and Food Term Etymologies*

The Apachean transition from the southern Subarctic to the American Southwest and southern

Plains had two key facets—adoption of a Plains bison hunting lifestyle, and trade with Plains periphery horticulturalists. In shifting from the Canadian boreal forest, Apachean ancestors adopted new material culture and encountered unfamiliar species. The distribution and etymology of ceramic and food terms in Apachean languages each shed considerable light on the timing and nature of these processes, as well as the character of interaction with horticultural societies like Fremont. Definitive archaeological traces of this transition occur in the Promontory Cave artifacts and associated rock art.

Ives, Tim (University of Connecticut)

[44] *Deep Holes and Deeper Questions: Investigating a Late Archaic Pit Feature Complex at Southeastern Connecticut's Preston Plains Site*

Excavations at the Preston Plains site have revealed an extensive complex of large pit features dating to the Late Archaic Period. Though initially interpreted to be subterranean remnants of pit houses, the morphological variability of these features and low artifact densities from "floor" surfaces demand the consideration of multiple explanatory models. Also, these features were generated by Native Americans discarding both Laurentian and Small-Stemmed "tradition" tools, affording us an opportunity to critically examine the utility of correlating tool forms with cultural signatures in southern New England during this period.

Iwaniszewski, Stanislaw (Escuela Nacional de Antropología e Historia, Mexico / State Archaeological Museum, Warsaw)

[143] *Lunar Series at Copan and Quirigua*

In this paper I discuss Glyphs E, D together with Glyphs C and A. The Moon Age dates are often in disagreement with the lunations provided by Glyphs C and A. These discrepancies suggest shifts in choosing the starting point of the moon age (observational parameters), changes in calculations of the length of a lunar synodic period (observational-computational parameters), and transformations within the system of grouping of moons into a series of 5 or 6 (formal computational parameters).

Iwaniszewski, Stanislaw [97] see Suarez Cruz, Sergio

Izuho, Masami (Graduate School of Letters, Hokkaido University)

[209] *Paleoenvironmental Changes during the Late Pleistocene in Japan: A Human Ecosystem Approach*

This paper presents the environmental changes that occurred during the late Pleistocene in Japan in regards to the human ecosystem. Although a huge number of rescue campaigns for paleolithic sites have been continuously launched and have provided a reconstruction of lithic reduction methods and assemblage patterns, the consideration for non-cultural contextual components of the human ecosystem (fauna, flora, landscape and climate) and their relationship to lithics has been ignored. It is highly recommended that modern paleolithic archaeology in Japan take the human ecosystem approach into account for future research projects.

Jackson, Edwin (University of Southern Mississippi), Flosenzier, Diana (University of Southern Mississippi) and May, Jared (University of Koblenz- Landau)

[173] *Resituating the Winterville Chiefdom in Mississippian Dynamics of the Lower Mississippi Valley*

Winterville Mounds was the center of one of several prominent chiefdoms that emerged in the Lower Mississippi Valley ca. AD 1200. Previous investigations depicted the site as a rapidly constructed vacant Mississippian mound center, abandoned by the beginning of the 14th century. A new round of excavations in 2005 and 2006 at Winterville mounds calls into question existing interpretations of the site's chronology and the nature of the Mississippian occupation there. This paper presents new data on site chronology, geoarchaeological contexts, effects on site organization of the program of mound construction, domestic and other architecture, and subsistence.

Jackson, Sarah (University of Toronto)

[188] *Investigating Inequalities: Representation and Experience of Classic Maya Status*

Archaeologically investigating status is key to understanding past hierarchical relationships and organizations, yet remains challenging in deciphering the value and meaning of material markers of inequality. Emic visual depictions of leaders and their assemblies complement

archaeologically-recovered remains by revealing elements of an elite habitus, through the public portrayal of elite experience. Classic Maya painted vessels – vehicles for asserting and circulating status within the courtly community – constitute a rich dataset depicting such courtly tableaux. This integrative analysis illuminates archaeological and hieroglyphic studies through an exploration of representations of inequality, as marked and experienced through space, bodies, and relationships.

Jackson, Sarah [26] *see Barrientos, Tomas*

Jackson, Thomas [50] *see Price, Heather*

Jacob, John [159] *see Nordt, Lee*

Jacobs, Ian (Thames & Hudson) [24] *Discussant*

Jacobs, Tedd [113] *see Fruhlinger, Jake*

Jacobson, Jeffrey (University of Pittsburgh)

[13] *Immersive Interactive Displays for 3D Models of Archaeological Data; Inside the Virtual Pompeii Theater District*

The Virtual Pompeii Theater District is a 3D reconstruction built from site photographs, early drawings and ancient writings. Using the CaveUT free software and the Unreal Engine, the user can navigate the reconstruction in an immersive display. Examples include digital dome theaters and individual viewers resembling eyeglasses. From ancient architecture to natural environments, the archaeologist can represent interior views and movement as well as traditional exterior and static views. Each way of seeing emphasizes different aspects of the artifact or environment. We will explore this idea and discuss how to configure low-cost displays using CaveUT.

Jacobson, Jodi (University of Tennessee)

[114] *Reassessing Environmental Change in the Western Ozarks: A Case from Rodgers Shelter and Brynjulfson Cave*

A variety of grassland fauna native to the Great Plains have been found at archaeological sites in the Prairie Peninsula. Until recently, an accurate understanding of the role of western fauna in this area was incomplete as there were no published methods to differentiate between mule deer and white-tailed deer post-cranial remains. Using new techniques, mule deer have now been identified in archaeological context from the western Ozarks. The addition of this previously unconsidered species is altering the perceived presence of wooded and open/grassland species in the Prairie Peninsula. Evidence from Rodgers Shelter and Brynjulfson Cave is presented.

Jadin, Ivan [39] *see Golitko, Mark*

Jaime-Riveron, Olaf (University of Kentucky), Cruz, Juan Carlos (UNAM), Moecher, David (University of Kentucky) and Matadamas, Raul

[74] *Characterization of Serpentinities from La Venta and the Analysis of Chaîne-Operatoire*

In this paper we will define the mineralogical and geochemical characteristics of serpentinites from La Venta, the diagenetic processes, and the general physical attributes which were constraints for the manufacture of artifacts. By examining provenance and the study of steps of production, we can understand the importance of serpentinite as an exchange value. We will explain why this raw material replaced most of the jadeite during the Middle Formative in the Southern Gulf Coast of Mexico. The importance of contextual information and controlled excavations also help us to see diachronic technological changes.

Jaime-Riveron, Olaf [74] *see Tenorio Castelleros, Dolores; [74]* *see Barba, Luis*

Jakes, Kathryn [192] *see Tiedemann, Erica; [192]* *see Baldia, Christel*

Jameson, John (National Park Service) [118] *Discussant*

Janik, Lilliana (University of Cambridge)

[12] *Intentionality and Cultural Choices, Following Visual Narrative of Prehistoric Rock Art of Northern Europe*

Embodied realism along side art history is going to be the leading approach in understanding intentionality and cultural choices made by prehistoric artists in creating visual depictions of rock art. Following the visual narrative, this presentation will focus on visual interpretation of rock carvings as 3D moving images. I shall argue that only by the use of film are we able to visually conceptualise the prehistoric carvings of Northern Europe (5000 – 3000 BP) within our own Western visual tradition, since only film allows us to translate from a 2D into a 3D visual medium.

Jansen, Maarten (Leiden University) [46] Discussant

Jansen, Maarten (Leiden University) and Perez Jimenez, Gabina Aurora (Leiden University)

[46] *Reading the Codex of Yanhuítlan*

The Codex of Yanhuítlan is an early-colonial pictorial manuscript from Ńuu Dzaui (the Mixtec region, Southern Mexico). Due to its damaged, fragmentary condition, it has proven difficult to establish the order of the pages, as well as the contents and aims of the narrative. The drawings show a fascinating integration of Mixtec and European stylistic elements into a new artistic creation. By combining different sources of information and multiple lines of reasoning, we arrive at an overall reading, which shows the impact of the military and spiritual conquest on native dynastic history, tributary structure, and religion.

Jansen, Susan [82] see Williams, Joel

Janusek, John Wayne (Vanderbilt University)

[137] *Proyecto Jach'a Machaca: Objectives, Results, and Future Directions*

Initiated in 2001, Project Jach'a Machaca seeks to evaluate the rise of complexity and state formation in a virtually unknown but theoretically important region of the Andean altiplano of Bolivia. Our investigation focuses on the Formative ritual-political center of Khonkho Wankane and its hinterland, but in comparison with contemporaneous and later major settlements in the region. We seek to directly address the role of four variables frequently considered to be influential for past sociopolitical transformations: productive intensification, economic interaction, ritual practice, and social identity. This paper summarizes our ongoing investigation and plans for future research in a fascinating Andean region.

Jeffcoat, Leo [45] see Levine, Marsha

Jefferies, Richard (University of Kentucky) and Burdin, Sheldon (University of Kentucky)

[197] *Early to Middle Holocene Hunter-Gatherer Interaction in the North American Midcontinent*

Multiple data sets are used to evaluate the extent and intensity of intergroup exchange and interaction among Early to Middle Holocene hunter-gatherers that once inhabited the lower Ohio and central Mississippi river valleys. Analysis of the spatial distributions of stylistically distinctive bone pins and atlatl weights suggests that interaction among small local groups increased during the Middle Holocene, reflecting the emergence of larger, more complex regional-scale social networks. The nature of interaction among local groups is discussed and possible explanations for changes in the level of group interdependence are explored.

Jenkins, Emma [86] see Rosen, Arlene

Jenkins, Ned (Alabama Historical Commission) and Mann, Jason (Troy University)

[60] *Early Shell Tempering in the Mobile River Drainage*

Shell tempering occurs in the Mobile River drainage as part of a cultural package that first appears ca. AD 1100 in the form of what will be described as the Moundville Variant.

Jennings, Justin (Royal Ontario Museum)

[43] *In the Shadows of Wari: Preliminary Results of the 2006 Excavations at Collota and Tenahaha in the Cotahuasi Valley, Peru*

During the Middle Horizon (600-1000 AD), the Cotahuasi Valley of highland Peru was one of many valleys across the Central Andes that was heavily influenced by the Wari culture. In 2004, excavations were started at the sites of Tenahaha and Collota to explore the nature of this influence in the valley, and this paper presents the results of the 2006 season. This paper describes the 2006 excavations in habitation, ritual, and storage areas, presents C-14 dates and paleobotanical data from the 2005 campaign, and offers some tentative interpretations of the relationship of the sites to the Wari state.

Jensen, Eva [123] see Rager, Hal

Jeppson, Patrice L. (West Chester University)

[111] *Markaeology: (noun) 1. mar-ket-ing arch-e-ology, 2. exposing an idea of archaeology to the public*

Don't worry, this is merely a moniker to let us talk about something we ignore and abhor. Archaeology and marketing are words/concepts rarely uttered together for obvious (and less obvious) reasons, although the avoidance of overt promotion seems to be working to archaeology's detriment. This presentation will explore some opportunities for marketing 'the idea of archaeology'. Examples will draw from a current Society for Historical Archaeology Public Education and Interpretation Committee project - a survey study based on a pictorial rendering conveying an idea of historical archaeology for public consumption.

Jeske, Robert (University of Wisconsin-Milwaukee)

[204] *At the Edge of the Prairie Peninsula: Oneota Dates, Diets, Technology and Spatial Organization*

Recent excavations at the Crescent Bay Hunt Club site at Lake Koshkonong provide significant new information on the way that Oneota groups occupied the northern portion of the prairie peninsula. A comparison of Crescent Bay to related components within the region allows an updated overview of cultural chronology, subsistence, lithic, metal, and ceramic technologies, mortuary practices and spatial relationships during the 12th through 14th centuries. Building on the work of previous scholars, this update alternately refines, strengthens and refutes our concepts of Oneota culture history.

Jiao, Tianlong (Bishop Museum)

[20] *Toward a New Understanding of the Hemudu Culture: Recent Discoveries in Zhejiang Province, China*

The significance of the Hemudu Culture (5000-7000 BP) for understanding the prehistoric rice agriculture of East Asia has been widely recognized. A series of new archaeological discoveries in Zhejiang over the past decade have yielded a great deal of data for a fresh understanding of the economy, settlements, exchange networks, cultural transformations and population migrations of the Hemudu Culture. Using these new materials, this presentation re-examines the dynamic process of economic and cultural transformations of the Hemudu Culture and their impacts upon the prehistory of southeast China.

Jing, Zhichun (University of British Columbia)

[109] *The Materiality of Jade Use at Anyang and Sanxingdui*

The material qualities, such as durability and color (natural or altered), of nephrite critically affected how they were perceived, exchanged, utilized, and symbolized; and the perception and use of these qualities were culturally and historically contingent. Using non-destructive near-infrared spectroscopy, we have examined jades found at Anyang and Sanxingdui. By emphasizing the materiality of objects, our science-based analysis attempt to address interregional interactions by not only looking for mineralogical fingerprints, but also asking questions of the ways in which the material properties of jades were perceived and symbolized, and how they affected social relations in culturally different societies.

Jochem, Chris [65] see Fariss, Barker

Jodry, Margaret (Smithsonian Institution) [190] Discussant

Jodry, Margaret (Smithsonian Institution) and Owsley, Douglas (Smithsonian Institution)

[129] *Paleoamerican Burials at Horn Shelter Number 2, Texas, Connections to Land, People, and Spirit*

11,100 years ago, a man and girl were interred in a single grave associated with a San Patrice occupation, within a deeply stratified rock shelter on the Brazos River, Texas (41BQ46). The nature and placement of individuals, offerings, and capstones provide an extraordinary doorway to their world of cultural and spiritual relationships. A flintknapper's tool kit accompanied the male, as did hawk talons, badger claws, tortoise carapaces, red ocher, coyote teeth, and shells speaking of connections with all his relations. A bone needle accompanied the girl. Owsley's reanalysis of their human remains informs discussion of ancestral ties in the Americas.

Johansen, Trine [6] *see Darwent, Christyann*

John, Jennifer (University College London)

[202] *Symbolism on Postclassic Ceramics from Lamanai, a Maya site in Northern Belize, Central America*

This paper summarises findings of the first detailed ceramic iconographical study performed at Lamanai, distinguished in the Maya Lowlands by its sustained occupation through the 'collapse', a period of decline for many other Classic Period sites. Ceramic iconographic styles from the Terminal Classic, Postclassic, and Early Historic Periods were defined and their evolution studied. Stylistic breaks in symbolism coincide with marked changes in Lamanai's cultural sphere, particularly in relation to the elite. Results show an ideology centred on the Cosmic Dragon distinct from feathered serpent-focused beliefs as found at other Maya Lowland centres, such as Chichen Itza in the Postclassic.

Johnson, Amber (Truman State University), Gil, Adolfo (CONICET-Museo de Historia Natural de San Rafael) and Neme, Gustavo (CONICET- Museo de Historia Natural de San Rafael)

[124] *To Be or Not to Be a Maize Farmer*

Despite all we've learned about the benefits of a hunting-gathering way of life, the view that agriculture is inherently superior to hunting-gathering remains. Thus, there is a perpetual question concerning those people who did not invest in agricultural production – particularly if it is clear that they knew about it! This research explores the distribution of archaeological evidence for maize cultivation across both North and South America using environmental and hunter-gatherer frames of reference to isolate the conditions under which hunter-gatherers, faced with the possibility of adopting maize cultivation, choose to be or not to be a maize farmer.

Johnson, C. David [181] *see Kohler, Tim*

Johnson, Eileen [155] *see Backhouse, Tara J.*

Johnson, Erlend (Kenyon College) and Porobil, Jonathan (Kenyon College)

[147] *Open Door Policy: Valley Integration and the Formalization of Site Access at El Cafetal, El Paraíso Valley, Honduras*

Recent investigations in the North Plaza at El Cafetal have demonstrated that the entrance to the site was formalized late in its occupation. This formalization included the construction of a cobble plaza delimited by two gateway structures to the north and a low platform, step, and wall assemblage to the south. This architectural assemblage also appears to have funneled traffic into the Main Plaza between two non-residential pyramidal buildings. This formalization of space may have contributed to an administrative strategy designed to increase the connection between the site core and surrounding settlement, drawing valley residents into the center.

Johnson, Ilana (UCLA)

[205] *Households in Urban Context: A Comparison of Two Domestic Compounds from Pampa Grande, Peru*

This paper presents the results of recent excavations at the Late Moche Period (AD 600-800)

urban center of Pampa Grande located in the Lambayeque Valley, Peru. Two domestic compounds are compared in order to characterize the nature of the domestic occupation of the site. The Moche household is organized in a similar way throughout the North Coast and certain domestic activities, spaces, and artifacts characterize that worldview. In addition, the urban character of household organization is discussed, including the heterogeneous nature of craft production, planned and formal architectural layouts, and differences in social status.

Johnson, John (Santa Barbara Museum of Natural History)

[146] *Varieties of Mission Experience: Continuities and Coalescences of Southern California Indian Tribal Groups*

California Indians belonging to independent sociopolitical groups, having various forms of social organization, and speaking different languages were brought together in mission communities during the Spanish colonial period. Inter-marriage and population decline resulted in a coalescence of tribes. Using information derived from eight missions, the varieties of indigenous group experiences in southern California are compared and contrasted. Differences derive from contrasting missionization strategies and whether post-secularization communities were located in rural or urban areas. Whether or not groups eventually became recognized as tribes by the federal government depended upon historical and demographic processes set in motion during mission times.

Johnson, Phillip (Texas A&M University) and Pearl, Frederic

[93] *Archaeological investigations of mountain settlement on the Samoan island of Tutuila*
This poster reports the results of the Samoan Mountain Settlement Project. During the field seasons of 2004 and 2005 archaeologists from Texas A&M University investigated three prehistoric mountain residential sites on the Samoan island of Tutuila. Survey, testing, and mapping conducted on the sites of Lefutu (AS-21-02), Levaga Village (AS-25-27), and Old Vatia (AS-24-002) established a chronology for the occupation of these sites as well as detailed maps of the abundant surface features. We will discuss why each site represents a significant opportunity for investigating prehistoric Samoan settlement on the island of Tutuila.

Johnson, William (University of Kansas), Zeidler, James (Colorado State University), Sherman, Stephen (Colorado State University) and Hall, Scott (U.S. Army)

[34] *New Evidence for Paleoindian Occupations in the Kansas River Valley, Fort Riley, Kansas*
Recent NRHP evaluation of two deeply buried (~3m) archaeological sites within high-terrace fill of the Kansas River valley at Fort Riley, KS, has yielded new evidence of early Paleoindian occupations dating from approximately 12,000 to 10,700 cal yrs BP. At both the Mandel site (14RY6175) and the Hall site (41RY6176), Paleoindian age lithic and bone materials were found in association with the well-defined A horizon of a paleosol coeval with the regionally-expressed upland Brady Soil, formed during the Younger Dryas climatic event. This poster documents results of archaeological and geomorphological testing, including recovered lithic assemblages, radiocarbon chronology, and paleoenvironmental reconstruction.

Johnstone, Dave (Humboldt State University) and Shaw, Justine (College of the Redwoods)

[162] *The Role of Open-Fronted Architecture in Northern Yucatan*

"Open-Fronted" architecture has been described at a number of sites in the Northern Yucatan. Noted for double rear and side wall lines with a single wall line in the front, the structures are generally positioned in a manner that violates earlier spatial configurations. They have been interpreted as the intrusion of new cultural elements, potentially accompanied by political conquest. They appear to be temporally diagnostic, appearing relatively late in the occupational sequence of each site. In an effort to better understand what the intrusion of such architecture represents, two such structures were excavated at the minor site of Nohcacab.

Jolie, Edward (University of New Mexico) and Burgett Jolie, Ruth (University of New Mexico)

[192] *Waterborne Boundaries: Twined Water Bottles and Social Interaction in the Western Great Basin and Southern California*

Twined water bottles were one of the most important forms of basketry used by the inhabitants of the arid western Great Basin and southern California. In both regions archaeological evidence indicates that this technology has considerable antiquity. This paper synthesizes

published data on water bottles with the results of an analysis and radiometric dating of a twined water bottle from Cuyama Valley, California. Our research supports earlier work by Charles Rozaire suggesting that twined basketry, generally, and water bottles, specifically, provide an avenue for the study of persistent social boundaries and interaction among Chumashan and Uto-Aztecan language-speaking groups.

Jones, Bradford (Hicks & Company) and Smith, Suzanne (Hicks & Company)

[80] *The Matter of Difference: Archeology and the Materiality of Identity in Freedmenstown, Houston, Texas*

In fall of 2005, archeologists conducted testing of late 19th and 20th century contexts at the Gregory Lincoln School in the Freedmenstown district of Houston. This paper considers how the artifacts recovered during these investigations inform us on the nature of urban life for the residents, and how difference, particularly racial and economic difference, is manifested in the material record. In doing so we are not only confronted with the difficulties of interpreting the urban archeological record, but with our own expectations of difference in the archeological record and how it is shaped by historical and contemporary discourse.

Jones, Brian (PAST, Inc.)

[44] *Providing a Context for Three Early through Middle Archaic Pit Features in Southeastern Connecticut*

Recent excavations for a golf course associated with the Mashantucket Pequot's Foxwoods Resort Casino in southeastern Connecticut resulted in the identification of three large pit features dating to the Early through Middle Archaic periods. The three features represent similar deep oval pits with a well-developed, reddened cambic (Bw) sandy loam matrix. The features are associated with two adjacent lakeshore sites where diagnostic Early and Middle Archaic artifacts were recovered. This presentation discusses the local and regional contexts of these pit features, their possible mortuary function, tribal participation in their excavation/preservation and implications for settlement organization and land-use at this time.

Jones, Christopher (University of Pennsylvania)

[161] *Market Architecture and Trash*

The only ethnographic illustration of a Mesoamerican marketplace is that of Tenochtitlan, with arcades and a large corner platform. These elements were found in excavation of a possible marketplace next to the ball court in the East Plaza at Tikal, Guatemala, where low roofed buildings with close-set doorways on both sides define inner and outer streets. A larger building and possible guard houses stand at corners. Floors were well-swept but a deep midden off the plaza yielded abundant Late Classic ceramics and possible market trash. This architecture may be duplicated at Yaxha.

Jones, Eric (Penn State University)

[129] *Settlement Demography of the Onondaga Iroquois, A.D. 1500-1700*

Until now archaeologists and demographers have been unsure about how European-introduced diseases affected New York Iroquois groups outside of the Mohawk. This project explores the population trends of the Onondaga Iroquois during the late pre-contact and early contact phases of their cultural development in order to understand the nature of depopulation during this period as well as the subsequent effects on Native American cultures. Using modern GPS equipment, several GIS measuring and analytical tools, and recent theoretical developments in settlement pattern archaeology, demographic patterns were determined and the effects on settlement were explored.

Jones, John [100] see Freidel, Dorothy

Jones, John [181] see Wright, Aaron

Jones, John G. (Washington State University)

[36] *Pollen Analysis of Peruvian Agricultural Terraces: Evidence of Farming at Machu Picchu and Moray*

Terraces at the Inca sites of Machu Picchu and Moray have been well documented, and although speculations on their uses abound, their true functions have never been known. A detailed palynological analysis of sediments from these features reveals a vast array of cultivated plants, including domesticated crops, ornamental flowers as well as economically

significant shrubs and trees. The cultivation of potatoes and quinoa appears to be minimal at both sites, while maize was important at Moray, and mate was widely cultivated at Machu Picchu. Other crops grown at these sites include Canna, passionfruit, Furcraea, and possibly guava, sapote and cherimoya.

Jones, John G. (Washington State University) [178] *Discussant*

Jones, Kevin B. [175] *see* Hodgins, Gregory

Jones, Matthew [86] *see* Roberts, C Neil

Jones, Teresa M. (University of Missouri), VanPool, Todd L. (University of Missouri), Rakita, Gordon F.M. (University of North Florida), Hains, Billie (University of Missouri) and Boldt, Jessica (University of Missouri)

[32] *Bedrock Mortars and Their Significance to Cerro Del Diablo*

Data from bedrock mortars in northern Chihuahua indicates their cultural significance. Cerro del Diablo near Janos, Mexico, contains an assemblage of massive tumbled rock slabs each displaying impressive art panels. The site's core covers only 270 square meters, but also contains over 200 bedrock mortars arranged in small clusters. These consistently formed mortars indicate extensive use of specific resources at the site. These features can consequently provide significant information about the site's use. To gain this information, the mortars are compared to others from the surrounding region and similar cultures to determine their use and their placement in time.

Jones, Terry L. (California Polytechnic State University), Green, Roger C. (University of Auckland, New Zealand), Klar, Kathryn A. (University of California, Berkeley), Ramirez-Aliaga, Jose Miguel (Universidad do Valparaiso, Chile) and Matisoo-Smith, Elizabeth (University of Auckland, New Zealand)

[167] *The Other Polynesian Triangle: Cases for New World Contact*

Theories for contact between prehistoric Polynesia and the New World have been proposed by scholars since the middle of the nineteenth century. Early arguments based on impressionistic assessments of cultural and linguistic similarities, although in some cases insightful, were never rigorous enough to command substantial support from the scientific mainstream, particularly in light of archaeology's in situ innovation paradigm of the late 20th century. Systematic evaluation of archaeological, ethnohistoric, linguistic, and genetic evidence related to a collection of cultural traits including sailing rafts, sewn-plank boat construction, compound fishhooks, harpoons, adzes, hand clubs, bottle gourds, the coconut, and the sweet potato reveals intriguing if not compelling cases for multiple contacts in both South and North America.

Jones, Thomas [104] *see* Stokes, Robert

Jordan, James [128] *see* Maschner, Herbert

Jordan, James W. (Antioch University New England), Finney, Bruce (University of Alaska Fairbanks) and Maschner, Herbert (Idaho State University)

[128] *Geomorphic History of the Sanak Islands: Implications for Coastal Ecosystem Change and Human Settlement*

The Sanak Island archipelago was deglaciated several millennia earlier than the adjacent Alaska Peninsula; since 15,000 cal yr bp it has been modified by post-glacial climatic variability, regional seismicity, sea level fluctuations, and human occupation. Over 25 tephras are preserved in lake sediments; tsunamis are recorded as historic driftwood lines and clastic deposits in coastal marshes. Relative sea level has fallen during the last 6000 years, influencing near-shore sedimentation, coastal ecology and human settlement patterns. The introduction of cattle in the early 20th century resulted in the modification of terrestrial vegetation, pervasive surface disturbance, and local reactivation of bluff-top dunes.

Jordan, Peter (University of Sheffield)

[166] *Hunter-Gatherer Ceramics in Northern Eurasia*

The origin of pottery is one of the most important questions in Old World archaeology and has long been associated with the emergence and dispersal of early farming societies in the

Neolithic. Recent evidence demonstrates that pottery use amongst northern hunter-gatherers was far more widespread than hitherto recognized. This paper traces the origins of early hunter-gatherer pottery and identifies social factors promoting its dispersal across northern Eurasia. The paper concludes that a new era of analytical work is required if we are to understand better the technological history of these hunter-gatherer ceramics at more local and regional scales.

Jordan, Peter (University of Sheffield) [45] Discussant

Jordan, Stacey (Jones & Stokes)

[104] *A Patchwork History: Interweaving Archaeology, Narrative and Tourism in Old Town San Diego*

On the site of the original settlement, Old Town San Diego State Historic Park uses renovated and reconstructed buildings to represent life in San Diego's Mexican and early American periods. Archaeological excavations in and adjacent to the park, project-driven rather than thematically designed, have yielded a patchwork of separate studies that have yet to be linked together to produce a coherent landscape. Recent excavations have helped to connect the park with the settlement's broader past and have revealed disjunctures between the public's experiences as tourists and their understanding of the historical landscape.

Joseph, Brian (Northern Arizona University)

[40] *Preservation for the Future: The Value of Condition Assessments in Managing Grand Teton National Park's Cultural Resources*

This paper demonstrates the effectiveness of condition assessments in the management of the fragile and often ephemeral archaeological sites in Grand Teton National Park. Condition assessments provide the site information federal archaeologists need to carry out the public charge to preserve cultural resources. The National Park Service mission involves preserving cultural resources for the enjoyment, education, and inspiration of this and future generations. In accordance with this mission, Grand Teton National Park is required to assess site conditions at five-year intervals. The condition assessment information enables the development of effective, timely management plans for the cultural resources in the park.

Joyce, Arthur (University of Colorado at Boulder), Workinger, Andrew (University of Tennessee at Chattanooga), Hamann, Byron (University of Chicago) and Levine, Marc (University of Colorado at Boulder)

[46] *The Archaeology and Codical History of Tututepec (Yucu Dzaa)*

This paper synthesizes archaeological survey and excavation data with studies of the Mixtec codices and early colonial ethnohistory to examine the Late Postclassic imperial center of Tututepec (Yucu Dzaa). We argue that Tututepec was founded ca. A.D. 1100 when the region was vulnerable to conquest due to political fragmentation and unrest. Indigenous historical data from three codices narrate the founding of Tututepec as part of the heroic history of Lord 8 Deer "Jaguar Claw." Archaeological survey data show that the Late Postclassic site of Tututepec covers 22 km² and residential excavations provide data on economy and interregional relations.

Joyce, Arthur (University of Colorado at Boulder) [139] Discussant; [15] see Mueller, Raymond; [168] see Barber, Sarah; [211] see Levine, Marc

Joyce, Rosemary (University of California, Berkeley)

[68] *In the Beginning: The Experience of Residential Burial in Early Formative Honduras*

Sophisticated analyses have demonstrated how residential burial in Mesoamerica contributed to the creation of localized, historically continuous group identities, and to the reinforcement and naturalization of claims of differential social status. If we do not assume that residential burial was from the beginning a self-conscious strategy intended to produce these effects, how might such innovative practices have taken shape? Data from Formative Honduras are used to explore the transition from other forms of disposal of the dead to residential burial. Practices of incorporation, disjunction, and commemoration central to this transition have earlier histories that motivated their coordination in residential burial.

Joyce, Rosemary [200] Discussant; [169] see Tchakirides, Tiffany; [19] see Sheptak, Rus

Judge, James [84] Discussant

Junker, Laura [106] see Green, Debra; [175] see Niziolek, Lisa

Just, Bryan (Independent scholar)

[13] *Imag(in)ing Archaeology: Reflections on the Visual Culture of Archaeological Illustration*

Most modes of archaeological illustration, such as vessel form drawings, elevation maps and stratigraphic diagrams, reduce the dense visual character of their subject matter to their purported 'salient features'. Reconstructive illustrations, in contrast, extrapolate from given evidence, inevitably involving some interpretation and guess-work. However, new technologies, including remote sensing, GPS, CAD, and other software for 3D reconstruction, seem to offer greater scientific accuracy to reconstructive illustration. This paper, drawing on examples from Mesoamerican archaeology, assesses these diverse kinds of archaeological illustration from an art historical perspective in order to explore their underlying assumptions, communicative potential and interpretive implications.

Justeson, John (University at Albany)

[143] *The Circumnodal Venus Cycle: An Epi-Olmec Cultural Practice*

This paper describes the structure of a distinctively epi-Olmec calendrical and astronomical cycle, the circumnodal Venus cycle (CNVC). The cycle is here defined in terms of one of its cardinal points, probably its base, at the node of the eclipse cycle and near maximum elongation of Venus as evening star. The use of this cycle for timing or commemorating civically important events was as pervasive among epi-Olmecs as was the use of the 360-day cycle and the katun among Lowland Mayans, reflected in six or seven of nine epi-Olmec texts containing dates.

Kabata, Shigeru (Universidad Nacional Autonoma de Mexico)

[194] *Obsidian Procurement Strategies in the Toluca Valley Before and After the Fall of the Teotihuacan System*

During the Classic period, the Central Mexican Highlands were built into the Teotihuacan system, and the presence of obsidian from Pachuca and Otumba has been considered one of the indicators of a political and economic relationship with Teotihuacan. Nevertheless, only small quantities of obsidian from these sources have been recovered in the Toluca Valley, while Ucareo obsidian abounds. This paper presents the results of macroscopic and chemical analyses of obsidian recovered during the survey and intensive excavations in the Toluca Valley and discusses the change and continuity in obsidian procurement strategies before and after the fall of Teotihuacan.

Kadish, Lesley (Minnesota Historical Society)

[106] *Using an Online GIS to Integrate and Display Museum Collections*

The Minnesota Historical Society has developed an online mapping tool that will integrate the museum's archives and three-dimensional collections with over 200 layers of geographic and historic spatial data. The paper will showcase the most recent GIS prototype, discuss target audience and content selection, and provide insight into ways museums can digitally display their collections thematically and spatially.

Kadowaki, Seiji (University of Toronto)

[207] *Groundstone tools and food preparation activities at Ayn Abu Nukhayla*

Groundstone assemblages from Ayn Abu Nukhayla are characterized by the high proportion of food processing tools, which mostly consist of various forms of handstones and basin-shaped grinding querns. This paper examines designs and handling techniques of the food processing tools to obtain insights into the intensity of food preparation activities at Ayn Abu Nukhayla in comparison to other Pre-Pottery Neolithic B sites in the southern Levant. The paper also analyzes the spatial organization of food preparation activities to discuss how food preparation activities were performed in the community at Ayn Abu Nukhayla.

Kadowaki, Seiji [207] see Bergin, Sean

Kahn, Jennifer (University of Queensland)

[191] *Modeling Social Interaction in the Late Prehistoric Society Island Chiefdoms: Integrating Ethnohistoric Data and Geochemical Evidence for Adze Exchange*

Models of adze production and exchange at major quarries in Polynesia emphasize economic

processes, particularly elite control over or increased access to, labor and raw materials used in adze production. Data from Society Island ethnohistoric sources documents that diverse types of material goods and ideas were exchanged within the archipelago in the context of social relations, particularly within networks and alliances of the social and ritual elites. I present new geochemical characterization data for adzes and adze by-products from Mo'orea (Windward Society Islands) and interpret the results within a framework emphasizing both the economic and social importance of regional exchange.

Kakoulli, Ioanna [115] *see* Lozada, Maria

Kalchgruber, Regina (Oklahoma State University), Cordova, Carlos (Oklahoma State University) and Henry, Donald (University of Tulsa)

[207] *OSL Dating of a Qa' Sediment Sequence near Ayn Nukhayla, Jordan*

Sequences of Late Quaternary deposits near the Neolithic settlement of Ayn Abu Nukhayla include lacustrine sediments typical of playa lakes (locally called qa'). The environmental setting with abundant deposits of eolian sand, as well as the examined time period, make optically stimulated luminescence (OSL) dating the most suitable method for age determination. A test pit was excavated in a qa' near the site and samples were taken from the sediment sequence for OSL as well as radiocarbon dating. The determined ages have been used to reconstruct local climate variations during the Terminal Pleistocene and Holocene.

Kalchgruber, Regina [207] *see* Cordova, Carlos

Kamenov, George [174] *see* Valentine, Benjamin

Kamiya, Masahiro (Texas A&M University)

[159] *Modern and Archaeological Starch Grains from South Texas*

Although the Richard Beene site has produced numerous FCR features, they lacked macroscopic organic remains to determine their function. The morphology of some of these features and ethnographic data suggested that they served to cook plant foods, especially including geophytes. In the absence of macrofossils preliminary organic residue analysis, specifically for starch grains, may prove to be a productive line of inquiry. Reference slides were created for plants likely to have been used. Modern soil was sampled for residual starch grain for contamination. Efforts are underway to find and identify starch grains on FCR, stone tools, and in feature fill.

Kane, Lowell (Texas A&M University)

[93] *An Ethnoarchaeological Interpretation of Shell Remains Excavated at Aganoa, American Samoa*

This poster represents data collected during a pilot ethnoarchaeological study carried out during the excavation of an Ancestral Polynesian (2,500-2,000 BP) village at Aganoa, American Samoa. During the excavation, shell remains from various species were frequently encountered and collected in the cultural levels. For this project, a selection of the most frequently excavated shells were identified to species and shown to local informants. Through interviews with these informants, recovered shell was interpreted on a cultural level as possible food items, decorative/wealth objects, and potential tools.

Kang, Bong W. (Gyeongju University)

[182] *Defensive Fortress of the Silla Kingdom in Ancient Korea*

It used to be often called that 'Korea is a country of fortress.' In fact, a great number of fortresses have been identified and some of them were excavated. Twelve fortresses located in and in the vicinity of modern-city Gyeongju, the capital of the Silla Kingdom for nearly 1000 years, were identified. The fortresses consist of earthen- and stone-walls constructed before the end of the seventh century A.D. This paper presents the implications and theoretical considerations of the Silla fortress in terms of its wars with neighboring polities and/or countries during the Three Kingdoms period in ancient Korea.

Kansa, Eric (Alexandria Archive Inst.)

[172] *Open Context: A Participatory Way to Publish and Integrate Field and Collections Data*
Linking diverse archaeological data sets will catalyze innovative research of great scope and analytic rigor. However, our diverse and informal conceptual systems coupled with our

community's limited budgets and IT skills challenge data dissemination initiatives. Given these challenges, our discipline should explore inexpensive, informal and easily implemented methods for integrating our digital resources. This paper presents Open Context, a new approach toward meaningfully integrating archaeological datasets by combining approaches of schematic data integration with more informal, community-driven tagging systems, or "folksonomies". Through collaborative annotation and tagging, we hope to encourage greater transparency in the interpretive process.

Kansa, Eric (Alexandria Archive Inst.) [215] Discussant

Kansa, Sarah Whitcher (Alexandria Archive Institute), Kennedy, Amanda, Campbell, Stuart (University of Manchester) and Carter, Elizabeth (UCLA)

[217] *Subsistence Economy and Ritual at Domuztepe, a 6th millennium BCE Settlement in South Central Turkey*

This paper presents comparative analyses on plant and animal remains at Domuztepe, a large Neolithic settlement in southern Turkey. Although the development of social hierarchies remains one aspect of our investigation, social integration through ritual practice has gained prominence with the discovery of a large pit filled with thousands of highly processed animal and human bones, ceramics, lithics and plant remains. Comparisons of likely "everyday" and "ritual" deposits demonstrate differences in the types of animals and plants utilized in these two spheres and help shed light on diet, secondary products usage, and ritual life of the people of Domuztepe.

Kantner, John (School of American Research)

[90] *A Holdout in the Heart of the Chaco World? The Blue J Community of the Red Mesa Valley*

In the past two decades, research on the developments of Chaco Canyon in New Mexico has shifted emphasis towards the numerous outlying communities that constructed iconic Chacoan great houses. What has not been systematically investigated, however, are villages that exhibit no Chacoan architecture. Six seasons of fieldwork in the Blue J Community of the Red Mesa Valley confirm the near absence of influence from Chaco Canyon, despite its large population, apparent wealth, and location near numerous great house communities. A comprehensive occupation history is presented along with working hypotheses as to why Chaco had little apparent impact on Blue J.

Kantner, John [8] Discussant; [90] see Snyder, Charles

Karas, Basiliki Vicky [169] see Beaubien, Harriet F. (Rae)

Karasik, Carol [143] see Mendez Toporek, Alonso; [143] see Barnhart, Edwin L.

Kardulias, Nick [5] see Womack, Andrew

Kardulias, P. Nick (College of Wooster) and Womack, Andrew C. (College of Wooster)

[5] *Burial and Identity in Cyprus: Spatial Analysis of a Modern Cemetery in Athienou*
Examination of modern sites as part of the Athienou Archaeological Project in central Cyprus provides significant insights into the settlement structure of the region over time. The study of the modern cemetery in the town of Athienou focuses on spatial attributes of individual graves and tomb groups. GIS analysis demonstrates the evolution of burial practices over the past century. This distribution reveals the sequence of inhumation, kin group affiliation, and the use of burials as symbols of national identity. In a contested landscape near the 1974 cease-fire line that separates Greek and Turkish zones, the graves establish claims to territory.

Kardulias, P. Nick [95] see Duffus, Katherine; [95] see Stotts, Rhian

Kasper, Kimberly (University of Massachusetts-Amherst)

[156] *Foraging Through 17th Century New England: A Critical Approach to Native Resource Use and Subsistence*

During the seventeenth century, the cultural and environmental landscape changed dramatically for Native Americans. Little is known about how Native peoples interacted directly with their local environments and if they modified their resource strategies. This study, which focuses on two sites in New England, will examine "points of contact" between Native

American peoples and the landscape. Wood charcoal and other subsistence items will be discussed from seventeenth century features in Deerfield, Massachusetts, and the Mashantucket Pequot Fort, Connecticut. This comparative investigation will allow us to gain a regional perspective of resource use and subsistence strategies during this tumultuous period.

Katayama, Mio (University of California, Berkeley) and Habu, Junko (University of California, Berkeley)

[45] *Human-Animal Interactions at Sannai Maruyama, Japan: The Importance of Small Fish in Jomon Foodways*

Sannai Maruyama in Aomori, Japan, is a large Early and Middle Jomon hunter-gatherer settlement dating from 5,900 to 4,300 bp. Excavations since 1992 have yielded contextual information that helps us understand the intricate human-animal relations. Preliminary analysis of fish remains retrieved from fine meshed screens indicates the importance of small fish in the foodways of Sannai Maruyama residents. Using multiple lines of evidence from Sannai Maruyama, our paper explores several key issues in understanding Jomon foodways and society, including site function and occupational seasonality.

Kaufmann, Kira (University of Wisconsin-Milwaukee)

[177] *Nitschke Garden Bed Site: Three Years of Research, Excavation, and Outreach at a Late Woodland Site Adjacent to Effigy Mounds*

The Nitschke Effigy Mounds in Dodge County, Wisconsin, were first investigated by W.C. McKern in the 1930's. Recently, new excavations have been conducted in an effort to provide additional information for a National Register nomination, to clarify the association of the Garden Bed Site with the adjacent Effigy mounds, and as a public outreach opportunity. To date several hundred visitors have come to see and participate in archaeological research at the site. This research has provided new information about Late Woodland ceramic technology as well as to educate the public about the site, cultural resources, and the discipline of archaeology.

Kay, Marvin (University of Arkansas)

[207] *Use-Wear Evaluation of Sickles and Other Prismatic Blades from Ayn Abu Nukhayla*

Pre-Pottery B Neolithic prismatic blades are dominated by burins and other maintenance tools but also include sickles. This paper describes an analysis of over 150 artifacts and their experimental controls. Its focus is on sickles from this site and from the Levant more generally.

Kay, Marvin [197] see Adair, Mary

Kearns, Timothy (Western Cultural Resource Management)

[72] *Reevaluating Burned Rock Ring Middens in the Trans-Pecos Region of the American Southwest*

Burned rock ring middens are distinctive features of the archaeological landscape in southeast New Mexico and southwest Texas. Although these large cooking facilities have been investigated for almost 100 years, debate continues regarding their morphology, function, age, and use. Recent excavation by Western Cultural Resource Management at 11 burned rock ring middens addressed these issues. The results indicate: multiple construction techniques characterize the features; use as roasting facilities, albeit in significantly different contexts; initial use by 2500 B.C.; greatest use during the Formative period; use potentially spans hundreds of years; and, single features represent tens to hundreds of roasting events.

Keegan, William (Florida Museum of Natural History), Pateman, Michael (University of South Florida), Carlson, Lisabeth (SEARCH Inc.), Chilton, Christopher (University of Florida) and Mullins, Deborah (University of Florida)

[71] *Archaeological Investigations in the Clifton National Heritage Park, New Providence, Bahamas*

The Clifton National Heritage Park is the first of its kind in the Commonwealth of the Bahamas. The park includes archaeological remains from the prehistoric Lucayans, conch period Europeans, and a Loyalist plantation. In July 2006 an international team of researchers investigated the Lucayan site to better define its boundaries and to collect additional information on the material remains. This paper describes the initial results of our investigations involving prospecting, remote sensing, ceramic analysis, faunal analysis, and a description of unique material remains.

Keegan, William (Florida Museum of Natural History) [195] Discussant; [22] see Hofman, Corinne

Keeley, Lawrence [39] see Golitzko, Mark

Keith, Matthew [208] see Evans, Amanda M.

Kékegyi, Dorottya (Békés County Museum)

[21] *Visualizing the Past: A Reconstruction of the Tiszapolgár settlement at Vésztő-Bikeri*
This paper uses archaeological data and ethnographic and archaeological analogies to create a visual rendition of the Vésztő-Bikeri site in the Early Copper Age. Excavation and archaeobotanical data provide basic guidelines for building techniques, and the mechanics of wattle and daub architecture confine the range of possible reconstructions. Combined with data from outside the settlement, this reconstruction technique places an Early Copper Age village in a landscape and context. Using visual diagrams and illustrations, the past can come alive for the general public, challenge preconceptions about prehistory, and even provide new hypotheses for archaeologists investigating the past.

Keller, Angela (Statistical Research)

[161] *Another Roadside Attraction: Marketplaces, Causeways, and the Case of Xunantunich, Belize*

Despite the ubiquity of exotic and specialized trade goods at Maya sites, surprisingly few marketplaces have been identified thus far; each differing in scale and architectural elaboration. One factor that these probable marketplaces have in common, though, is that they are all adjacent to causeways. This paper explores the intriguing association of marketplaces and causeways in the Maya area. The discussion centers on an examination of the case of Xunantunich, Belize where exploratory excavations north of a short causeway recovered macro- and microartifacts suggesting point-of-sale production within an open area previously identified as a possible marketplace.

Keller, Angela [146] see Douglass, John G.

Keller, John (Southern Archaeological Consilts.)

[80] *A Persistence of Vision: Urban Planning and Cemetery Location in 19th Century Brownsville, Texas*

Archaeological investigations at Campo Santo Viejo, the original Brownsville, Texas municipal cemetery, were focused on establishing whether or not a significant number of intact graves were still present. Documentary evidence, by itself, was unable to clarify the situation and, indeed, proved less informative than local folklore or memory. Findings suggest that usage of the old cemetery persisted long after a new cemetery location was established and that interments continued after the old location had been returned to private ownership. Given the formalized nature of the interment process these findings provide a unique perspective on 19th century mortuary behaviors and their interconnectedness with urban planning.

Kellett, Lucas (University of New Mexico) and Socualaya Dávila, Carlo (Instituto de Cultura, Cuzco Peru)

[216] *Neighbor to Neighbor: Contextualizing Inka State Development from the Chanka Territory*

The Inka empire and its ascendancy was heavily influenced by the previous interactions and trajectories of local polities. While such research has been typically limited to the Cuzco area, the nearby Chanka region to the west of Cuzco provides an often overlooked and important area in which to understand pre-Inka cultural developments and their effects on subsequent Inka state formation and expansion. This paper presents recent Late Intermediate Period archaeological research from the traditional Chanka heartland of Andahuaylas to offer a new "non-Cuzco" perspective towards contextualizing subsequent Inka imperial development and expansion.

Kelley, Jane (University of Calgary)

[116] *The Southern Zone of the Chihuahua Culture*

The upland, southern zone of the Chihuahua Culture, located some 150km from Paquime,

provides insights into regional diversification. Regional differences are less apparent for the Viejo period, in part because of lack of knowledge. During the Medio period, each region of the southern zone exhibits a certain amount of individuality, while the southern zone as a whole differs in important ways from the lowland desert zone while sharing basic characteristics of domestic architecture, crops, ceramic categories, stone tools, and, probably, symbolic referents.

Kellner, Corina (University of California, San Diego) and Schoeninger, Margaret (University of California, San Diego)

[17] *Stable Isotope Analyses of Nasca Diet during Wari Imperial Influence*

To determine the impact of the Wari Empire (AD 750-1000) on the agricultural Nasca (AD 1-750) of south coastal Peru, we use stable isotope analysis of carbon and nitrogen of human bone collagen from individuals living before and during imperial influence. Although a shift toward an overall increase in maize consumption did not occur, as in other regions, the imperial period was marked by wide dietary variation among the Nasca. One group apparently ate significant amounts of C3 plant foods whereas others appear to have eaten greater amounts of meat and maize. No association with status was detected.

Kelly, John (Washington University) and Brown, James (Northwestern University)

[11] *Contextualizing Mississippian Ancestors*

The cosmology of North American Indians is an important source of information on ancestors and ancestorhood. A rich ethnographic and ethnohistoric record from the Eastern Woodlands and Prairies helps identify the role that ancestors had in Mississippian culture and society. Both continuity and discontinuity of beliefs are represented. Oral traditions associated with this literature are critical to our understanding of the way in which ancestors were embedded in Mississippian iconography and symbolism for nearly a millennium and the way in which ancestorhood was expressed in the archaeological record.

Kelly, John [60] *see Bailey, Susanna*

Kelly, Robert (University of Wyoming) [79] *Discussant*

Kelly, Sophia (Arizona State University)

[96] *Archeological Site Stewardship Programs: Involving the Public in Site Preservation and Protection*

Archeological site stewardship programs can be an invaluable component of protection plans for archeological resources on both public and private lands. These programs provide invaluable assistance to land managers, who are often strained under limited budgets and staff support. Site stewardship programs also involve landowners in the protection of archeological resources on their property. Most importantly, these programs facilitate communication among professional archaeologists, government agencies, and the public. This poster explores different types of site stewardship initiatives and presents the necessary components to the successful development and implementation of these programs.

Kelly-Buccellati, Marilyn (Cotsen Institute of Archaeology)

[187] *Integration of Typological Analysis*

The structure of the Urkesh Global Record allows for an indefinite expansion of attribute categories, especially in the typological realm. The amount of descriptive detail is unlimited, and yet the resulting picture is always transparent and coherent. The data are instantly integrated within the system by means of an intra-site network. The result is that the archaeologist can analyze the data and modify or nuance the excavation strategy daily resulting in an approach that supports the archaeologist's intuition with clearly quantified information. The paper illustrates these goals and results with reference to the rich inventory of ceramics and glyptics from ancient Urkesh.

Kemp, Brian (Vanderbilt University)

[169] *You Can Get DNA Out of Those? Prospects and Cautionary Notes about Sampling Archaeological Specimens*

Ancient DNA studies rest on the ability to place genetic types at specific temporal and geographic axes. Largely focused on extraction of DNA from bones and teeth, these studies can be limited by both the poor preservation and the paucity of skeletal material from times

and places of interest. However, recent studies have highlighted the utility of alternative sources of genetic material: coprolites, quids, and aprons. The ability to study DNA from these classes of archaeological specimens opens up the possibility of addressing questions that might have otherwise seemed unapproachable and, moreover, highlights the need of their careful excavation.

Kemp, Leonard [113] see *Munoz, Cynthia*; [99] see *Mauldin, Raymond*

Kempton, Karen (Wyoming Army National Guard)

[113] *Home on the Range: Ten Thousand Years of Living on the High Plains of Wyoming*

During the past 15 years the Wyoming Army National Guard has commissioned cultural resource inventories at the Camp Guernsey Joint Training Center in compliance with Section 106 and Section 110 of the National Historic Preservation Act. Over 800 archaeological and historic sites have been recorded on approximately 40,000 acres of Wyoming Military Department land in east-central Wyoming. A summary of these resources representing 10,000 years of life on the high plains is presented. Management strategies for the protection of archaeological sites at Camp Guernsey are also discussed.

Kendig, William [146] see *Vellanoweth, René*

Kendrick, James W. (El Malpais National Monument)

[185] *Advancements in Archaeology and Preservation at El Morro and El Malpais National Monuments, New Mexico*

In order to advance our understanding of the past at El Morro and El Malpais National Monuments, the NPS is conducting or facilitating numerous research and heritage preservation projects. These projects range from digitally mapping ancient pueblos and preserving historic inscriptions at El Morro to conducting archaeological surveys and preserving historic homesteads at El Malpais. New and innovative methods have been used during many of these projects, which will benefit various disciplines. This paper discusses the results of this work and presents a brief discussion on our expanded knowledge of the history and prehistory of El Morro and El Malpais.

Kenmotsu, Nancy (Geo-Marine, Inc.)

[99] *The Toyah Phase: A Retrospective*

In 1947, J. Charles Kelley briefly described the Toyah phenomenon as a focus that rapidly spread across a broad expanse of Texas around A.D. 1200. Subsequent research, nearly all in the gray literature, has modified Kelley's original descriptions, sometimes in unintended ways. This paper provides an overview of how archeologists have interpreted Toyah material culture and social organization as a backdrop for considering the significance of current research.

Kenmotsu, Nancy A. (Geo-Marine, Inc.)

[1] *Negotiating Bridges in Texas Archaeology*

The archaeological record of Texas is rich and varied with Caddoan and Plains villages, hunter-gatherer camps and bison kills, and Spanish missions and presidios. Daily, government agencies, cultural resource firms, academics, local preservationists, Native Americans, and others negotiate decisions about which Texas sites are significant and how much to preserve or excavate. This paper presents a glimpse into how those archaeological decisions have sometimes been negotiated through bridges built among these various players and touches on why bridge-building is not easy.

Kennedy, Amanda [217] see *Kansa, Sarah Whitcher*

Kennett, Douglas (University of Oregon) and Culleton, Brendan (University of Oregon)

[178] *Transition to Maize-Based Food Production in Mesoamerica*

In this paper we review the archaeological, botanical, isotopic, and genetic evidence for the domestication and dispersal of maize in Mesoamerica. These data suggest that 5,000 years passed between the initial domestication and use of maize and the shift towards heavy reliance upon this domesticate in systems of food production. We propose that the persistence of mixed foraging-food production strategies for 5,000 years resulted from: the marginal nature

of the subsistence choices involved, the need to discount agricultural yields relative to foraging returns, and the adaptive difficulties of adjusting to risk under a new agricultural mode of production.

Kennett, Douglas [154] see *Erlandson, Jon*; **[158]** see *McClure, Sarah B.*; **[195]** see *Culleton, Brendan J.*

Kenward, Amalia (Muukui-Ci)

[82] *Drawing from the Past: Bat Imagery on Mimbres Funerary Ceramics and Ritual Cave Use*
Bat images found on Mimbres funerary ceramics have often been viewed by archaeologists and iconographers as composite creatures. In particular, the elongated ears depicted on the bats are often considered to be elements borrowed from the rabbit. However, previous studies have ignored the fact that a common Southwestern cave-dwelling bat species, *Corynorhinus townsendii*, the Townsend's Big Eared Bat, possesses elongated ears consistent with many of the bats shown on Mimbres vessels. The frequency of these depictions on Mimbres vessels is not reflected in contemporary Pueblo cosmology. Therefore, a link between these images and extensive Mimbres ritual cave use is postulated.

Kerley, Janet [140] *Discussant*

Kersel, Morag (University of Cambridge) [193] *Discussant*

Ketchum, Sheena (University of Notre Dame), Schurr, Mark (University of Notre Dame) and Garniewicz, Rex (Indiana State Museum)

[62] *A Test for Maize Consumption by Fauna in Late Prehistoric Eastern North America*
Several hypotheses suggest that pest species consumed corn and were then eaten by late prehistoric populations. This could lead to over-estimates of amounts of maize that were directly consumed in prehistoric diets. Definitive evidence of prehistoric corn consumption by animals would also shed new light on the practice of Mississippian agriculture. To test these hypotheses, stable carbon isotope ratios of collagen from deer and raccoon bones from the Late Archaic Indian Knoll and Upper Mississippian Angel sites are compared. The stable isotope ratios are used to determine the amount of maize, if any, in Middle Mississippian faunal diets.

Kibler, Karl (Prewitt and Associates, Inc.)

[99] *Exotic Materials in Toyah Assemblages: A View from the Jayroe Site (41HM51) and Its Role in a Late Prehistoric Economic and Social System*

Exotic materials in Toyah assemblages, though relatively uncommon, are reminders that Toyah peoples had alliances and contacts with neighboring peoples. The Jayroe Site (41HM51) offers unique opportunities to examine this economic and social network, particularly since exotic materials - Caddoan pottery from the east and obsidian from western sources - came from regions that are in opposite directions from the site. Through exotic artifacts this paper examines the inter-actions between Toyah peoples and neighboring groups, interactions that may signal the maintenance of an economic and social system established to reduce risk in a world of fluctuating and unpredictable resources.

Kidder, T.R. (Washington University in St. Louis)

[132] *A New History of Poverty Point*

The dominant paradigm of cultural change in the Archaic of North America is one of slow, gradual transformation reflecting stable adaptation to post-Pleistocene environments and steady population growth. Data from the Poverty Point site challenge prevailing notions that Archaic peoples "evolved" solely through accumulation of adaptive traits. Using data from Mound A, I show these people had a long history punctuated by rapid, complex socio-political transformations. The emergence, perpetuation, and demise of Poverty Point can only be understood in the context of its being embedded in a web of local and regional historical connections in the Mississippi Valley and beyond.

Kidder, T. R. [58] see *Thompson, Victor*

Kieffer, Crystal (California State University, Los Angeles)

[82] *New Music From Old Flutes: A Reexamination of the Collection from Gypsum Cave, Southern Nevada*

Gypsum Cave is located in the Frenchman Mountains of southern Nevada, 15 miles east of

Las Vegas. The cave was excavated by Mark Harrington in 1930 and 1931. Original research focused on the sloth remains and dung radiocarbon dated to 8500 BC- 6500 BC. Human artifacts included dice, a toy cradle, flutes, a hoof rattle, bone and wooden tubes, a dart point, Gypsum Points, and personal adornment items. Other cave sites in the American Southwest have demonstrated their importance in rituals. Reevaluation of this site and artifacts suggests ritual activities relating to hunting, the sun, winter solstice, and summer solstices.

Kiers, Roger (University of Washington)

[34] *Archaic Site Formation on Outwash Terraces of the Eastern Puget Lowland, Washington*
Archaic occupation of western Washington is poorly understood due to a general lack of excavated sites. Sites sharing similar lithic technology and material have been frequently described on outwash surfaces of the eastern Puget Lowland, particularly on a series of terraces above the South Fork Stillaguamish River in Snohomish County, Washington. These sites, long thought to date to the earliest Holocene, often create serious interpretive challenges to archaeologists trying to understand site formation, chronology, and the adaptive strategies of their inhabitants. Recent investigations of a number of these sites have attempted to elucidate the processes contributing to their formation.

Kilby, David (University of New Mexico)

[165] *"Most Spectacular and Exciting Finds:" Forty Years of Research into Clovis Caches*
Reports of Clovis caches first appeared in the archaeological literature in the 1960's. These reports not only proposed the idea of Clovis caching of materials, but also suggested new technological attributes characteristic of Clovis. Although the most renowned assemblages are from the Northern Rockies, the majority is from the Great Plains. Caches provide a unique window into Clovis technology and organization. This paper traces the impact over the past forty years that the recognition and investigation of Clovis caches has had upon our understanding of early Paleoindian adaptations, and provides new insights into Clovis technological organization based upon recent research.

Killeen, John J. (U.S. Army Corps of Engineers)

[213] *The Mystery of the Hansen Dam Barracks on the Hansen Dam Property in Pacoima, Los Angeles County, California*

This paper will consider evidence for a mysterious, long ago demolished group of World War II barracks once located on the Hansen Dam property in Pacoima, California. The barracks were first detected on a 1940s U.S. Army Corps of Engineers aerial photograph. Initially the barracks were thought to be an unknown Japanese internment camp, a camp for a small World War II military unit, or housing for the Hansen Dam construction workers. The results of the research on these barracks have reintroduced and characterized a long forgotten San Fernando Valley community that represents the early suburbanization of the Valley.

Killick, David (University of Arizona)

[127] *Chewa Responses to the Ngoni Invasion: Historical Archaeology in Central Malawi*
Human settlement in the Kasungu region of central Malawi during most of the last 2000 years was based upon swidden (slash and burn) agricultural systems, small dispersed villages and very low regional population densities. In 1860 central Malawi was invaded by Ngoni regiments, and thereafter the Kasungu region was raided almost annually. The marked change of settlement pattern that resulted is reconstructed here by combining archaeological evidence with oral and written historical sources.

Killion, Thomas (Wayne State University)

[140] *Agricultural Intensification in Lowland Mesoamerica: Examples from the Gulf Coast and Their Implications for Theory*

The last twenty years of archaeological fieldwork in Mesoamerica's Gulf Coast Lowlands challenges earlier thinking on the agricultural capacity of the region for large scale complex societies. The paper counters the older notion with a growing body of evidence on population from recent settlement surveys. Evidence includes population estimates based on settlement pattern studies since 1990 (including Santley et al. in the Tuxtlas) as well as the discovery of intensive agricultural features indicating large-scale modification of the area's natural landscape. These new data are reviewed and their implications for classic "intensification theory" are considered.

Kim, Lynn (University of Texas at San Antonio) and Alconini, Sonia (University of Texas at San Antonio)

[76] *Sacred Spaces and Public Architecture of Power in Charazani: The Inkas in The Eastern Margins of the Empire*

This paper will explore the different avenues of power that the Inka utilized to maintain control in the Charazani region located in the eastern fringes of the empire. By analyzing the function and distribution of public architecture and Inka cultural materials, we will evaluate the ways in which power was used not only to maintain authority but also to promote marked levels of agricultural exploitation. This paper will further explore the use of religion in the establishment of architecture of power as the Inkas targeted the appropriation of sacred spaces that seemingly were influenced by Formative cultures of the Circum-Titicaca region.

Kimball, Bennett [54] see Walter, Tamra

Kimbell, Bennett (Texas Tech University), Hatchett, Jennifer (Texas Tech University) and Norment, Aaron (Texas Tech University)

[129] *Using GIS in Modeling Historic Archaeological Sites: Presidio San Sabá (41MN1)*

Geographic Information Systems provides tools that will, we believe, become increasingly important in various facets of archaeology, from research design, to site modeling, to laboratory analysis. Using ESRI software, we have created a virtual model of Presidio San Sabá in Menard County, Texas. The model highlights the architectural stages of the presidio construction as well as helping to identify different activity areas within the site. The virtual reconstruction of Presidio San Sabá provides a visual guide to the complex, which overcomes the difficulties of the inaccurate 1936 reconstruction that currently dominates the landscape of the site.

Kimura, Birgitta (University of Florida), Marshall, Fiona (Washington University) and Mulligan, Connie (University of Florida)

[37] *Ancient DNA and Domestication of the Donkey*

It has been argued that the donkey was domesticated in Africa, but the places and people involved are uncertain. Modern donkeys fall into two mitochondrial DNA groups, the Somali and Nubian lineages. This study focuses on archaeological specimens from sites in northeastern Africa, the Atlas mountains, Egypt, and the Sahara. Different DNA extraction methods are tested and positive samples cloned and sequenced. The aim of the study is to compare recovered aDNA sequences to known sequences from modern Nubian and Somali lineages, and other equids, with the overall goal of better understanding the location and cultural context of domestication.

Kindon, Andrew (West Valley College) and Prufer, Keith (Wichita State University)

[188] *The Emergence of Sociopolitical Complexity in Southern Belize: A Case Study from the Site of Uxbenka, Toledo District, Southern Belize*

The mechanisms behind the development of sociopolitical complexity in southern Belize have been a mystery to archaeologists working in the area. Epigraphic and ceramic evidence suggest that shifting influences from the Petén and Southeast Periphery shaped regional development histories. Recently, the authors have begun investigations at Uxbenká, a polity with early iconographic references to Tikal. This paper discusses the nature of proposed connections and the subsequent development of a distinct regional cultural tradition in the area. We also discuss the implications for understanding the growth of early complex polities, especially those with interregional interaction spheres and shifting political affiliation networks.

Kindon, Andrew [14] see Parks, Shoshaunna

King, Adam [212] see Stephenson, Keith

King, Eleanor (Howard University) and Shaw, Leslie (Bowdoin College)

[161] *In Search of Maya Markets*

Thriving Maya markets, both contemporary and ethnohistoric, strongly suggest the existence of Precolumbian equivalents. Researchers have long been frustrated in their search for these, however, as the ephemeral materials comprising most marketplaces leave little trace in the

archaeological record. Many simply assert their presence, using markets then to bolster their views of the Maya economy. They thus gloss over potential variability and fail to answer questions critical to our understanding of Maya exchange systems, such as who ran the markets and how were they organized? This paper considers some key factors necessary for marketplaces to exist and their archaeological correlates.

King, Eleanor [161] *see Shaw, Leslie*

King, Howard [123] *see Carr, Philip*

King, Stacie M. (Indiana University)

[68] *Remembering One and All: Early Postclassic Residential Burial in Coastal Oaxaca, Mexico*

Deceased adults at Río Viejo were interred beneath the floors of houses, a practice that incorporated the deceased as witnesses and actors within the world of the living after their physical deaths. Residential burial marked the deceased as members of particular houses and enacted a shared, multivalent house history. However, burial ritual at Río Viejo additionally depended on the precise knowledge of grave locations. Adults were interred side-by-side in standardized burials separated in time and space, never impacting previous burials. I consider how the enduring memory of grave locations and specific individuals fits with the interpretation of collective house memory.

Kingston, Andrew (McMaster University), Burchell, Meghan (McMaster University), Grocke, Darren (McMaster University) and Cannon, Aubrey (McMaster University)

[62] *Using Stable-Isotopes to Reveal Shellfish Collection Strategies in the Namu Region, British Columbia*

Oxygen-isotope analysis was conducted on the bivalve *Saxidomus gigaratea* to determine the season of shellfish collection at sites in the Namu region on the central coast of British Columbia. Seasonal variations in temperature and precipitation are recorded in oxygen-isotopes within shell carbonate. Oxygen-isotope analysis helps us to understand climatic effects on bivalve chemistry and has the potential to provide further insight into interpretations of settlement and subsistence patterns for coastal hunter-gatherers. Comparison of trends from multiple shell samples obtained from various sites can elucidate site-specific collection strategies. Preliminary results from this study show that shellfish collection was a multi-season activity.

Kingston, John [174] *see Turner, Bethany*

Kintigh, Keith (Arizona State University)

[131] *Estimating Population Growth from Settlement Data: A Modeling Approach*

In the northern Southwest, population growth rates are ordinarily estimated by applying a standard compound interest formula to room counts, standardized by period length, for successive time periods. This paper proposes a more nuanced approach that, assuming a standard use-life for rooms, simulates room construction and abandonment, yielding a total number of rooms occupied during a period. The model growth rate is the value at which the model total most closely matches the count observed in the settlement data. This model can produce quite different—and I argue, better—estimates than the standard formula, with important implications for demographic reconstruction.

Kintz, Ellen (SUNY Geneseo) and Fletcher, Laraine (Adelphi University)

[162] *Doing Archaeology and Ethnography in Cobá, Q. R., Mexico: 1975-2007*

In the 1970s, Dr. Folan supervised archaeological fieldwork in Cobá, Q.R., Mexico. Laraine Fletcher and I were hired to map the northern area of the site as Folan's junior colleagues. Folan's lead in research and scholarly debate fostered development of a sociological portrait of the Maya, revealed in the organization of Classic Maya settlement patterns. His engagement in the life of the living Maya provided ethnographic foundations for interpretation of the pre-Columbian past. His research agenda influenced and informed scholarly studies on social, economic, political, and ritual practices in the Maya area for over three decades.

Kinzig, Ann [116] *see Hegmon, Michelle*

Kipnis, Renato (Universidade de Sao Paulo) and Neves, Eduardo (Universidade de Sao Paulo)

[58] *A Historical Perspective on the Nature of Social Structures in Lowland South America*

For a long time the archaeology of lowland South America has been obscured by a spurious dichotomy, based on neoevolutionary models of socio-political evolution, that either claims the emergence of hierarchical organized systems or negates them. In this paper we depart from this approach, and argue based on the archaeological record from Amazonia and Central Brazil that past interactions among and between societies practicing small-scale economies, which themselves continuously change internally through time, generated novel and unique histories, and complex social relations. An important aspect of historical transformations is the impact on the social and natural landscape of lowland South America.

Kirkley, Samantha (University of Nebraska-Lincoln)

[75] *Marks with a Message: Finding Meaning in White Ironstone Makers Marks*

Ironstone maker's marks reveal much more than the name of a particular pottery. In the early 1800s, English potters developed inexpensive, durable ironstone dishes which received greatest reception in American homes. Ceramic analysis from selected historic sites suggests that westward expansion contributed to English monopolization of ironstone dishes in the U.S. Eventually, American potters mastered ironstone production, but often continued to use English-looking maker's marks. However, by the 1880s, Americans abruptly abandoned the use of foreign marks, replacing them with those exhibiting distinct national imagery. The ever changing marks act as cultural texts defining past social, economic, and political processes.

Klar, Kathryn A. [167] see Jones, Terry L.

Klein, John (Truman State University) and Wales, Nathan (University of Connecticut)

[124] *Detecting Clothing Manufacture in Upper Paleolithic Tool Assemblages from Spain*

Using published data from Spanish Upper Paleolithic assemblages, this poster builds on previous research by Lewis Binford and Nathan Wales to link paleoclimatic models and expected hunter-gatherer clothing characteristics with archaeological data. Given established relationships between general characteristics of hunter-gatherer clothing and climate, it is expected that patterns of clothing manufacture would vary significantly through this archaeological record. Can we detect variability in tool frequencies through the Upper Paleolithic that could be related to changing patterns of clothing manufacture? This poster outlines the logic of the research, discusses preliminary research results, and explores what else we may need to know.

Klein, Terry L. [42] Discussant

Kleinbach, Karl (CEMML/Fort Hood)

[164] *What's Going on at Fort Hood? Synthesizing the Data for Future Management and Research*

This paper provides a brief history of the Fort Hood Cultural Resource Program's accomplishments with a focus on synthesizing 25+ years of data into GIS and other databases. Considerations of maintenance and upkeep of the data as essential for viable future research and productive management will also be discussed.

Kling, Amber (State University of New York at Buffalo)

[182] *Construction and Conception in the Inca Capital: Cuzco's Built Landscapes in Inca and Spanish Times*

Capital cities are usually constructed to represent power and physically display important ideologies. This paper uses archaeological and ethnohistorical data to reconstruct the physical and conceptual changes made to the built forms and natural landscapes within Cuzco, Peru. The Inca intentionally constructed their capital and areas around the city to showcase the power of their religious, political and social ideals. However, in 1532 after Spanish conquest, elements of the Inca would be destroyed both physically and symbolically, and Cuzco's built forms and ideologies would be reconstructed on different levels to symbolize the power and beliefs of the Spanish.

Klinger, William (University of South Florida), Doering, Travis (University of South Florida) and Collins, Lori (University of South Florida)

[208] *The Mesoamerican 3-Dimensional Database*

Recent advancements in 3-dimensional laser scanning, High Definition Documentation Survey, and digitization have facilitated the application of these geospatial technologies to the preservation of archaeological data. Due to the nature of ancient carved artifacts and the limitations of traditional methods, previous attempts to record and illustrate indistinct or obscure details have proven inadequate as a visualization tool. The Mesoamerican 3-Dimensional Database is an expandable electronic archive designed for researchers who wish to incorporate high-definition, 3-dimensional laser scans into their interpretations of carved stone, wood, shell, or stucco sculptures.

Kludt, Trevor [169] *see Walker, Steven James*

Knell, Edward (Washington State University)

[110] *Inter-Component Variability in Late Paleoindian Cody Complex Technological Organization at the Hell Gap Site*

This paper presents results of lithic analyses performed on two late Paleoindian Cody complex components and one Alberta component from the Hell Gap site, Wyoming. Combining both assemblage-level analyses and minimum analytical nodule analyses allowed for a detailed reconstruction of variability between these components in terms of lithic raw material use, flake tool and biface production, and transport decisions. The results show continuity in technological organization and land-use within the Cody components, but demonstrate interesting differences between the Cody and Alberta components. These findings ultimately enhance our understanding of the variable ways late Paleoindians organized technology and land-use.

Knight, Chinyere [6] *see Baker, Kristin*

Knight, Terry (Ute Mountain Ute Tribe), Gilpin, Dennis (SWCA) and Potter, James (SWCA)

[196] *Numic, Navajo, Puebloan, and Spanish Interactions in The Animas-La Plata Project Area*

Historical accounts indicate that Utes, Paiutes, and Navajos used southwestern Colorado in protohistoric and historic times. Oral history, archival data, and archaeological evidence from the Animas-La Plata project area illuminate the complex and changing interrelations among these groups and with neighboring groups. The "Old Ute Trail," which passed through the project area, is best known from historical accounts dating back to the Rivera expeditions of 1765. Six artifact scatters in the project area yielded small numbers of protohistoric artifacts indicative of light use of the uplands away from the major streams, as well as Numic, Navajo, and Pueblo interactions.

Knight, Terry [33] *see Horton, Kristina*

Knipper, Corina [94] *see Fisher, Lynn*

Knudsen, Garrett (University of Cambridge)

[128] *A Departure from Prehistoric Aleut Coastal Orientations on the Rivers of Nelson Lagoon, Alaska*

Archaeological investigations of the Nelson Lagoon river system on the Alaska Peninsula have identified a unique expression of prehistoric Aleutian village life characterized by substantial villages of permanent whalebone houses located up to twenty kilometers by river from the Bering Sea. A suite of radiocarbon dates reveals an occupation spanning 3500 BCE – AD 1600. Peak occupation occurred between AD 300 and AD 900, contemporaneous with the major component of The Hot Springs Site, Port Moller, from which the majority of stylistic artifacts in this region have been recovered. The utilization of exceptional resources is discussed with reference to these data.

Knudson, Kelly (Center for Bioarchaeological Research, Arizona State University)

[137] *Residential Mobility in the Lake Titicaca Basin: Strontium Isotope Analysis at Khonkho Wankane*

Strontium isotope analysis of archaeological human remains from the South Central Andes

has shown great promise in identifying first-generation migrants and elucidating political integration, colonization and expansion, and ritual activity. At Khonkho Wankane, strontium isotope analysis of archaeological human remains was undertaken in order to investigate residential mobility at the site during the Late Formative and Middle Horizon periods. Preliminary strontium isotope analysis at Khonkho Wankane shows very little variability in the geographic origin of the individuals interred at the site. The implications of these data and directions for future research will be discussed.

Knudson, Kelly J. [83] *see Blom, Deborah E.*

Knusel, Chris (University of Bradford, UK)

[115] *'Little Leaguer's Elbow' in the Medieval Period: Context and Conflict*

'Little Leaguer's Elbow', a fracture of the humeral medial epicondyle, occurs in youths engaged in strenuous throwing today. An example has previously been described in the hypertrophied left humerus of an individual excavated from the Towton battlefield (A.D. 1461). Additional occurrences have been identified in other medieval populations and provide evidence for strenuous physical exertion in individuals whose burial context permits insight into their social status. This contribution considers the differential diagnosis of such lesions, potential etiologies to explain their occurrence in the Late Medieval period, and their value for understanding the link between warfare and status in archaeological contexts.

Kober, Brent (Northland) and Hart, Dave (Northland)

[122] *GIS Based Overview of MCAGCC Cultural Resources*

Northland Research, Inc. has worked closely with the Natural Resources and Environmental Affairs (NREA) office and the Army Corp of Engineers over the last seven years to inventory cultural resources of the Marine Corps Air Ground Combat Center (MCAGCC), Twentynine Palms, California. GIS is an essential tool in the analysis, evaluation, and management of cultural resources in large, spatially bounded areas. This poster uses the GIS database to provide an interactive overview of cultural resources in their respective geographic, topographic, and geologic settings.

Kober, Brent [122] *see Hart, David*

Koehler, Hermann [74] *see Robles-Camacho, Jasinto*

Kohler, Tim (Tim Kohler / WSU/SFI/CCAC) [105] *Discussant*

Kohler, Tim (Tim Kohler / WSU/SFI/CCAC) and Johnson, C. David

[181] *"Village" Productivity and Demographic Reconstructions for SW Colorado, A.D. 600-1300, and Their Implications*

The new reconstruction for potential maize productivity developed by the "Village Project" is both absolutely lower than Van West's earlier reconstruction, and also relatively lower for the first 40 years of the 1200s. Despite the very poor local conditions, populations surged, reaching their prehistoric peak through immigration in the A.D. 1225-1260 period. These immigrants (anomalously) settled in relatively unproductive areas in the western part of our study area, rather than in the eastern portions that were both more productive and also less populated, contributing to an inefficient settlement configuration. These data provide a springboard for our interpretation of the 1280s depopulation.

Kolb, Charles C. (National Endowment for the Humanities) [97] *Discussant*

Kollecker, Mark A. [150] *see Nolan, Kevin C.*

Kollman, Dana (Towson University) and Novak, Shannon (Syracuse University)

[35] *Skeletal Biology of the Mirador Basin: Preliminary Osteological Observations of 37 Human Burials*

Examination of 37 human skeletons representing Preclassic and Classic periods from El Mirador, Tintal, and Nakbe sites provide preliminary information on morbidity, mortality, diet, and physical activity among the ancient Maya in the northern Petén region of Guatemala. This study also considers the cultural modification of the human body through the intentional deformation of the cranial vault and reshaping of the anterior dentition, as well as the use of human bone as source material in the manufacture of beads.

Kollmann, Dana [35] *see Balcarcel, Beatriz*

König, Viola (Ethnologisches Museum Berlin)

[46] *Sources for Oaxacan Studies in German Museums: Artifacts, Images and Written Documents*

Since the mid 19th century, different types of objects from all over the state of Oaxaca have been included into German museums collections, such as archaeological artifacts, lienzos, i.e. However, the documentation kept together with the objects in the museums storage is in many cases insufficient. But information often does exist. It is hidden in the museums archive, in other institutions, or published out of context. Old handwritten sources in other European languages than English and Spanish often do not get involved in the processing of data. Is a more systematic access to sources, artifacts and documents possible?

Konstantinov, Aleksander [34] *see Terry, Karisa*

Konstantinov, Mikhail [34] *see Terry, Karisa*

Koons, Michele [65] *see Herrmann, Jason*

Koontz, Rex (University of Houston)

[18] *Narrative Politics at El Tajín and in the Huasteca*

This paper examines the narratives surrounding the legitimization of political power at El Tajín and among the Postclassic Huastec. In proposing a number of complex narrative continuities between the art of Tajín and the Huastec, I suggest that not only did the two areas share iconographic elements, but portions of complex Huastec narrative may have roots in Tajín. This more complex iconographic interaction between the two cultures is the basis for a further investigation of the Tajín legacy in other domains, especially the rites surrounding rulership and the particular deity system intimately connected to rule.

Koontz, Rex (University of Houston) [198] *Discussant*

Kornfeld, Marcel [110] *see Wiewel, Adam*

Kosiba, Steven (University of Chicago) and Galiano Blanco, Vicentina (COARPE)

[216] *Local Influence and the State: Rethinking Cusco-Centric Models of Inka Political Consolidation*

Inka state formation is typically conceptualized as a top-down centripetal process in which the authority and ideology of a dominant Cusco elite were forcefully asserted in outlying regions. In contrast, we suggest that early Inka state consolidation was not monolithic but conditioned by local political agency and cultural tradition. Our recent survey and excavation data (2005-2006) from Huarcocondo-Ollantaytambo, Cusco demonstrate the selective conservation of pre-Inka aesthetic styles and social institutions throughout the Inka Imperial Period. In this way, we provide a "ground-up" view of local people's participation in, contribution and resistance to a process of political integration.

Kovacevich, Brigitte (Vanderbilt University)

[74] *Ritual Prescriptions and Social Taboos: The Control and Use of Jade in Ancient Mesoamerica*

Jadeite and greenstone artifacts were highly valued by the peoples of ancient Mesoamerica. These artifacts often functioned not only as social currency, but also actual ritual paraphernalia. The production, consumption, and distribution of jade artifacts were controlled through social and ritual means, especially in the form of sumptuary laws. This paper will explore archaeological, ethnohistoric, and ethnographic evidence from Mesoamerica and Asia surrounding the meaning and use of jade artifacts in the ancient past.

Kowalczyk, Stefanie [215] *see Schulenberg, Janet*

Kowalewski, Stephen (University of Georgia) [194] *Discussant*

Kral, Ethan [39] *see* Lundin, Richard

Krasinski, Kathryn (University of Nevada-Reno) and Haynes, Gary (University of Nevada-Reno)

[34] *Eastern Beringian Late Pleistocene/Early Holocene Extinctions: Evaluating the Radiocarbon Record*

Humans and megafauna may have co-existed in eastern Beringia in the late Pleistocene, but the extent to which their interaction influenced extinction is unknown. Assessing the circumstances surrounding this process is dependent on understanding possible radiocarbon errors and sampling variability. Species chronologies currently are not reliable enough for fine-scale comparisons with human colonization and climate change. To better understand extinction timing, 500 *Equus* and *Mammuthus* radiocarbon dates were rated for their reliability based on criteria such as provenience and material dated. Correlating these patterns with proxy climatic records may help clarify the degree to which climate or humans influenced extinctions.

Kreutzer, Daniel (Metropolitan State University)

[155] *Biomaterial Culture as Cultural Heritage: How "Body Worlds" Legitimizes the Display of the Dead*

The overwhelming success of the "Body Worlds" exhibits of plastinated bodies raises issues of what is appropriate and meaningful with the display of human remains. During the plastination process, which uses polymers as a permanent method for preservation, these "biomaterial remains" are posed in artistic positions with the purpose of blurring the line between science and art. "Body Worlds" then employs rhetoric reminiscent of cultural heritage as a persuasive argument to legitimize such display. Because museums have become more cautious with exhibitions of human remains, this engagement with heritage discourse is critical to the success and legitimacy of "Body Worlds".

Krigbaum, John [100] *see* Chambers, Erica; [174] *see* Valentine, Benjamin; [49] *see* Tucker, Bryan

Kristiansen, Kristian (University of Gothenburg)

[152] *Processes towards Inequality: The Case of Bronze Age Europe*

During the Bronze Age European societies experienced a remarkable intensification of interaction and the spread of new institutions and ideas of rank and inequality: the reception of and resistance to these new ideas and their materialisation is analysed in a regional case study that combine changes in households, settlement and burials rituals from 2000 to 500 BC.

Kristiansen, Kristian (University of Gothenburg) [179] *Discussant*

Kroefges, Peter (Freie Universität Berlin)

[46] *Time, Space, and Action in Oral, Written, and Archaeological Sources*

This paper compares how archaeology and history conceptualize time, space, and sociocultural phenomena, and how they identify them in material remains, written and oral sources. A methodological framework that integrates the three source types is exemplified in a case-study from the Lowland Chontal communities of Huamelula and Astatuta, at the southeastern Oaxaca coast. Historical cartography and administrative records from the colonial period, a prehispanic-colonial settlement continuum in the archaeological record, and the collective memory of today's inhabitants provide different views on the past.

Kuch, Melanie [36] *see* Poinar, Hendrik

Kuckelman, Kristin (Crow Canyon Archaeological Center)

[181] *Catalysts of the Thirteenth-Century Depopulation of Sand Canyon Pueblo and the Central Mesa Verde Region*

Archaeologists have long sought the causes of the thirteenth-century depopulation of the Mesa Verde region by ancient Pueblo farmers. Excavations conducted by the Crow Canyon Archaeological Center at Sand Canyon Pueblo, a large village dating from the mid-to-late A.D. 1200s, yielded abundant data regarding the catalysts of this depopulation. Comparisons of midden contents to abandonment assemblages revealed a substantial subsistence shift to a greater utilization of wild resources just before this late Pueblo III village was depopulated.

Analyses of human remains found in abandonment contexts reveal that warfare also played a role in the depopulation of the region.

Kuckelman, Kristin [33] *see Coffey, Grant*

Kuehn, David [169] *see Walker, Steven James; [15]* *see Davis-Salazar, Karla L.*

Kuijt, Ian (University of Notre Dame) and Plis, Laura (University of Notre Dame)

[6] *Reconstructing Changing Post-Medieval Land-Use on InisArac, Western Ireland*

In studying past land use practices of InisArac, located off of western Ireland, we incorporate aerial and ground photography, and historical documents to build a multi-scale representation from the early 1800's through 1960 when the Island was abandoned. Computer enhancement of available infrared photos makes it possible to identify previously unknown buried features and to better understand known features and land-use practices. In conjunction with a field survey to document the current landscape, we employ Griffith's Land Valuation, an Irish governmental survey created in the 1850's, to develop a multi-faceted understanding of the changing cultural landscape.

Kuijt, Ian [101] *see Quinn, Colin; [68]* *see Guerrero, Emma*

Kula, Christine (Pennsylvania Department of Transportation)

[42] *Alternative Mitigation Strategies for Archaeological Sites Affected by Transportation Projects*

Transportation projects are linear in nature and thus it is common for only portions of archaeological sites to be affected. This situation presents challenges in evaluating sites for eligibility to the National Register and developing research questions when a limited portion of a site can be examined. How much we are learning from the excavation of a site relative to the expenditure of public dollars becomes relevant when the project take is minimal. The Pennsylvania Department of Transportation has successfully completed alternative mitigation projects where off-site research projects were funded in lieu of excavation. These cases will be presented.

Kulisheck, Jeremy (USDA Forest Service, Santa Fe National Forest)

[112] *"Like Butterflies on a Mounting Board": Pueblo Demography, Mobility and Agriculture from A.D. 1325 to 1825*

Periodic residential mobility was central to the sustainability of subsistence agriculture among the ancestral and early modern Pueblo of the U.S. Southwest. The imposition of Spanish rule over Pueblo peoples in the seventeenth century, along with the arrival of other, non-Pueblo Native peoples in the Southwest, served to significantly restrict the movement of Pueblo farmers. Faced with a century of population decline from disease, warfare, and other sources, Pueblo populations were unable to recover during the eighteenth century, as non-Pueblo peoples increasingly occupied ancestral lands, and mobility was often accompanied by a loss of ethnic identity.

Kurchin, Bernice (Hunter College, CUNY) and McCormick, Megan (Hunter College, CUNY)

[81] *Oh If Only We Knew Then What We Know Now: Mentors, Mentoring, Mothering and Mistakes*

Female archaeologists face obstacles male colleagues rarely encounter, especially female graduate students "of a certain age." Some women raise children, others spend years caring for elderly parents. In our case, until one completed her Ph.D., we both occupied strange, liminal territory: adjunct professors who mentored, and at the same time, were mentored. Students are stunned by our empathy: we are stunned by institutional infantilization no adult should tolerate. Nevertheless our own—mostly male—mentors treat us as adults and fellow scholars. We review our experiences mentoring and caregiving and the mistakes we made, hoping others will avoid similar situations.

Kusimba, Chap (The Field Museum)

[52] *Preindustrial Water Management in Eastern Africa*

Although anthropologists have studied land use and rights to land, rights to water, which may have been much more fundamental, still remain poorly known. How did East Africans deal with

seasonal fluctuations between water abundance and scarcity? How were rights of ownership and access to water resources reckoned? How and in what ways did different communities manage, use, and distribute rights to water? What was the relationship between water abundance/scarcity and intensification of forager, pastoral, agrarian, and industrial activity? My paper will discuss these questions using comparative examples from Eastern African and the Indian Ocean islands.

Kusimba, Sibel (Northern Illinois Univ/The Field Museum)

[58] *Power and Authority in Precolonial Western Kenya*

What was the nature of power and authority in precolonial African societies? How was it expressed archaeologically? Among the Bukusu of Kenya, many kinds of power were possessed by individuals with expertise and responsibilities as rainmakers, communicators with the dead, consolers of the bereaved, political chiefs and leaders of war. Large walled villages developed in the 17th to 19th centuries in the face of slave trade and ivory trade, as warriors and chiefs consolidated power at the expense of ritual specialists.

Kuttruff, Carl [211] see Heredia, Verenice

Kuwanwisiwma, Leigh [119] see Lomayestewa, Lee Wayne

Kuwanwisiwma, Leigh J. (Hopi Cultural Preservation Office) and Ferguson, T. J. (Anthropological Research, LLC)

[201] *The Hopi Model for Repatriation Research: The Tribe is the Gatekeeper, the Archaeologist is an Analyst*

Hopis have a secure identity rooted in more than a millennium of history in the Southwest. This identity derives from the social relations of kin and clan, a rich religious heritage, and the tribal sovereignty recognized by the United States. Hopis therefore don't need archaeologists to "establish" their identity. Nonetheless, the tribe employs archaeologists to analyze technical information for NAGPRA. In this mutually beneficial relationship, the tribe serves as the gatekeeper, providing access to tribal members entrusted with the authoritative traditional knowledge essential in NAGPRA research. For Hopi, traditional knowledge and scientific data are complementary rather than oppositional.

Kvamme, Jo Ann (University of Arkansas) and Kvamme, Kenneth (University of Arkansas)

[31] *Geophysics at 46 N Latitude*

Results of magnetometry, resistivity, EM and GPR studies are illustrated at three Plains Village sites in North Dakota—Double Ditch (32BL8), Boley (32MO37), and Larson (32BL9)—and at Cougar Bar Village (10NP464), an ancestral Nez Perce site in Idaho. Cougar Bar may have been visited by members of the Lewis and Clark expedition in 1806; the site's location and geophysical findings appear to agree with the limited historical evidence. Guided by anomalies in North Dakota, excavations aid understanding of these sites by providing material culture, botanical, faunal samples, and datable materials.

Kvamme, Kenneth (University of Arkansas)

[84] *Geophysical Surveys as a Form of Archaeology*

Geophysical surveys have come a long way in their ability to identify and map subsurface elements of archaeological interest. Hidden archaeology in large settlements or cultural landscapes can be revealed, frequently with clarity sufficient for inferences about content, structure, and organization to be made from the geophysical data alone. Examples are given from throughout the United States using multiple geophysical technologies—many with accompanying excavation findings.

Kvamme, Kenneth [31] see Kvamme, Jo Ann; [31] see Ernenwein, Eileen

LaBelle, Jason (Colorado State University)

[165] *A Folsom Complex, Then and Now: Recent Investigations at the Lindenmeier Site in Northern Colorado*

CSU and SMU recently began investigation of the cultural and natural landscape of this famous Folsom locale. Work focused on survey of the site and surrounding drainages, mapping, photo revisits of former work, metal detection of prior field camps, and geological profiling and sampling of several exposures. Results are promising, as over fifteen tools were

discovered during this current project, including Folsom points, preforms, end scrapers, and gravers. Lithic debris and weathered bone are present on the surface and arroyo system. Potential raw material sources were also identified. Results are placed into the context of past work at Lindenmeier.

Lafe, Ols [134] see *Galaty, Michael L.*

Lafferty, Robert (MCRA)

[60] *The Diffusion of Shell Tempered Pottery into the Baytown Area of the Northern Lower Mississippi Valley*

Shell tempering began to be used among the Baytown peoples in southeastern Missouri and northeastern Arkansas beginning about A.D. 800. Based on over 100 dated contexts from this region, the shell tempering was slowly incorporated into the pastes over the next 300 years. From ca. A.D. 800 to A.D. 1100 there was a period of mixed tempering. The component tempers included various combinations of grog, shell, and sand in various proportions. Even using ground shell tempered pottery was used for grog. After about A. D. 1100 straight shell is the dominant temper found in the pottery.

Laluk, Nicholas C. (White Mountain Apache Tribe - University of Arizona) and Welch, John R. (Simon Fraser University)

[138] *Practical Politics, Apache Scouts, and Active Residency at Fort Apache*

Fort Apache implemented US Indian policies of subjugation and assimilation, but the site's enduring significance may stem from the hundreds of Apache men recruited as scouts. Often accompanied by their families, scouts set up camps around the post perimeter, positioning themselves on locational, economic, social, and political middle ground. Employing the concept of practical politics, a recent analysis of a Fort Apache scout camp indicates that some Apaches confronting encroachment established active residency at Fort Apache, possibly employing their landscape knowledge as the basis for subtle assertions of power and improvements in their households' material conditions.

Lambers, Karsten (German Archaeological Institute)

[17] *Archaeological Evidence of Geoglyph Use and Function in Palpa and Nasca, Peru*

The interpretation of the geoglyphs in the Nasca region is still a matter of debate. While most current hypotheses draw on well-known Andean concepts of social organization and religious practices, actual archaeological evidence to test these hypotheses remains sparse. Recent fieldwork in Palpa and Nasca resulted in a comprehensive body of survey and excavation data that allowed activities on geoglyph sites to be reconstructed. GIS-based spatial analysis revealed distinctive patterns of geoglyph distribution. Both lines of evidence, which will be presented in this paper, hint at a persistent religious and social role of the geoglyphs throughout much of Nasca history.

Lanata, Jose Luis (University of Buenos Aires) and Garcia-Herbst, Arleen (University of California, Santa Barbara)

[158] *Exploring the Tempo and Mode of America's Human Dispersal*

America is the last continent to which the Homo sapiens arrived. We adopt an invasive species perspective to shape tempo and mode of human dispersal using demographic models. Dispersal simulations are presented based on the ecoregions available from Late Pleistocene until 10 kybp, by considering a fast invasive process and a slow one. The results show that the tempo of the dispersal would not be very different among both situations. It also suggests that Mesoamerica and the Amazon regions where the higher population densities areas in America since very early moments. The evolutionary consequences are discussed.

Lanata, Jose Luis [39] see *Garcia-Herbst, Arleen*

Landry, Jacqueline (Northern Arizona University)

[40] *Beyond Repointing: Incorporating Technology as a Preservation Tool at Tonto National Monument*

Since 1916, the National Park Service has stood at the forefront of preservation efforts. Recent technological innovations have enabled archaeologists to make significant advances in the field of ruins preservation. Today, archaeologists at Tonto National Monument incorporate

LIDAR, GIS, and GPR technologies to obtain the highest levels of accuracy in architectural documentation and apply innovative, non-invasive techniques to aid in the preservation of archaeological sites. This paper examines the present and future roles of technology in ruins preservation at Tonto National Monument, Roosevelt, Arizona.

Landt, Mathew (Washington State University)

[117] *Cultural Developments at the Chalcolithic Site of Gilund, Rajasthan*

Explanations of large-scale interregional social networks are hindered by inadequate understandings of local cultural entities. Recent work at the Ahar-Banas Chalcolithic site of Gilund provides an opportunity to focus on community level environmental exploitation. Knowledge of differential wild and domestic species utilization at a single locale allows archaeologists to ascertain the way in which resident groups exploited cultural networks in responding to environmental and cultural shifts. This paper utilizes chronologies established in the Banas River area as indicators of local cultural developments at Gilund that reflect the synchronic and diachronic migrations and movements of people and animals in northwest India.

Lane, Chad [86] *see* Horn, Sally

Lane, Lillian [96] *see* Leeper, Karlene

Lane, Molly (Ohio State University)

[21] *A Comparison of Neolithic Burials to the Copper Age Cemetery of Tiszapolgár-Basatanya*

By studying the burial practices of the cultures in the Great Hungarian Plain from the Early Neolithic to the Early Copper Age, the continuation of certain burial rituals and customs can be observed. This comparison is important because the transition from the Late Neolithic to the Early Copper Age marked a drastic change in the composition of the cultures in the Great Hungarian Plain. The analysis of each culture's burial practices in the Neolithic aids in understanding the mortuary characteristics of the Copper Age cemetery of Tiszapolgár-Basatanya.

Laneri, Nicola (ISIAO)

[133] *Interpreting the Transformation of Burial Practices in a Mid-Late Third Millennium BC Society of Southeastern Anatolia*

The transformation of funerary tradition among ancient and modern societies is also a dramatic change within the social fabric of a given society. In this paper, the author decided to investigate the above-mentioned topic using the funerary data associated with the mid-late Third Millennium BC archaeological context of the southeastern Anatolian site of Titris Höyük. During this chronological period, the site is in fact marked by a transformation of burial practices—i.e. from an extramural to an intramural custom of burial depositions—, as well as changes in sustenance economy, settlement pattern, and goods production.

Lange, Frederick (LSA Associates)

[151] *Expanding the Playing Field for Archaeologists in Nicaragua and Costa Rica*

Costa Rica and Nicaragua support archaeological research under existing laws. Procedures are transparent. In the era of e-mail, requests from foreign researchers are processed efficiently. Foreign participation is welcome. This having been said, the loss of archaeological resources in both countries continues at an alarming rate. They lack legal support and human and economic resources. Research focuses on topics of interest to individual investigators and not to issues of national need or interest. Salvage or rescue archaeology consumes almost all resources while private, or CRM, archaeology is not encouraged. In the interest of protecting archaeological resources, this situation must change.

Lange, Hans [6] *see* Darwent, Christyann

Lange, Richard (Arizona State Museum, University of Arizona)

[100] *Building a Cliff Dwelling, Building A Pueblo: Environmental Impacts and Labor in Prehistoric Construction*

Archaeologists may not typically appreciate the labor required to build prehistoric pueblo dwellings, nor the impacts of collecting the stone, soil, and wood necessary for the construction. Data from Arizona cliff dwellings and pueblos are presented, indicating the scale of labor required and the extent of environmental impacts created.

Lansing, Steve (University of Arizona & Santa Fe Institute), Fox, Karyn (University of Arizona) and Schoenfelder, John (University of Arizona)

[52] *The Expansion of the Subak System in Bali*

Along a typical Balinese river, dozens of small groups of farmers meet regularly in water temples to manage the irrigation systems for their rice paddies. Although each group focuses on its own problems, somehow a global solution emerges that optimizes irrigation flows for everyone. Understanding the historical development of this system required a model for its present-day mode of operation. In this paper we present new data on the formation of irrigation communities in the twentieth century, and reflect on the implications for the past.

LaPorta, Philip (Graduate Center of CUNY and LaPorta and Associates, L.L.C., Geological Consultants)

[87] *Prehistoric Quarries of the Mid-Atlantic United States: Controls on Intra-Regional Variability*

The mid-Atlantic region of the United States hosts a variety of quarries of different types of raw materials; such as bedded and nodular cherts, jasper, rhyolite, steatite, quartzite, argillite and vein quartz. Differences in extraction loci architecture, extraction technology and chain of operation are functions not only of raw material type, but also of country rock geology and geometry, availability of specific mining tool kits and cultural mining practices. This paper will organize the variables controlling quarry development and subsequent refinement sequences for the mid-Atlantic region and permit comparison with other geographic regions of the eastern United States.

LaPorta, Philip C. [87] see Brewer-LaPorta, Dr. Margaret C.; [87] see Conrow, Michael

Larralde, Signa (Bureau of Land Management, New Mexico)

[140] *The Survey and the Surface Collection: The Basic Tools that Time Forgot and the Decades Cannot Improve?*

By mid-century, Gordon Willey's demonstration of the research power of the survey elevated it to standard practice for regional field research. The survey became formalized as both research tool and management practice during the 1970s and 1980s. Robert Santley honed the regional survey as research tool in the Valley of Mexico and the Tuxtla Mountains. In Robert's spirit, this paper tracks professional debate on the survey and the surface collection as tools for building an archaeological record; explores how standard practice may have led to stagnation; and suggests how lessons now emerging may affect the future of the survey.

Larralde, Signa [125] see Powers, Bob

Larsen, David (Arizona Department of Emergency & Military Affairs)

[113] *Inidan Village: Native American Work Camps During WWII*

Camp Navajo is one of the AZ-ARNG's major training facilities. Recently, a comprehensive oral history review was undertaken to obtain and preserve the prospective and experiences of the Native American work camp. In 1942, over 1,500 Native Americans, mostly Navajo laborers and many Hopi carpenters were employed to build the Navajo Ordnance Depot for the storage of ammunition during World War II. Native Americans later served as ammunition handlers throughout the war, doing much of the transfers by hand. The contribution of Native Americans at the Navajo Ordnance Depot was a huge support to troops in the Pacific Theatre.

Larson, Mary Lou [110] see Wiewel, Adam; [129] see Cox, Shanna

Latham, Mark (Burns & McDonnell) and Boudreaux, Jennifer (Camp Gruber Joint Maneuver Training Center—Heavy)

[113] *Leave No Stone Unturned: "New" Lithic Resources in Camp Gruber*

Lithic sources were critical for prehistoric people and have allowed archaeologists to conduct a variety of studies. In eastern Oklahoma a number of lithic sources have been documented, but until recently all known sources were outside Camp Gruber. No local resources were identified during archaeological surveys on the facility over the last 25 years. A recent study has identified several extensive lithic sources at Camp Gruber. This paper examines how these newly identified lithic sources within the locality have changed the interpretation of land use and site distribution or settlement patterns of the identified prehistoric components within Camp Gruber.

Lattanzi, Gregory Denis (New Jersey State Museum)

[170] *Caught in the Cloverleaf: Public Archaeology at the New Jersey State Museum, Its Mission and Reality*

Education has been part of the New Jersey State Museum's mission since its inception in 1895. Since that time, the State Museum's Archaeology Bureau has been instrumental in public education and outreach, in the form of exhibitions, classes, outgoing loans, academic internships and volunteer programming. In addition, through the Museum's Bureau of Education, archaeologists promote academic programs for all grades, including college. Museum staff continually conducts scholarly research and publish with the help of volunteers and interns, relying on these individuals for their help and enthusiasm. The goal of the Archaeology Bureau is to further the education of New Jersey residents in the prehistory and history of the state. This paper will present how being part of a state agency has its advantages and disadvantages in effectively providing the necessary resources in order to carry out our mission to the public.

Lau, George (Sainsbury Research Unit)

[65] *Recuay-Period Monumentalism and Defensive Architecture at Yayno, Ancash, Peru*

Recent investigations shed light on the ancient mountaintop settlement of Yayno (Pomabamba, Ancash Department, Peru). Test excavations and mapping indicate principal occupation during the late Early Intermediate Period and Middle Horizon (ca. AD 400 - 800). Although there is evidence of ceremonial activity, the research documents intensive fortified, residential occupation in most areas of the central monumental core (approximately 30 ha.), by wealthy corporate groups of the Recuay culture. Our work highlights the diverse trajectories for the emergence of towns and social complexity during the 1st millennium AD in the Central Andes.

Laumbach, Karl W. [63] *see Dahlin, Eleanor*

Laumbach, Toni S. [63] *see Dahlin, Eleanor*

LaViolette, Adria (University of Virginia)

[144] *Archaeological Expressions of Swahili Ethnicity in 10th-16th-Century Pemba, Tanzania*

Exploration of Swahili origins over the last 30 years has led to a consensus that this eastern African coastal society was built by multiple African peoples rather than Middle Eastern colonial ones, as once assumed. The African foundations of early Swahili ca. A.D. 700, however, does not speak to the centuries of transformation from then on, including ongoing effects from Islamic conversion, incorporation of Arab and Indian Ocean immigrants, and domestication of imported material culture. I argue here that the false dichotomy of foreign and indigenous in the study of ethnicity in this frontier zone has prevented richer understandings of cultural constructions of identity.

Law, Randall (University of Wisconsin-Madison)

[117] *Interregional Interaction in the Ancient Indus Valley: New Data from Geologic Provenance Studies of Harappa's Rock and Mineral Assemblage*

Harappa, one of the largest Indus Civilization cities, is situated in the center of the Punjab Plain where there are no local sources of stone whatsoever. Geologic source provenance studies have recently been conducted on a wide range of archaeological stone from the site including alabaster, chert, carnelian, grindingstones, limestone, steatite, and vesuvianite as well as on several metals. The results of these studies are summarized in this paper. Many assumptions made by previous scholars regarding rock and mineral source utilization and trade networks during the Harappan period have been confirmed. Some interpretations, however, now need to be significantly revised.

Lawler, Andrew (Science Magazine) [193] *Discussant*

Lawton, Crorey (Tulane University)

[189] *Wheel Within a Wheel - Local Commodity Trade in a Long Distance Exchange Network*

Local commodity exchange occurs with long-distance exchange at trade centers, but takes place independent of mechanisms that govern long distance trade. This paper discusses local chert trade networks at a group of sites in the Petén Lakes region involved in long-distance

elite goods exchange. Advances in technology have resulted in a portable XRF apparatus that can be used to chemically analyze samples quickly and inexpensively. The analysis of large numbers of samples helps identify general patterns of chert sources across the region, and to address patterns of acquisition and consumption of local materials at sites engaging in long distance exchange.

Layzer, James [114] see *Bogan, Arthur*

Lazcano, Carlos (IIA-UNAM Mexico) and Serra Puche, Mari Carmen (Coordinación de Humanidades UNAM)

[97] *The Formative Period in the Central Plateau: A Revision*

In this text we will do a revision of the proposals and models that have been put forward around the social processes that occurred during the Formative period in the Mexican Central Plateau. The contents will be discussed, as well as the contributions and advantages with the purpose of evaluating their validity and to determine the range for the explication of the social dynamics during this period.

Lazcano, Carlos [206] see *Serra Puche, Mari Carmen*

Lazrus, Paula Kay (St. John's University) and Van Hove, Doortje (Bova Marina Research Project)

[106] *Reconstructing Post Medieval Economic Landscapes in Southern Italy Using Multiple Datasets*

Understanding the spatial and social dynamics of a landscape can be enhanced by extending beyond traditional datasets such as multiple map types, environmental and individual site data. This paper presents preliminary data on economic and social aspects of land use around the town of Bova (Reggio Calabria, Italy) during the early 1800s. By combining archival tax records with initial GIS analysis we are investigating the nature, extent and location of individual land holdings, the types of forest exploitation and the relationships between different social classes in this now very degraded and seemingly empty landscape.

Lazzari, Marisa

[180] *Collective Workers: The Social Efficacy of Artifacts, Past and Present*

In this paper, I discuss the social efficacy of objects and their concrete work in particular social projects, both in the past and in the present. Central to the argument is that an adequate understanding of social action requires the exploration of the political and aesthetic field as structured by the active intervention of artifacts and their complex associations. The essential relation to explore is how social significance emerges in particular historical junctures from people's existential implication with the cultural products that mediate their relationships.

Leach, Peter (Climate Change Institute: University of Maine) and Belknap, Daniel (Earth Sciences Dept.: University of Maine)

[142] *Marine Geoarchaeological Investigation of Damariscotta River, Maine, USA*

Seismic reflection profiling and side-scan sonar, coupled with marine vibracoring, were utilized to investigate the archaeological potential of relict (4800 – 3800 yBP), submerged (-10 mbsl) oyster beds in Damariscotta River, Maine, USA. Ceramic Period (Woodland) groups in the area utilized robust oyster populations, evidenced by a high density of currently eroding oyster middens. Archaic Period oyster middens are presumably underwater. Paleogeographic reconstruction through correlation of vibracores and geophysical data has lead to some success in searching for these sites. We feel that spatially-restricted, easily identifiable buried oyster beds, where present, are the ideal starting point for estuarine marine geoarchaeological investigations.

Lear, Katina [42] see *Lotti, Teresa*

Leckman, Phil (University of Arizona) and Greene, Gregory (CSU Pomona)

[125] *Welcome to the Neighborhood: Visibility, Access, and Aggregation in the Burnt Corn Community*

Recognizing that a variety of factors are likely at play in any particular case, many recent discussions of Coalition- and Early Classic-period aggregation move beyond one-size-fits-all

explanations to approach individual site clusters and groups in terms of the social processes at work in their particular local contexts. Geographic information systems can serve as an important tool for such an analysis. In this study, we use GIS to address the social processes at work in the Burnt Corn Pueblo cluster via an analysis of intervisibility, accessibility, and other factors that might have played a role in local site location decision-making.

LeCount, Lisa (Alabama)

[205] *Bread and Chocolate for the Gods: Late and Terminal Classic Maya Ceramic Caches at Xunantunich*

The Late and Terminal Classic Lowland Maya commonly cached whole vessels in burials and buildings including private domestic structures and monumental temples. Interestingly, the kinds of vessels found in household caches and burials are distinctly different than those found in civic buildings at Xunantunich. Contrary to expectations, ordinary bowls are associated with civic dedication and termination rituals, whereas prestige wares are found in private burials and household caches. Feeding the gods was an important component in all commemorative rites, but those associated with the community apparently did not require competitive displays of wealth like those associated with the house.

LeCount, Lisa (Alabama) [149] Discussant; [160] see Persons, Brooke

Lee, Christine [133] see Miller, Bryan

Lee, Craig M. (University of Colorado Department of Anthropology and INSTAAR)

[156] *Perennial Snow and Ice Patch Archeology in the Rocky Mountains: New Insights from Surveys in Montana and Colorado*

Archeological and paleontological materials have been discovered in association with perennial snow and ice patches in Montana, Colorado and elsewhere in North America. These discoveries offer important new insights into alpine paleoecology and the use of high elevation environments by humans. The presence of fragile organic artifacts and ancient paleobiological specimens lying exposed on the surfaces associated with these features suggests they are experiencing atypical melting. Because organic specimens and artifacts deteriorate rapidly when exposed to the elements there is an urgent need for regionally focused surveys in all areas where perennial snow and ice resources exist.

Lee, Craig M. [62] see Lee, Jennie Borresen

Lee, David (Southern Methodist University), Piehl, Jennifer, Gamez, Laura, Acuna, Mary Jane and Matute, Varinia

[103] *Ritual and Remembrance at the Northwest Palace Complex, El Perú-Waka'*

Four seasons of excavation in El Perú-Waka's northwest palace complex have yielded a picture of activities within the site's royal court. The evidence reveals patterns of reverential ritual, rejuvenation and the invocation of connections to legendary royalty in the tumultuous final centuries of Classic Maya civilization. The interment of a powerful royal woman, the termination of a polychrome stucco façade, the installation of inscribed panels on the acropolis staircase, and the construction of defensive walls on the acropolis perimeter provide important clues about cycles of life, death and rebirth in the life history of the royal court.

Lee, David [103] see Piehl, Jennifer

Lee, Gyoung-Ah (Dept. of Archaeology Seoul Nat'l University)

[20] *Re-Conceptualising the Transition to Agriculture in Korea: Chulmun Examples*

Definitional confusion of prehistoric 'agriculture' has hampered our understanding of the Chulmun (Neolithic) subsistence in the Korean Peninsula. This paper revisits the term with archaeological and ethnographic examples in East Asia. Then it reviews recent archaeobotanical data collected from various parts of Korea, dating from the Early to Late Chulmun period (ca. 6000 – 1500 BC). Based on the clear definitions and new data, it reassesses the diversity of the Chulmun subsistence strategies regarding to plant uses.

Lee, Jennie Borresen (Metcalf Archaeological Consultants, Inc.), Lee, Craig M. (University of Colorado Department of Anthropology and INSTAAR) and Turnbull, Jocelyn (University of Colorado INSTAAR Laboratory for AMS Radiocarbon Preparation and Research)

[62] *Refining the Age of the Frazier Site: AMS Radiocarbon Dating, Stable Isotope Analysis and the Agate Basin Complex*

The Frazier site (5WL268) is believed to represent a single component, Agate Basin- age bison kill/butchery event on the Kersey Terrace of the South Platte River in northeastern Colorado. The presence of projectile points consistent with the Agate Basin complex and two radiocarbon dates obtained in the late 1960s from bulk soil collected above the cultural horizon indicate the site is at least as old as other Agate Basin complex sites. The poster details the extraction of collagen and amino acids from bison bone for stable isotope analysis and AMS radiocarbon dating, and presents the results and related implications.

Lee-Greig, Tanya [51] *see Desilets, Mike*

Leeper, Karlene (US Air Force - remote Alaska), Cassell, Mark (Northern Land Use Research) and Lane, Lillian (Point Hope, AK)

[96] *Past is Omnipresent: Archaeological and Human Histories at Point Hope, Alaska*

Archaeologists have worked in Point Hope, an Iñupiat Eskimo village on the coast of northwest Alaska, since the 1930s. Previously, archaeologists did not trouble themselves with critical notions of living Eskimos as objects or subjects. Eskimo pasts were given meaning by archaeologists through artifacts and archaeological sites. Recently, archaeologists working among Eskimos have realized that Eskimos are active attributors of meaning to Eskimo material culture, pasts, and society. The US Air Force recently sponsored a collaborative workshop in Point Hope with Eskimo elders, community members, and archaeologists, engaged in a thoughtful and occasionally confrontational discussion of the archaeological past, heritage, and repatriation.

LeFebvre, Michelle J. (University of Florida) and Giovas, Christina M. (University of Washington)

[195] *The Zooarchaeology of Islands: Towards Synergy and Synthesis*

Island zooarchaeologists working around the world are inherently linked by interests unique to island settings, yet island zooarchaeology often remains colloquial in scope. Therefore, this paper outlines current trends in island zooarchaeology, explores some of the diverse research agendas, novel developments and approaches pursued in island settings, and discusses the benefits to be gained from increased communication and collaboration among island zooarchaeologists. We propose the formation of island zooarchaeology as a disciplinary community that extends beyond the confines of island foci in order to foster a more sophisticated understanding of the human cultural past on islands.

Lefrancois, Marc [185] *see Roop, Tobin W.*

Leftwich, Brent (UC - Santa Barbara)

[106] *What a Grind: Patterns of Behavior and Bedrock Mortars in the Sierra Nevada*

Bedrock mortars are ubiquitous in the North-Central Sierra Nevada and the processing of acorns proved a time-consuming yet profitable resource during the Late Prehistoric. Within the site, bedrock mortar shape, count, location, groupings can point towards a greater understanding of site activities, behavioral aspects, and gender. On a regional scale, their location helps predict site placement and settlement patterns, as well as address issues of landscape. This report summarizes two seasons of fieldwork in the Amador District of Eldorado National Forest. Through GIS mapping, groundwater analysis, and individual mortar analysis, a clearer picture can be seen of acorn processing in the Sierra.

Legge, Anthony [145] *see Moore, Andrew*

Lehman, Heather [188] *see Barela, Tim*

Lekson, Stephen (University of Colorado)

[132] *States of Mind, States of Confusion: Historical Contexts of Native State-Like Entities North of Mexico*

Archaeological thinking about ancient politics north of Mexico assumes that episodes of complexity (if any) occurred as isolated cases or situations. But nothing north of Mexico was, in fact, isolated. Mesoamerican kingship began as early as Olmec: if soi-disant lords of Cahokia and Chaco wanted models for kingly behavior, they knew where to look. States north of Mexico, however, were forbidden to archaeology by Lewis Henry Morgan – a proscription dutifully followed by US archaeologists ever since. Setting Morgan and modern nationalisms aside, it makes much sense to consider Chaco and Cahokia as secondary states.

Lekson, Stephen [196] *Discussant*; [116] see Gumerman, George

LeMoine, Genevieve [6] see Darwent, Christyann

Lemus, Manuel Aroldo [85] see Bell, Ellen

Lemuz, Carlos

[137] *Técnicas de Producción Agrícola Prehispánica en la Región de Jesus de Machaca*

Las poblaciones prehispánicas desarrollaron tecnologías agrícolas que respondieron a condiciones que el medioambiente les impuso. En la Cuenca del Lago Titicaca se implementaron cultivos en terrazas desde el 1500 a.C. y en camellones desde el 100 d.C. Probablemente, los cultivos en Q'ochas fueron aplicados casi al mismo tiempo que los camellones. Investigaciones en la región de Khonkho Wankane muestran una importante cantidad de Q'ochas y Q'otañas que participaron de una estrategia regional de explotación agrícola y pecuaria desde el Formativo Tardío.

Lengyel, Stacey (Statistical Research, Inc.) and Sternberg, Robert (Franklin & Marshall College)

[61] *An Assessment of Archaeomagnetic Contemporaneity*

Typically, archaeomagnetic (AM) data are used to obtain calendar dates for specific archaeological features. However, these data are useful for assessing the relative contemporaneity of archaeological features as well. For many archaeological questions, the ability to test the potential contemporaneity of features can be more powerful than the acquisition of calendar dates. This study represents a preliminary attempt to assess the practical limits of AM contemporaneity studies and to provide a means to quantify the error associated with these relationships. Modern, historical, and prehistoric AM data sets are employed.

Leonard, Daniel (University of California Riverside) and Taube, Karl (University of California Riverside)

[14] *An Iconographic Analysis of the Preclassic Mask at Cival*

Excavations at the Preclassic Maya site of Cival have unearthed a monumental anthropomorphic stucco mask. While resembling the Sun God in many respects, the mask combines elements of both the Sun God and God C. In this paper we conduct an iconographic analysis of the Cival mask and suggest that the mask represents a distinct figure that can tentatively be called God C' (God C "prime"). Following this, we attempt to better understand the meaning of God C' by examining the contexts in which he appears and how his form changes throughout Maya history.

Leonard, Robert D. [32] see VanPool, Christine S.

Leone, Mark [171] see Harmon, James

Lerch, Michael (Statistical Research, Inc.) and Siva, Ernest (Morongo Band of Mission Indians)

[146] *Changing Scales of Identity in Native California: The Serrano of Southern California*

The arrival first of Europeans and later of Americans into inland southern California led to a number of social, demographic, and geographic changes in Native American cultural groups. Using the Serrano as a case study, we examine how the focus of identity for Native Americans in the region changed from the localized village-based lineage to the language group (tribe), and finally to a multi-tribal reservation identity. These changes were accompanied by

geographic shifts as well, and have implications for archaeological studies of cultural affiliation of particular sites, for consultation under Section 106 of the NHPA, and for NAGPRA repatriation.

Lerner, Shereen [96] *see* Burnett, Scott

Lesure, Richard (UCLA), Carballo, Jennifer (U. of Michigan) and Carballo, David (UCLA)
[200] *Iconic Traditions and Collective Memory in Formative Central Tlaxcala*

We explore representations as loci for the negotiation of collective memory in Formative central Tlaxcala. Our focus is on four iconic traditions in households: ceramic figurines, cylindrical effigy censers, images of recognizable Central Mexican deities, and incised decoration on pottery. We consider how each tradition coheres as a diachronic series of related forms. We then ask whether the series were iconographic and stylistic in different ways. The result is a model of articulations between the traditions that, with a contextual analysis, allows us to assess changes in strategic uses of materialized memories over the course of a millennium.

LeTourneau, Philippe D. [191] *see* Steffen, Anastasia

Leung, J. [134] *see* Blickstein, Joel

Levan, Larry [147] *see* Bill, Cassandra R.; [147] *see* Charton, James

Leventhal, Richard M. (University of Pennsylvania Museum) [19] *Discussant*

Levine, Marc (University of Colorado), Joyce, Arthur (University of Colorado) and Glascock, Michael (University of Colorado)

[211] *Examining Postclassic Change in Obsidian*

Following the establishment of Yucu Dzaa (Tututepec) at the dawn of the Late Postclassic Period, it conquered most of coastal Oaxaca and maintained alternatively friendly and antagonistic relations with its highland neighbors. XRF analysis of obsidian from Early and Late Postclassic residences in the lower Rio Verde region allow us to chart the effect of the founding of Yucu Dzaa on interregional exchange. Following a summary of the shifting patterns of obsidian procurement, we suggest how this data may reflect the nature of relations between lower Verde polities and their peers through time.

Levine, Marc [46] *see* Joyce, Arthur

Levine, Marsha, Whitwell, Katherine (Equine Pathology Consultancy, Moulton, Newmarket, Suffolk), Jeffcoat, Leo (Veterinary School, University of Sydney, Australia) and Barker, Graeme (McDonald Institute for Archaeological Research (University of Cambridge))

[45] *Palaeopathology as a Tool for Exploring Ancient Horse Husbandry*

The basic premise of this project is that the horse did not evolve in nature to carry or pull loads. We have hypothesised that doing so over an extended period of time could result in the development of bony changes. The core of this project is the systematic comparison of horses from a variety of different populations with different life-styles. In addition to modern controls, archaeological samples include Scytho-Siberian and Medieval riding horses, and Chinese chariot horses. The results of this project should help us to better understand the osteological material relevant to the origins and evolution of horse husbandry.

Lev-Tov, Justin (Universität Mainz)

[114] *Astragali Dice from the Protohistoric Southeastern United States Versus Those from the Mediterranean World*

Nearly twenty years ago, B. Lewis argued that astragali dice from Mississippian sites demonstrated that Spanish explorers introduced the game to Native Americans. Lewis further suggested astragali dice formed chronological markers for the arrival of the Spanish into the southeastern U.S. Others have disagreed with his assessment and used radiocarbon dates to demonstrate that the bones pre-date the Spanish. I concur with the latter assessment, and add to it qualitative evidence based on context, form and use, showing that the modified

astragali known from Near Eastern and Mediterranean European contexts differ from their New World counterparts.

Lewis, Brandon (Santa Monica College), Gifford, Chad (Columbia University), Connell, Samuel (Foothill Community College) and Me-bar, Yoav

[9] *The Organization of Inka Imperial Expansion: Analysis of the Pambamarca Fortress at Quitoloma*

Research undertaken by the Pambamarca Archaeology Project at the Ecuadorian site of Quitoloma is directed toward elucidating the dynamic process of imperial expansion, subjugation, and local resistance. Ongoing excavation permits insight not only into the broad scale organization of Inka expansion, but also into the specific details of execution. This paper will examine the function, spatial composition, duration of occupation, and rate of abandonment of Quitoloma and then integrate these data into the overarching discussion of imperial conquest.

Lewis, Brandon [76] see Gifford, Chad; [9] see Connell, Samuel

Li, Kuangti (Academia Sinica), Tsang, Cheng-hwa (Academia Sinica), Chu, Cheng-yi (National Prehistory Museum, Taiwan) and Hsing, Yue-yi (Academia Sinica)

[20] *Rethinking the Beginning of Agriculture in Prehistoric Taiwan*

This paper deals with the theoretical consideration of the beginning of agricultural practice in prehistoric Taiwan. The earliest evidence for grain cultivation has been recently unearthed from two sites on the south western Taiwan. Evidence associated with the Tapenkeng culture (6000-5000 B.P.), characterized by a cord-marked and incised pottery style, spread around the coastal region of Taiwan. According to the length/width ratio, this rice might be Hsien or, Ken, and might even be *Oryza rufipongo*, instead of the cultivated rice *Oryza sativa*. This newly discovered evidence allowed a reconsideration of how rice cultivation emerged in prehistoric Taiwan.

Li, Min (University of Michigan) and Fang, Hui (Shandong University)

[109] *Cuisine, Sacrifice, and Divination at the Shang Frontier: Interregional Interaction from the Perspective of Animal Bones at Daxinzhuang*

This paper examines the ways that the local elite at the frontier settlement of DXZ reproduced or modified the behavioral codes from the Shang metropolitan centers in realms of food consumption and religious practice. Analysis of the DXZ faunal remains reveals the social relations and cultural institutions that underlie the movement, consumption, and religious use of animal products. The constitution of social prestige and cultural identity in the broader context of Mid-Shang interregional interaction sphere, therefore, can be appreciated from cultural patterns of food consumption and protocols of religious communication, in addition to the typological aspect of ceramics.

Li, S. [20] see Yuan, Jairong

Li, Yung-ti (Institute of History and Philology, Academia Sinica)

[109] *The Essence of Swiss Cheese: the Nature of Interaction between Anyang and Its Neighboring Regions*

Thanks to its monopoly over textual records and its eminence in historiographic data, Anyang has long been deemed the location where the Shang king resided and exercised hegemonic power over an extended geographic area. The "dynastic" nature is often projected over the archaeological data, despite the claim by Keightley that the Shang territory was porous like Swiss cheese rather than solid. This paper re-examines the relationship between Anyang and the neighboring regions. By reviewing the nature of its power and stressing the importance of exchange, this paper attempts to resituate Anyang in the fabric of interaction rather than political dominance.

Liebmman, Matthew (College of William and Mary)

[19] *Amnesia and Re-Membering in Seventeenth-Century New Mexico: A Postcolonial Interpretation of the Pueblo Revolt*

Archaeology has recently made significant contributions to our understanding of indigenous resistance to Spanish colonialism in New Mexico, particularly during the Pueblo Revolt era (1680-1700). The re-examination of this period through material culture suggests that

archaeology can play a unique role in the recovery of subaltern voices and native strategies of resistance. This paper investigates the variety of tactics utilized in Pueblo resistance to Spanish colonialism, including violence, mimicry, and appropriation. Interpreting these phenomena from a postcolonial perspective results in a radically different picture of Pueblo life in the late seventeenth century, one characterized by resistance—and not acculturation.

Liendo, Rodrigo (IIA-UNAM, México) and Teranishi, Keiko (IIA-UNAM)

[206] *Peasants, Agricultural Production and Social Inequality*

Within Mesoamerican studies, peasant communities have generally been treated as a homogeneous class, assuming that rural farmers were isolated from many of the large scale political and economic currents of their time, except perhaps in their role as producers of tribute for foreign lords. However, when an appreciation for sources of variation among rural residential groups in Mesoamerica becomes the focus of inquiry, one is prone to infer a significant degree of economic autonomy within agrarian producers. Using the data obtained during the last several years, we discuss several settlement pattern aspects, agricultural features and palinological remains from the Palenque region.

Liliane, Meignen (CNRS)

[23] *Hayonim Cave and the So-Called "Early Levantine Mousterian": New Insights into Its Variability*

Since the work of Garrod on the Near Eastern Paleolithic in the 40's, an early Middle Paleolithic entity (her Lower Levallois-Mousterian) has been identified based on stratigraphical and technological criteria. Stratigraphically positioned at the bottom of the Middle Paleolithic sequence in the Paleolithic multilayered sites, these assemblages are generally characterized by a quite large blade component (blades and elongated points). Often presented as a homogeneous entity, all these assemblages have been for a long time considered as exclusively Levallois. More recent technological studies in Hayonim cave (Meignen 2000), Rosh Ein Mor (Marks and Monigal 1995; Monigal 2002) and Hummal la have pointed out a slightly more complex picture with several core reduction strategies involved in the blade production and more diversified retouched tool-kits than often presented schematically in the text books. Both these new elements along with new dating results in Hayonim allowed us to question the Early Levantine Mousterian as an homogeneous entity.

Lilley, Audrey [126] see Lukowski, Susan

Linares, Moises [17] see Carpenter, Tim; [17] see Vaughn, Kevin

Linares-Palma, Adriana Maria (Universidad de San Carlos, Guatemala)

[67] *Propuestas de Desarrollo Comunitario y Conservación del Patrimonio Cultural y Natural en la Cuenca Mirador, Guatemala*

El fenómeno social del saqueo arqueológico es gravemente utilizado por los pobladores cercanos a los sitios arqueológicos, efecto de la pobreza y de una tradición que han arrastrado hasta nuestros días. La gravedad del caso se debe a factores económicos y culturales, obligando un análisis del saqueo con la ideología de los saqueadores.

Lind, Michael [211] Discussant

Lindauer, Owen [42] Discussant

Lindgren, Kristina [169] see McKenna, Jeanette

Lindsay, David [218] Discussant

Linse, Angela [81] see Hughes, Susan S.

Linton, Clinton (Red Tail Monitoring and Research, Inc.)

[98] *Border Field Sacrifice: A Kumeyaay Tribal Perspective*

In the name of Homeland Security, the massive undertaking of constructing a new International Border Fence will commence this year. Cultural and biological resources will be destroyed without mitigation measures or consciousness of what will be lost. At the

westernmost end of this new fence, lies the village of Milejo, which is one of the last preserved Kumeyaay villages. The destruction of this Sacred Land will test the boundaries of our laws, including NAGPRA, which is the last hope for the burials yet to be unearthed at Milejo.

Lipe, Bill (Washington State University)

[181] *Mesa Verde Migrations and Culture Change*

Multiple lines of evidence indicate many 13th century migrants from the central Mesa Verde area settled in the Rio Grande region, yet numerous elements of Mesa Verde material culture, architecture, and settlement organization "don't make the trip." Instead, migrants appear to have assimilated culturally and socially to existing Rio Grande patterns. This suggests that migrants from the central Mesa Verde area traveled in small groups to a region that already had a substantial population with long-standing cultural and social traditions. Rio Grande forms of community organization and religious practice may also have been attractive to Mesa Verde migrants.

Lipo, Carl [92] see Hunt, Terry; **[92]** see Safi, Kristin; **[92]** see Harper, Veronica; **[92]** see Thomas, Roberta; **[92]** see Bell, Matthew; **[158]** see Terrell, John; **[166]** see Eerkens, Jelmer

Lippert, Dorothy (National Museum of Natural History) and Beaver, John (National Museum of the American Indian)

[119] *Yours, Mine or Ours? How Tribal Visitors Approach Collections in the Nation's Attic*

For Native Americans, a tension exists between the concept of national identity as American citizens and a historically ascribed identity as obstacles to American progress. Two of the Smithsonian museums, the National Museum of Natural History and the National Museum of the American Indian hold significant collections from tribal areas. This paper will consider differences in meaning for repatriation-oriented visitors to the museums' collections. When the visitors conceive of the museum as an institution that is culturally derived, the experience differs vastly from that of visiting a facility that is considered to be based in scientific behavior.

Lippi, Ronald (University of Wisconsin Colleges) and Gudino, Alejandra

[76] *Yumbo and Inka Landscape Architecture at Palmitopamba and Tulipe, Ecuador*

The Yumbo sites of Palmitopamba and Tulipe on the western Andean slope in northern Ecuador provide case studies of landscape architectural negotiation that occurred with the arrival of the Inkas. An analysis of the constructs at the site, especially those that modified the landscape and marked it, sheds light on the nature of Yumbo-Inka interaction and accommodation. The apparent absence of stone buildings in this tropical setting does not mean the absence of "the architecture of power"; a broader definition is needed where Inka occupation was short-lived or stone buildings were not practical.

Littman, Ali [126] see Ausel, Erica

Litwinionek, Luc (Sacred Heart University)

[110] *Hunter-Gatherers in Periglacial Environments a Case Study of Paleoindian Occupations along the Glacial Front in Marquette County, Michigan*

In the last fifteen years, paleoindian locales have been identified in Marquette County, Michigan indicating occupation at least since 9,500 years ago. In 2006, analysis of lithic assemblages from archaeological sites located along the Silver Lake Basin suggests that the initial peopling might have dated earlier between 10,500 and 10,000 years ago. Occupations at the time were in proximity of the glacial front which was 20 kilometers away. The presence of human groups in periglacial environments intimates adaptation to rapidly changing plant and animal communities. This paper will discuss the significance in understanding such adaptive processes by these early hunter-gatherers.

Liu, Guoxiang (Chinese Academy of Social Sciences, Institute of Archaeology)

[109] *The Relationship between Upper Xiajiadian Culture and Cultures of the Central Plains and Surrounding Areas*

Archaeological discoveries in the recent ten years include evidence of sophisticated bronze production associated with the Upper Xiajiadian Culture. Dating from early Western Zhou to the beginning of the Springs and Autumns period, the Upper Xiajiadian Culture reached its apex in the early 8th century BC. The material culture up to this point retained stylistic elements of Shang period bronzes from the Northern Grasslands, which were joined by a

sudden emergence of Central Plains styles during this peak period. This paper discusses these patterns and explore the types of interregional interactions that led to this patterning in material culture.

Liu, Li (La Trobe University)

[109] *Regional Interaction between the Yellow River and the Northern Zone*

The Northern Zone cultures developed during the early Bronze Age (second millennium BC), when many changes took place in China and the Eurasian steppe, and interregional interactions reached a higher level than ever before. This paper discusses several major factors which may have encouraged such interactions, using a case study, the Zhukaigou site in Inner Mongolia, to illustrate how migration, colonization, and exchange may have helped to form some unique characteristics of Northern Zone cultures.

Livingood, Patrick (University of Oklahoma)

[212] *Evidence for the Limits of Inter-Polity Competition, A View from the Pearl River*

Previous research in the western Gulf Coastal Plain has argued that the largest Mississippian sites were able to influence the development and complexity of neighboring polities through their ability to restrict access to esoteric goods. These studies primarily relied on comparisons of the abundance of non-local goods in burials. This paper builds on those studies by examining the geographic limit of such inter-polity interactions and arguing that polity size and signs of political centralization are useful means of identifying the effects of inter-polity competition.

Lizarraga, Karen (UC Berkeley, member Class of 1960) and Chiu, Miriam (Escuela Nacional de Bellas Artes, Peru)

[192] *An American Aesthetic, or We've Got Rhythm*

In the beginning was America. Then came South, North, Central, Meso and, last but not least, Latin America - identities in convergence and in conflict. The search for a proper aesthetic intensified in 1959 at the Archaeology Week, held at the UNMSM. Vocabulary such as style was affirmed by participants, Muelle, Rosselló and Rowe. Chanka became a sub-style of Naska. Today, Andean epistemological patterns insist on a new look at Chanka, as well as Tello's search for the center. The application of archaeolinguistic methodology, the consideration of format, figure and color in textiles studied, will manifest inherent rhythmic patterns, ground of an American aesthetic.

Lockard, Gregory (Los Alamos National Laboratory)

[105] *Ancestral Pueblo Fieldhouses in Rendija Canyon, Pajarito Plateau, New Mexico*

This paper presents the results of chronological, architectural, and artifactual analyses of 21 ancestral pueblo fieldhouses excavated in Rendija Canyon during the C&T Project. Rendija Canyon is located just north of Los Alamos on the Pajarito Plateau, New Mexico. The relative chronology of the fieldhouses has been determined via ceramics, and the absolute chronology via radiocarbon, archaeomagnetic, and thermoluminescence dates. The architectural analyses presented in this paper include form, area, building materials, masonry height, and the presence, location, and principal characteristics of external walls, entryways, hearths, and floors. The artifact analyses include ceramics, lithics, faunal and botanical remains, and pollen.

Lockard Reed, Angela (University of Pittsburgh) and Allen, Kathleen Sydorik (University of Pittsburgh)

[142] *Cayuga Subsistence During the Late Sixteenth Century*

While all of the Iroquois depended on a mixed subsistence strategy, it has been observed that the Cayuga had a heavier reliance on hunting than other groups. This paper evaluates western Cayuga dependence on hunting by examining patterns of resource exploitation at a Cayuga village dating to the late sixteenth century. Faunal assemblages from pit, household, midden, and plowzone contexts from the Carman site (ca. 1550-1600 AD) are analyzed to illuminate subsistence activities in the upland Cayuga region. Hunting decisions, distribution of community activities, and the gendered division of labor among the upland Cayuga will all be explored.

Lockhart, Jami (Arkansas Archeological Survey), Sabo III, George (Arkansas Archeological Survey) and Hilliard, Jerry (Arkansas Archaeological Survey)

[154] *Ritual Use of Caves and Rock Shelters in Ozark Prehistory*

Recent developments in the study of ancient religious beliefs direct new attention to caves and rock shelters as sacred places appropriate for certain ritual performances. This paper examines Ozark caves and rock shelters that contain rock art as well as evidence of a distinctive Mississippian mortuary program. These sites are associated with mound centers, residential sites, special purpose sites, and distinctive natural features. Analysis of distributional patterns and site associations using GIS technologies reveals evidence of a sacred geography embedded within late prehistoric cultural landscapes.

Loendorf, Chris (Gila River Indian Community), Darling, J. Andrew (Gila River Indian Community) and Shackley, M. Steven (University of California, Berkeley)

[30] *Obsidian Source Provenance Studies in the Hohokam Core: New Perspectives from the Middle Gila River, South-Central Arizona*

Obsidian source provenance studies are a staple of archaeometric endeavors and have been a major contributor to anthropological statements about source utilization and raw material distribution. Recent x-ray fluorescence (XRF) analyses of obsidian artifacts from sites in the Gila River Indian Community have amassed one of the largest trace-element obsidian artifact databases for the region. Provenance expectations based on regional studies are evaluated against findings from excavated sites in the west end (Estrella Mountain foothills) and east-central (Santan) areas of the reservation. Results demonstrate the advantages of large datasets and the comparative potential of regional and excavation-based research methodologies.

Loendorf, Lawrence

[41] *Archaic and Older Petroglyphs on the Central High Plains*

Analysis of a large number of sites, including radiocarbon dated settings, indicates that there is change in Archaic petroglyphs through time. Early Archaic forms are individual circles and embellished circles; quadrupeds are added to the inventory by the Late Archaic. A few sites have darkly varnished, incised designs under the Archaic pecked figures.

Loendorf, Lawrence [41] see Newman, Bonita

Loffler, German (WSU)

[50] *Microscopy Analysis Diminishing Predictability of Activities on Blade-Like-Flake Tools*

Blade-like-flake tools from the Qwu?gwe's waterlogged site (45TN240), on Mud Bay, near Olympia, Washington, and consultants/site co-managers from the Squaxin Island Tribe, allow analysis of blade-like-flake tools for wood and fiber artifact production. Microwave analysis – with the aid of an electron microscope – identifies signature wear characteristics of specific activities on the flake tools. A discriminate function analysis models these characteristics and objectively designates the "activity-life" of blade-like-flakes. The model illustrates diminishing predictability of activities on flake tools as the number of activities to identify increases.

Logan, Amanda (Department of Anthropology, University of Michigan)

[174] *New Phytolith and Starch Grain Evidence for Maize in the Formative Period Titicaca Basin*

This paper presents results of phytolith and starch grain analysis conducted at four Formative period sites on the Taraco Peninsula, highland Bolivia. Extensive comparative work on Andean grasses was conducted to define production patterns for this region, and test current identification methods for maize. A new maize phytolith diagnostic specific to the Andean highlands is outlined. Analysis of artifact residues and soil samples yielded evidence for maize beginning in the Late Chiripa period. The ecological and social contexts of these finds are explored to help understand the spread of maize into the Andes and its role in Formative period society.

Lohse, Jon C. (University of New Mexico) and Bradley, Bruce (Exeter University)

[190] *The Clovis Cutting Edge: Understanding Socialization and Blade Production from Blade Cores at Gault, Central Texas*

Over 130 Clovis blade cores recovered from Gault include both conical and wedge shaped varieties. Analysis indicates that while fundamental considerations influenced all blade-making, much idiosyncratic variability among the cores appears due to differences in individual

knapper process or differences in skill. Our research reveals that enculturation, in this case learning how to make blades, was a significant factor that conditioned much of the Clovis assemblage at Gault. Analyses of Clovis assemblages elsewhere, particularly workshop sites, are likely to yield similar findings, and should help archaeologists understand broader patterns of Early Paleoindian social behavior and adaptation.

Lohse, Jon C. [206] *see Luzzadder-Beach, Sheryl*

Lohse, Keith [190] *see Lohse, Skip*

Lohse, Skip (Idaho State University), Turley-Ames, Kandi (Idaho State University), Lohse, Keith (Idaho State University), Schou, Corey (Idaho State University) and Strickland, Albert (Idaho State University)

[190] *Archaeological Classification Explored: The Gault Site*

The authors worked with TARK archaeologists to develop an explicit, automated classification system for analysis of the Gault Site Clovis assemblage. This required knowledge elicitation interviews and development of a software program to implement an image classification based on the TARK classification system. The Gault classification system is a unique contribution to Paleoindian studies, emphasizing consideration of diagnostic attributes of Clovis lithic reduction strategies. Emphasis on reduction characteristics rather than preoccupation with distinctive outcomes like projectile points allows incorporation of more varied data and promises more robust identification of Clovis assemblages in the archaeological record.

Lomawaima, Hartman (Arizona State Museum)

[116] *Linda S. Cordell -- The Museum Years*

In 1987, Linda Cordell transitioned from professor and chair of anthropology at the University of New Mexico to chair of anthropology at the California Academy of Sciences. This transition represented a host of new challenges and opportunities for Linda. At the time, I was administrative officer of the Robert H. Lowie Museum of Anthropology, University of California, Berkeley. We very quickly became friends and colleagues. This paper will recount 20 years of Dr. Cordell's work as a museologist, discuss changes we have seen in museum anthropology, and highlight her many contributions to our field.

Lomayestewa, Lee Wayne (The Hopi Cultural Preservation Office) and Kuwanwisiwma, Leigh (The Hopi Cultural Preservation Office)

[119] *Unanticipated Outcomes of Collections Contamination Research*

The Hopi Tribe requests chemical analysis of repatriated Anthropology and Ethnographic collections to ensure the safety of Hopi staff and Hopi Religious practitioners who may desire to re-use these items. By partnering with Nancy Odegaard at the University of Arizona we have obtained unanticipated results, which express the stories behind the creation of cultural material. The chemical analysis of the pigments, the ethnographic documentation, and tribal history combine to reveal the evolving traditions used by Hopi artisans.

Long, R.A. [174] *see Blackwell, Bonnie A.B.*

Longstaffe, Fred J. [202] *see White, Christine D.; [202]* *see Olsen, Karyn C.*

Looper, Matthew (California State University, Chico)

[147] *The History of Xkuy, an Unidentified Southeastern Center*

Although a small site, Quirigua, Guatemala, preserves a large corpus of hieroglyphic texts which provide critical data on southeastern regional politics in the Late Classic. In addition to the famous interaction between Quirigua and Copan, other small sites are mentioned, including the unidentified center known as Xkuy. Though first appearing in texts at Copan in association with the date AD 718, this site becomes increasingly prominent, reaching maximum visibility in the text of Altar O', dedicated in AD 790. I examine the history of Xkuy as an example of changing regional administrative strategies at the end of the Classic period.

Lopez, Carlos (Universidad Tecnológica de Pereira) and Ranere, Anthony (Temple University)

[79] *Cultural Diversity in Late Pleistocene/Early Holocene populations in Northwest South America and Lower Central America*

Hunter-gatherer populations lived in wildly different geographic settings in the Americas and,

not surprisingly, developed a wide range of subsistence, settlement and organizational patterns over time. This variability is evident even looking only at a restricted geographic area – Northwest South America and lower Central America. Distinctive cultural trajectories are already documented at the end of the Pleistocene in some localities, while others remain unexplored at this early period. This presentation summarizes these regional differences and attempts to account for them in terms of the environmental settings, changing climatic conditions, arrival of new populations and landscape domestication.

Lopez, Edwin Salvador (Dirección General de Patrimonio Cultural y Natural Guatemala)
[151] *Las Investigaciones Arqueológicas en Guatemala y las Perspectivas a Futuro: Una Visión Institucional*

El objetivo es analizar, proponer y regular las directrices de las investigaciones arqueológicas que se realizan en nuestro país con visión de construcción de nuestra historia. Hoy día la investigación que se realiza en Guatemala obedece a los intereses de los investigadores y universidades extranjeras que nada tiene que ver con una visión de País. De ahí que el mayor interés está centrado en las tierras bajas mayas, teniendo demasiadas interrogantes por falta de interés en investigar en las tierras altas, costa sur, e intermedias.

Lopez, Francisco (Universidad de San Carlos, Guatemala / Mirador Basin Project), Balcarcel, Beatriz (Mirador Basin Project / FARES) and Hansen, Richard D. (Idaho State University / FARES)

[35] *El Período Clásico Tardío en la Cuenca Mirador*

Durante el Preclásico Tardío en la Cuenca Mirador, hubo un crecimiento sin precedentes con la construcción de ciudades monumentales y una organización urbanística compleja. Después de un abandono de los principales centros por casi 500 años, hubo una re-ocupación modesta en la Cuenca Mirador. Durante el Clásico Tardío existió cierta presencia en varios sitios, logrando un nivel artístico importante en cuanto a su tradición cerámica, y lítica así como la construcción de edificios residenciales y complejos rituales.

Lopez, Francisco [35] see Morales-Guos, Paulino I.

Lopez, Nora (Mirador Basin Project / FARES)

[67] *La Ruta en el Postclásico Para la Conquista del Itza Pasando Por el Area de Mirador, Peten, Guatemala*

A través de la investigación de los documentos históricos y mapas antiguos se ha conocido el recorrido realizado por Ursua y Arizmendi de Campeche a Peten, en 1697, junto con su ejército y el ingeniero Capitán Manuel Cecera quienes fueron abriendo camino a través de montañas. Al reconstruir la ruta, que se encuentra por el lado oeste de la Cuenca Mirador, mencionaron "que hallaron vestigios de edificios antiguos y con muchos ídolos y señales de ofrendas..." así como aguadas "pantanos y anegadizos" y lugares aun mencionados en Peten como Chuntuqui.

López Austin, Alfredo [200] see López Luján, Leonardo

López Luján, Leonardo (Museo del Templo Mayor, INAH), López Austin, Alfredo (Instituto de Investigaciones Antropológicas, UNAM) and García, José María (Proyecto Templo Mayor, INAH)

[200] *Quetzalcoatl's Legacy: A Toltec Chacmool Found at Tenochtitlan*

In this paper we analyze the activities undertaken by the Mexicas in the ruins of Tula and at their own capital, actions with great political weight with which they attempted to link the images of an ecumenical Tollan with the reality and representations of Tenochtitlan. The ruins of Tula were stripped of many of its monuments as recognition of having been the home of the portentous ruler Quetzalcoatl. These sculptures were transported to different locations, where they were rehabilitated in new contexts. We will refer particularly to a Toltec chacmool that was uncovered recently in the sacred precinct of Tenochtitlan.

Lopez Varela, Sandra L. (U. Autónoma del Estado de Morelos)

[75] *The Social in Archaeometric Studies Means How Pottery from K'axob, Belize Was Made*

A social analysis of pottery investigates how potters translated into clay the social values and representations of people's lives, simultaneously considering how these objects defined their being-in-the world. The Maya region is a vast terrain with varying geologies and topographies,

providing the raw materials for different recipes to make pots. Use of archaeometric techniques defines this variability and magnifies the social values hidden behind the pottery we looked at under the microscope. Here, we discuss the "logique social" to understand the steps by which natural resources were transformed into meaningful and functional social objects to those that lived at K'axob.

Lopiparo, Jeanne (University of California, Berkeley)

[68] *Celestial and Subterranean Bodies: The Renewal of Humans, House Societies, and the Cosmos in the Ulúa Valley, Honduras*

Burials and other ritualized deposits at residential sites in the Ulúa Valley, Honduras were essential to the perpetuation of human life-cycles and renewal of house societies during the Late to Terminal Classic (600-1000 AD). Associated burial practices, from interments of the dead in houses, to caches, to the destruction and burial of structures, were repeated in place through time, materializing shared identities and social memory. Parallels in burial alignments among residential sites and landmarks in the built and natural environment demonstrate participation in a region-wide cosmology with shared conceptions of sacred landscapes, astronomical cycles, and the significance of their conjunction.

Lord, C. [134] *see Blickstein, Joel*

Loren, Diana (Peabody Museum, Harvard University), Capone, Patricia (Peabody Museum, Harvard University), Dong, Sandra (Peabody Museum, Harvard University) and Hodge, Christina (Peabody Museum, Harvard University)

[48] *Providing Perspective: Museum Records and the Path to Cultural Affiliation*

Museum records are often silent regarding an object's history, especially as information may be lost along its journey to a museum. As stewards of one of the largest collections subject to NAGPRA, the Peabody Museum constantly works to refine our evaluation of museum and academic sources. Tribal knowledge is critical to complementing—or refuting—these sources. A crucial area of research can be collectors and collection practices. Tribal memory creatively coupled with institutional knowledge, can reveal key connections when museum sources are silent. We provide several examples that couple tribal information with synthetic research to enable determinations of cultural affiliation.

Loren, Diana (Peabody Museum, Harvard University) [191] *Discussant*

Lorentzen, Leon [138] *see Roth, Barbara*

Losey, Robert (University of Alberta) and Nomokonova, Tatianai (University of Alberta)

[45] *Modeling Mesolithic to Early Bronze Age Fishing in Cis-Baikal, Siberia*

The Cis-Baikal region of Siberia is dominated by Lake Baikal and two large rivers, the Angara and Upper Lena. Archaeologists have been working here for over a century, but zooarchaeological studies are a recent development. This is unfortunate, as many models of cultural evolution here focus on human-animal interaction, particularly people's use of fish, the remains of which have largely escaped archaeological attention. We present a model for the roles of fish and fishing among Mesolithic to early Bronze Age peoples of Cis-Baikal. Data for the model are derived from the Baikal Archaeological Project's investigation of mortuary and habitation sites.

Lotti, Teresa (Georgia Department of Transportation), Duff, Eric, and Lear, Katina

[42] *A Public Display of Connection: Public Outreach and Archaeology at the Georgia Department of Transportation*

In 2005, the Georgia Department of Transportation (GDOT) Archaeology Unit began an effort to broaden the Department's mission by adding outreach/environmental stewardship initiatives designed to promote cultural awareness and education about Georgia's unique cultural heritage. At the heart of these activities is public involvement geared to a sole purpose: to improve the quality of life for the citizens of Georgia by promoting knowledge and respect for the state's cultural heritage. Reaching out to communities through archaeology has become an integral part of GDOT's pledge to improve the quality of life for our customers through innovative transportation planning.

Louderback, Lisbeth (University of Nevada Reno) and Rhode, David (Desert Research Institute)

[64] *Holocene Vegetation Change and Human Plant Use in the Northwest Bonneville Basin, Nevada/Utah*

The fortunes of native people in the Great Basin were closely tied to the distribution and abundance of plant resources, since both people and the game animals important to them relied on those plant resources. A record of Holocene vegetation change in the northwest Bonneville Basin is developed using palynological evidence from Blue Lake, a major regional wetland system, and other paleoenvironmental information. This record is compared with evidence of dietary plant use from archaeological deposits at Bonneville Estates Rockshelter, Danger Cave, and other occupation sites in the region to document how Holocene vegetation change influenced adaptive strategies.

Loughlin, Michael (University of Kentucky) and Pool, Christopher (University of Kentucky)

[168] *The End of the Formative in Western Olman*

Traditional accounts of the Late and Terminal Formative periods in the southern Gulf lowlands depict them as a time of cultural collapse and pervasive foreign influence. Recent research in the eastern Lower Papaloapan Basin, however, reveals a cultural and demographic florescence accompanied by the adaptation of an Olmec legacy to changing political and economic conditions. Our research underscores the volatility of a Late and Terminal Formative political landscape characterized by shifting relations among ruling factions within Tres Zapotes and the growing prominence of its probable subordinate, El Meson.

Lovata, Troy (University of New Mexico)

[104] *Torreón as Cultural Icon: Examples of the End Use of Archaeology from New Mexico*

This paper examines torreóns or watchtowers in the American state of New Mexico. Torreóns are manifestations of the Contact Era Spanish presence in the New World. However, they have also attained an iconic status by which they persist and have meaning beyond their original or intended functions. Study of how they have been preserved, reconstructed, replicated and renewed illuminates the role of material culture and archaeology in defining both past and current culture and public identity. Torreóns help us understand the complete lifecycle of material culture and lead archaeologists across the gap between professional and public spheres.

Love, Michael (Northridge)

[205] *Middle Formative Household Refuse Disposal at La Blanca, San Marcos, Guatemala*

Recent excavations at Middle Formative (900-600 B.C.) La Blanca encountered a series of differential refuse disposal patterns. Understanding differences in household refuse treatment underlies any attempt at comparative analysis. All households used a variety of disposal methods. In some cases refuse was casually dumped behind the house, leading to small scatters of artifacts. More formal curation strategies involved the excavation of pits. Refuse can be generally be associated with a particular residence or household, but in some cases abandoned houselots and houses were used for refuse disposal, so that the point of origin for the refuse is uncertain.

Lovis, William (Michigan State University) and Monaghan, G. William (Indiana University)

[156] *Directly Dated Cucurbita from the Upper Great Lakes: Implications for Archaic and Woodland Horticulture*

Cumulative research at Green Point, Michigan, revealed complex floodplain stratigraphy associated with Late Archaic through Middle Woodland occupation. On two occasions wetland deposits buried 2-3 m within the floodplain yielded uncarbonized seeds of *Cucurbita pepo*. AMS dates on two seeds suggest the wetland was long-lived, that squash was either deposited as flood detritus, or growing in ruderal or tended stands. A dated overlying pit feature reveals the wetland was buried ca. 1700 BP by a transgressive event of Lake Huron. These observations are important for understanding the floodplain evolutionary sequence, and for understanding the duration of squash presence on the floodplain.

Lowe, Kelsey (Bureau of Land Management) and Fogel, Aaron (University of Arkansas)**[31] *Geophysical Anomaly Testing with Downhole Magnetic Susceptibility***

Over the past few decades archaeogeophysical instrumentation, field methodologies, and data processing have improved dramatically. Yet it is still difficult to provide an accurate assessment of many anomalies from standard archaeogeophysical datasets. In response to this problem we have been developing new field techniques to aid in the interpretation of these enigmatic anomalies. Over the past months, downhole magnetic susceptibility field tests were conducted at Parchman Place Mounds in Mississippi. These tests utilized soils collected from the walls of excavations analyzed in a laboratory setting and downhole magnetic susceptibility data gathered in the field culminating in an enhanced understanding of the site.

Loy, Allan [91] *see* Ninnemann, Laura

Loyer, Anne [13] *see* Carrasco, Michael D.

Lozada, Maria (The University of Chicago), Boytner, Ran (UCLA) and Kakoulli, Ioanna (UCLA)**[115] *Ancient Funerals and Modern Politics: The Role of Pre-Columbian Mortuary Practices in Shaping Modern Community Identity in Northern Chile***

Recent mortuary excavations in Northern Chile required continuous dialogue between bioarchaeologists and community members. During logistical planning of the excavation, local inhabitants considered the individuals interred in the pre-Columbian cemetery of Tarapaca 40 as "their direct ancestors," even though there is no clear biological evidence to support this assertion. Through interviews, we learned that their definition of ancestry incorporates a broader range of variables, including cultural and geographic determinants. It is conceivable that ancestry and biological relatedness were not synonymous in the Andes and that ancestry was a more complex social construction in the past just as it is today.

Lozano, Stephanie (California State University, Los Angeles)**[59] *Social Dimensions of Ancient Maya Funerary Urn Use***

The placement of human remains in funerary urns was one way the ancient Maya disposed of their dead. This paper examines variables in Classic and Postclassic K'iche' Maya urn burials such as spatial location, mortuary offerings, and iconography to provide insights regarding Maya social dimensions. The archeological literature reports social data which when analyzed note the deceased social status. The iconographical analysis is derived from an investigation conducted at the Popol Vuh Museum during the summer of 2006 in Guatemala which reveals aspects of religious beliefs and legitimizes the deceased as elite members of society.

Lozano Villarreal, Ariadne Itzel [136] *see* Medrano González, Xochitl

Lu, Michael [101] *see* Ghazal, Royal

Lucas, Gavin (University of Iceland)**[25] *Time and the Archaeological Record***

What kind of temporalities are implied in the archaeological record – and how does this effect the nature of archaeological interpretations? This paper takes a look at the concept of time in relation to understanding change in prehistory on the one hand, and to the archaeological record on the other and argues that these relations need to be more carefully theorized than is customary. Examples will be taken from different periods and regions to explore this issue.

Lucero, Lisa (New Mexico State University)**[52] *Ancient Maya Water Management and Political Sacrifice***

In the southern Maya lowlands, the Maya dealt with noticeable seasonal vagaries. The Maya met these conditions successfully for millennia through use of diverse water systems that were specific to certain environmental and social conditions. The degree of political involvement in water management varied according to the scale of water systems. When conditions changed (e.g., long-term drought) and rulers continued to rely on previously successful strategies that no longer worked, everyone paid the price. Lessons from the Maya demonstrate that leaders must sacrifice their political success by instituting policies that while unpopular, are better for everyone on the long run.

Luchsinger, Heidi M. (Department of Anthropology, East Carolina University)

[43] *Geoarchaeology of the Middle Río Negro Valley, Northern Patagonia, Argentina: River Channel Abandonment and Settlement Patterns*

Fieldwork conducted in the Middle Río Negro Valley has focused on reconstructing the landscape history, incorporating the known archaeological record into this landscape history, interpreting natural formation processes, evaluating the preservation potential for archaeological sites, and interpreting how landscape history could have influenced settlement patterns. Study of Late Holocene channel avulsion and the formation of pools within abandoned channels suggest that landscape change potentially influenced Late Holocene settlement patterns in this valley.

Luhman, Hope (The Lois Berger Group, Inc.)

[170] *Approaching Relevance: Public Outreach and Education in CRM*

Public outreach should be a focus of every archaeological investigation conducted in a cultural resource management (CRM) context. Suggested approaches for making results of investigations accessible to the public, illustrated by project examples, show that meaningful interaction is the best way to make archaeology relevant to the public. The nature of the interaction may vary from the short site tour linking the lessons of archaeology with the present to interactive educational programs in which local residents experience their region's heritage. Such programs constitute effective and compelling public anthropology.

Luke, Christina (Boston University)

[191] *Ulua Marble Vases: Contextualizing Social Networks between the Maya World and Lower Central America*

Long referred to as the Mesoamerican Frontier, the Ulua Valley of northwestern Honduras bridges the Maya Lowlands and Lower Central America. This paper explores presenting the Ulua region in these foreign lands through the transfer of a luxury good: Late Classic marble vases. Rare in antiquity, these vases were produced in the heart of the Ulua Valley. Yet their importance as ambassadors of Uluan life in two very different spheres - central Maya and Nicoya-Guanacaste - suggest very diverse perceptions of what it meant to participate in a social network with the Ulua Valley. The multi-dimensionality of transferring a luxury good set within the context of a place and its people allows for a more nuanced understanding of the exotic.

Lukowski, Susan (Indiana University of Pennsylvania), Gompers, Kathryn (Indiana University of Pennsylvania), Lilley, Audrey (Indiana University of Pennsylvania) and Geletka, Leland (Indiana University of Pennsylvania)

[126] *Ceramic Types and Cordage Analysis for the Johnston Site and Carl Fleming Sites in Indiana County, Pennsylvania*

Recent investigations by archaeological field schools from Indiana University of Pennsylvania have recovered samples of ceramics from the Johnston site on the southern side of the county along the Conemaugh River and the Carl Fleming site along the Crooked Creek in the northern part of the county. While the Johnston site is part of the well known Monongahela culture of southwestern Pennsylvania, the Carl Fleming site is from an area with a less well defined cultural tradition. A preliminary analysis of the ceramics has defined differences and similarities in the two assemblages.

Luna, Leandro [59] see Berón, Mónica

Lundblad, Steven [167] see Mills, Peter

Lundelius, Jr., Ernest [190] see Timperley, Cinda

Lundin, Richard (Carothers Environmental, LLC), Brackett, Claudia (Carothers Environmental, LLC), Motsinger, Thomas (PaleoWest, Inc.), Kral, Ethan (Carothers Environmental, LLC) and Ryberg, Erika (Carothers Environmental, LLC)

[39] *Portable X-Ray Florescence Investigations of Two Pueblo II-III Sites on the North Rim Area of Mohave County, Arizona*

Class I-III Portable X-Ray Florescence (XRF) soil studies of two Pueblo II-III sites of the Arizona Strip area of Mohave County were done. These studies have been valuable in

identifying occupation and work areas of open and rock shelter sites. Elevated Ca, P and K values of areas without obvious features or artifacts may suggest targets for further studies. The NITON technologies and methodologies behind Carothers Environmental, LLC (CE) experimental archaeochemical and archaeobiogeochemical programs will be discussed as well as recommendations for further studies of this type for further archeological investigations and may have wider applicability.

Luzzadder-Beach, Sheryl (George Mason University), Beach, Timothy (Georgetown University) and Lohse, Jon C. (University of New Mexico)

[206] *Why Did the Ancient Maya Build Wetland Fields at Blue Creek, Belize?*

This paper explores the chronology, function, and management of Maya wetland fields with extensive data from around Blue Creek, Belize. We first assess two major hypotheses to explain the motives for construction. The first is that high Maya populations in the Classic Period spurred intensive food production. The second is that sea level rise from the Preclassic to Classic drove up ground water tables, and the Maya built canals to manage water quality and quantity. Our data from Blue Creek, Belize provide clear evidence for the second hypothesis, but also show intensive management amidst high populations through the Classic Period.

Luzzadder-Beach, Sheryl [145] see Beach, Timothy; [168] see Dunning, Nicholas

Lyman, R. Lee (University of Missouri-Columbia)

[37] *How Much Geographic Space in Zooarchaeological Studies of Bilaterally Paired Bones?*

Zooarchaeologists have refit or conjoined fragments of bones and identified members of bilateral pairs of skeletal elements. Bilateral pairs have been identified using morphological attributes and/or metrical symmetry. The same degree of metric bilateral symmetry of North American elk (wapiti) astragali in modern and prehistoric elk is assumed. Granting this assumption, two contemporaneous archaeological sites about 4 kilometers apart suggest intervillage elk hunts and carcass distributions took place between 1400 and 1800 A.D. This begs the question of how much geographic space to draw bone samples from when in search of bilateral pairs.

Lynott, Mark (Midwest Archeological Center)

[66] *Earthen Wall Construction During the Ohio Hopewell Era*

For many years, archaeologists devoted little attention to the earthen walls that formed the earthen enclosures associated with Hopewell sites in southern Ohio. Recent investigations document that a wide range of different construction techniques were used to build earthen embankments. These likely reflect differing strategies adopted by different social groups, but may also reflect an evolution of building techniques through time. Construction of a single earthen enclosure site represents a major investment of labor, but construction of the Hopewell landscape in southern Ohio is awe inspiring.

Lyons, Patrick (Arizona State Museum)

[138] *The Kayenta Diaspora and Group Identities in the American Southwest*

The topic of migration has dominated recent archaeological research in the American Southwest, leading scholars to focus on the dynamics of identity in the context of population movement. Given an increased appreciation of the scale of late prehispanic migration, improved chronometric, distributional, and provenance data, and advances in diaspora theory, it is now possible to explore the interplay of place and collective identity among displaced ancient groups. This paper examines the prehispanic diaspora from the Kayenta region of northeastern Arizona and southeastern Utah through the study of patterns in architecture, ceramics, and ritual that consciously and unconsciously reflect group identities.

Ma, Xiaolin (Henan Provincial Institute of Cultural Relics and Archaeology)

[37] *Hunted Boars and their Anthropological Meanings*

Pig bones from Neolithic sites in northern China are compared to the demographic profile and morphometric indicators of 48 boar skulls collected during a modern game hunt. Thirty-one can be identified as to sex: 14 males and 17 females. One was more than three years old; the others fell into three age groups: 8-9 months old (17); 17-23 months old (22), and 31-35 months old (8). This catastrophic age-distribution suggests young individuals were most

vulnerable, a pattern verifying the bias inherent in distinguishing archaeological populations of domesticated pigs from wild ones based primarily on such profiling of their remains.

Ma, Xiaolin [49] *see Pechenkina, Ekaterina*

Mabry, Jonathan (Desert Archaeology) and Webster, Laurie (Arizona State Museum)

[82] *A Prehistoric Shrine at Colossal Cave, Southeastern Arizona*

Prehistoric, protohistoric, and historic Native American artifacts have been found in Colossal Cave, in the eastern Tucson Basin of southeastern Arizona. This assemblage represents use of the cave as a shrine, shelter, and cache location by the Hohokam, Sobaipuri, and Tohono O'odham peoples, and adds to our knowledge of their perishable material cultures. Ritual offerings of pahas, reed cigarettes, arrows, miniature bows and pots, jewelry, a pristine ax, maize cobs, and possibly worn-out sandals are interpreted through comparisons with Hohokam and Mogollon cave shrines in the southern Southwest, and through ethnographic analogies with historically documented Native American practices in the region.

Maca, Allan (Colgate University) and Plank, Shannon (Boston University)

[147] *The Copan Valley and the City-State: Integration and Growth at the Urban Base*

This paper looks at the evidence for the integration of state power within the Valley of Copan. Focusing on the ancient city of Copan, though touching too on Rio Amarillo, we look at the growth of elite sites from the period of the 11th king onward. Among the topics addressed in this paper are segmentary versus unitary states, lineage dynamics, epigraphy, and urban planning and renovation. Among the data employed in our discussion are those from the ongoing Copan Urban Planning Project (PAPAC) which demonstrate a massive urban expansion coincident with the shift from Early to Late Classic.

MacDonald, Kevin (Institute of Archaeology, UCL)

[144] *'A Chacun son Bambara,' Encore une Fois: Oral History, Archaeology and Bambara Origins*

The Bambara of West Africa have long been used by anthropologists such as Jean Bazin and Jean-Loup Amselle as a case study for the futility of bounding and defining permeable 'ethnic groups'. The present study reassesses the origins and composition of 'the Bambara' in light of both new and pre-existing oral historical data and initial findings from surface archaeology in the Segou region. Comparisons are made between the ceramic assemblages of 18th century Segovian sites and pre-Segovian settlements, and a reasoned analysis for transformations in identity around Segou during the 17th-18th centuries undertaken.

MacDonald, Kevin (Institute of Archaeology, UCL) [144] *Discussant*

MacEachern, Scott (Bowdoin College)

[144] *What was the Wandala State?*

The precolonial Wandala state is well-attested from historical sources in the southern Lake Chad Basin; it extended a variable suzerainty over parts of the region through four centuries. However, the social and political organisation of Wandala statehood, and especially the material correlates of that statehood, appear curiously ambiguous. It is difficult to delineate a Wandala state as a functioning sociopolitical system away from the capital, and even more difficult to identify the origins of that state in the material record. This ambiguity is in large part due to Wandala negotiation of ethnic and political identities on local and sub-continental stages.

Mack, Joanne (University of Notre Dame)

[163] *A Southern Cascade Interaction Sphere as Evidenced by Siskiyou Utility Ware*

What may be described as an "interaction sphere" existed during the last thousand years of occupation of the Southern Cascades in California and Oregon. The clearest evidence for this is the distribution of Siskiyou Utility Ware and associated figurines in residential sites within the Upper Rogue River, the Upper Klamath River, and the Middle Pit River drainages. Other lines of evidence, the use of some flaked stone and groundstone artifact types and particular stone resources, also support this area as an "interaction sphere," perhaps for over five thousand years.

Mack, Sean (Idaho State University)

[128] *The Historic Archaeology of Sanak Island*

Over the last two hundred years the indigenous peoples of the North Pacific have experienced

the influence of empire states, the influx of foreign workers, and the pressures of modern global economic forces. The North Pacific is therefore a perfect study area to examine the impact of these forces on indigenous populations. Sanak Island was a central location during this historic period - a place that has experienced the scope of North Pacific indigenous people's relationships to the world system. Ethnohistoric, photographic, archaeological, and GIS-Based data are brought together to study this dynamic period in the history of Sanak Island.

Mack, Sean [128] *see Maschner, Herbert*

Mack, Steven (Southwest Archaeological Consultants and University of New Mexico)

[37] *Ritual Use of Fauna on the Park Plateau: The Evidence and Its Historical Implications*

Archaeological evidence for the ritual use of fauna often is sparse for prehistoric societies. Ritual-related deposits, whether "ceremonial trash" or paraphernalia caches, are encountered infrequently in the archaeological record. In this presentation the first evidence for the ritual use of fauna is presented for Vermejo period (A.D. 400–900) sites on the Park Plateau of northeast New Mexico. The presentation describes a cache of zoological specimens, including articulated bird wings, recovered from a residential structure and reviews the use of dogs as mortuary offerings. The latter behavior suggests interaction and information exchange between Park Plateau and Upper San Juan populations.

Mack, Steven [49] *see Wands, Cortney*

Mackie, Quentin (University of Victoria), Fedje, Daryl (Parks Canada) and McLaren, Duncan (University of Victoria)

[184] *High Resolution LIDAR-Derived Elevation Models and Archaeological Potential Mapping at the Pleistocene-Holocene Boundary, Haida Gwaii, Northwest Coast, Canada*

Light Distancing and Ranging (LIDAR) is a remote sensing technology that uses multi-beam laser instruments to create a high resolution Digital Elevation Model (DEM). Filtering the DEM enables removal of groundcover, allowing sub-metre resolution of "bare earth". We use LIDAR in Haida Gwaii (Queen Charlotte Islands) BC, to map palaeo-shorelines, karst, and other landforms with high potential for archaeology of the Pleistocene-Holocene boundary. Discovery of such sites has been hampered by low-resolution base mapping, dense vegetation and other logistical constraints. LIDAR-derived DEMs allow identification of ancient landforms and their targeted survey for archaeological sites.

Mackie, Quentin [184] *see Fedje, Daryl; [184]* *see McLaren, Duncan*

MacMinn-Barton, Margaret [84] *see Barton, Michael*

Macri, Martha (University of California, Davis)

[143] *The Quincunx and the Half Star: Symbols for Venus from the Preclassic to the Colonial Period*

Two distinct symbols for Venus, the quincunx and the five-pointed half-star, can be traced from the Preclassic period to post-contact documents. Depictions of Quetzalcoatl from the Codex Telleremensis show that both of these symbols were known to the Mexica. This paper compares the earliest examples of the quincunx (from Monte Alban) and the half-star (from Teotihuacan) with representations for Venus from the Classic and Postclassic periods, and suggests several hypotheses about what these symbols tell us of the shared knowledge base between the peoples of central Mexico and Oaxaca, and their neighbors in the Gulf Coast and Maya region.

MacWilliams, Arthur (University of Calgary), Hard, Robert (University of Texas, San Antonio), Adams, Karen (Crow Canyon Archaeological Center) and Roney, John (Colinas Cultural Resource Consulting)

[38] *Recent Investigations in Southern Chihuahua, Mexico*

Ongoing investigations in the Parral district of southern Chihuahua focus on locating early agricultural period sites. Current results indicate that sites predating the Ceramic period are abundant and located in diverse settings. Additionally, multi-component and Ceramic period sites are present throughout the district. Cerros de trincheras are among the most abundant and largest habitation sites, potentially for both intervals. Cave sites west of Parral also have complex occupation histories that repeatedly include Preceramic and potentially early

agricultural components. Results are providing new insights into early agriculture and settlement through time in this largely unknown area.

Macy, Jennifer (University of New Mexico)

[110] *A Study of the Late Paleoindian Cody Complex in New Mexico*

The shift from Paleoindian to archaic cultural adaptations has been a subject of debate from the advent of Paleoindian studies. Recent inquiries into the role of climate and regional economic changes in this shift have uncovered a variety of factors involved. The Cody complex is the least studied period in Southwestern prehistory. New Mexico, on the periphery of the Cody range, is an ideal place to study and compare a regional Cody occupation. While most archeologists continue to see Cody and other transitional forms as aberrations, transitional forms may well be typical of the adaptations present during the early Holocene.

Madsen, D. B. [164] see Vento, Frank

Madsen, David B. (Mercyhurst Archaeological Institute)

[190] *Millennial-Scale Climatic Change in Central Texas*

Holocene millennial-scale climate change events appear to be widespread and synchronous across the Northern Hemisphere and likely underlay many of the cultural changes evident in Southern Plains prehistory. However, the nature of these paleoenvironmental changes in the central Texas region is poorly known due to the lack of high-resolution proxy records. Here I apply dated sequences from Greenland and North Atlantic core records to paleoenvironmental records from the Southern Plains area to provide an environmental framework for understanding cultural change in central Texas.

Magnoni, Aline [200] see Stanton, Travis

Mahoney, Lisa [104] see Folb, Lisa

Mainfort, Robert [60] see Sabo, George

Makarewicz, Cheryl (Harvard University)

[217] *Herder Decision-Making in the Pre-Pottery Neolithic Indicated by Isotopic Variance*

Pastoralists must determine how to most effectively utilize available plant resources in order to maintain individual animals and animal herds according to pastoralists' short- and long-term social and economic needs. Through stable isotope analysis of caprine collagen from Pre-Pottery Neolithic sites in the Southern Levant, this paper will investigate decisions prehistoric pastoral herders made to supply their animals with plant fodder according to the sex and age of their animals, and discuss how these decisions changed over time.

Maki, David (Archaeo-Physics, LLC) and Brosowske, Scott (Courson Archaeological Research)

[31] *The 2008 Texas Archaeological Society (TAS) Field School: An Opportunity to Test Geophysical Anomalies on a Massive Scale*

Over the past several years' geophysical survey has been conducted at numerous Middle Ceramic Period (A.D. 1250-1500) sites on the Southern High Plains. These surveys have been very successful in locating buried archaeological features, however, results are seldom clear-cut. In fact, testing has nearly always been required to determine the source of geophysical anomalies. This poster summarizes geophysical survey and ground truthing results to date, and introduces plans for a massive ground truthing program during the 2008 TAS field school. This program will focus on Chill Hill – a very large and complex site located in the Canadian River valley.

Maldonado, Blanca (Colegio de Michoacan, Mexico)

[107] *Metal for the Commoners: Tarascan Metallurgical Production in Domestic Contexts*

At the time of the Spanish Conquest the Tarascan region was the main locus of metals production in Mesoamerica. Mining and metallurgy evolved to some extent into a state industry, as metal adornments used as insignias of social status became associated with political control. Available archaeological and ethnohistorical data, however, indicate that utilitarian implements (hoes, axes, needles, awls, fishhooks etc) were also produced and traded through local market networks. It seems clear that some mining and smelting of copper

and goods manufacturing were also taking place in household contexts outside state control. The present paper explores this possibility in detail.

Mallios, Seth (San Diego State University)

[191] *Consequences of Exchange in the Early Colonial Chesapeake: Symbolic Violence, Exchange Laterality, and Copper Quotients at James Fort and Beyond*

European colonists attempting to settle the Chesapeake and Carolinas in the late 16th and early 17th centuries at Ajacan, Roanoke Island, and Jamestown Island repeatedly violated indigenous gift-exchange rules, provoking Native attacks that temporarily thwarted Spanish and English plans of acquiring the New World's Middle Atlantic. Although the material remains of the 1570-71 Jesuit mission at Ajacan and Roanoke's 1585-87 Fort Raleigh have yet to be found, Jamestown Rediscovery archaeologists have uncovered the 1607 James Fort and over 500,000 associated artifacts. Temporal, spatial, and formal patterns in the archaeological record enhance previously established models of Contact-period intercultural exchange.

Mallouf, Robert (Center for Big Bend Studies, Sul Ross State University)

[154] *Indicators of Ritual Behavior in Rockshelters of the Davis Mountains*

A perceived linkage among lithic assemblages, cultural features, and rock imagery at a series of rockshelters and open sites in the Davis Mountains and vicinity is slowly opening a window into ritual beliefs and practices of a Late Prehistoric people—the Livermore phase (ca A.D. 700-1300). The data suggest that ritual rockshelters, along with a specific mountain (Mt. Livermore), played significant roles in the cosmogony of the culture.

Mallouf, Robert J. [73] see Ohl, Ann

Malloy, Maureen (Society for American Archaeology) [111] Discussant

Malof, Andrew (Lower Colorado River Authority)

[96] *Archaeology Education in the Central Texas Llano Uplift: The Nightengale Archaeological Center*

Each year, over 1000 students, teachers, parents and members of the public visit the Nightengale Archaeological Center, an educational facility operated by the Lower Colorado River Authority and the Llano Uplift Archeological Society. The center is located on a six thousand year old Native American campsite. Visitors learn about archaeological methods and the people who lived here in the past. Each summer a three-day workshop for teachers is held at the facility that provides instructors the background and resources to aid them in using archaeology as an interdisciplinary tool in their classrooms.

Manahan, Kam (Kent State University) and Ardren, Traci (University of Miami)

[162] *Shifting Fates of the Cupul Region: Recent Investigations at Xuenkal, Yucatan, Mexico*

Current research at the Late-Terminal Classic site of Xuenkal is beginning to reveal the complex nature of political relationships between competing polities at the time of Chichen Itza's ascension as a dominant military and political force in Yucatan. Proyecto Arqueológico Xuenkal has documented a robust and spatially extensive Late Classic occupation with strong ties to eastern polities of Coba and Ek Balam. However, unlike these centers, Xuenkal also contains a substantial Sotuta occupation concentrated in the site center. This paper synthesizes three field seasons at Xuenkal to draw preliminary conclusions about this critical yet poorly understood time in Yucatan's history.

Mandel, Rolfe (University of Kansas)

[159] *Geoarchaeology of the Richard Beene Site (41BX831) in South-Central Texas*

The Richard Beene site (41BX831) consists of stratified early through late Holocene cultural deposits beneath an alluvial terrace of the lower Medina River in south-central Texas. The cultural deposits are associated with the modern surface soil and four buried soils developed in a 15-m-thick package of fine-grained flood deposits. An assemblage of 40 radiocarbon ages determined on charcoal and decalcified soil carbon place the cultural record into a well-defined chronology. This paper describes the geomorphology, stratigraphy, paleopedology, and geochronology of 41BX831. Site formation processes also are considered.

Mandel, Rolfe [159] see Nordt, Lee

Mann, Jason [60] see Jenkins, Ned

Mann, Rob (Louisiana State University)

[148] *On (not quite) Resisting the Market: A Conservative Miami Household from the War of 1812 Era*

In the early nineteenth century the Forks of the Wabash was home to Miami Indians who were attempting to adhere to a conservative version of Miami identity. Among the proscriptions being touted by ideological leaders such as the Shawnee Prophet was a rejection of Euro-American material goods. At the same time, some Euro-American commodities had become constitutive components of "traditional" Miami identity. This paper examines the material expressions of identity at a conservative Miami household uncovered at the Ehler site in northeastern Indiana.

Manzanilla, Ruben (Instituto Nacional de Antropología e Historia)

[97] *Ubicación, Límites y Secuencia Ocupacional de las Antiguas Ciudades de Tlacopan y Atlacuihuayan, Cuenca de México*

Como resultado de diversas labores de salvamento en Tacuba y Tacubaya, en el occidente de la cuenca de México, diseñamos una estrategia arqueológica y de investigación documental que nos permitió la localización de los diferentes barrios y centros ceremoniales de estos centros urbanos tepanecas, así como definir de manera general su historia ocupacional.

Marceaux, Paul Shawn (University of Texas at Austin)

[148] *Negotiating Borders: Southern Caddo and Colonial Governments in East Texas ca. 1775 to 1850*

Early historic Caddo benefited from their position on the border of rival colonial governments, but a great deal changed after the French ceded Louisiana to Spain (1767). Spanish settlers and soldiers abandoned the area and the amount of trade goods from France decreased. The following century was characterized by changing and competing colonial powers, developing economies, Native hostilities, and epidemics, thus forcing the relocation and coalescing of many Caddo tribes. Using archival documents and archaeological evidence from sites in east Texas I discuss how Caddo groups maintained ethnic and group identities while adapting to the changing political and economic landscape.

Marchegay, Sophie (Centro INAH Tamaulipas, Museo de la Cultura Huasteca)

[18] *New Studies on Clay Figurines from Southern Tamaulipas and Northern Veracruz*

As in other Mesoamerican cultures, clay figurines from the Huasteca are associated with fertility cults and funerary offerings. Particularly abundant in Southern Tamaulipas and Northern Veracruz, figurines were an important feature of Huastec culture from the Preclassic through Postclassic periods. Unfortunately, lack of archaeological context has limited scientific investigations, which have progressed little since Ekholm's and MacNeish's foundational publications. This paper synthesizes new information pertaining to Huastec figurines through analysis of unpublished material. Ekholm's typology is completed with evidence from well-preserved figurines and several new categories are proposed. Socio-cultural approaches, which contribute to the identification and significance of figurines, are also discussed.

Marciniak, Arek (University of Poznan)

[53] *The Secondary Products Revolution – Zooarchaeological Foundations and their Current Critique*

Andrew Sherratt is perhaps best known for the concept of a 'Secondary Products Revolution', which stressed that the 'primary' pattern of domesticated animals exploitation for meat in early Neolithic was followed by a more diversified exploitation of secondary applications and products such as milk, wool, textile, and traction power. The paper will debate how changes in animal exploitation in the European Neolithic, including secondary uses and products, can be inferred from faunal remains. It will also challenge a meat-based livestock-rearing system of early European farmers and stress an idiosyncratic nature of introduction of secondary products in particular areas of Europe.

Marcom, Robert [80] see Bruner, David

Marcoux, Jon (University of North Carolina at Chapel Hill) and Wilson, Gregory (Muhlenberg College)

[132] *Categories of Complexity and the Preclusion of Practice*

The recent proliferation of new societal analytical categories and the continued use of old ones has drawn attention away from the very practices, strategies, and negotiations that produced social complexity in the late Prehistoric Southeast. Polemic debates over the size and complexity of Mississippian polities have similarly masked considerable organizational variation that existed among and within Mississippian polities. Faced with these problems we advocate the abandonment of macroscale, structuralist frameworks in favor of an approach that focuses on the generative practices of small-scale social groups. We consider Mississippian data sets from west-central Alabama and adjacent areas to illustrate this critique.

Mark, Robert (Rupestrian CyberServices), Billo, Evelyn (Rupestrian CyberServices) and Berrier, Margaret (Sanity Silversmithing)

[41] *Newly Discovered Hunter's Shelter, SE New Mexico: Archaic or Late Prehistoric Pictographs?*

A small (4m by 4m), high cliff-side limestone shelter with three significant red pictograph panels was discovered in 2005. The Hunter's Shelter contains a centrally located standing deer or elk, a rare butchering scene of a similar animal, and a complex panel of small figures (each a few centimeters or less). This unique scene appears to depict hunters holding curved sticks (one holding a rabbit), nets, rabbits, and dogs. The images have similarities to the Red Linear Style found in the Lower Pecos River rock art region of Texas as well as to late prehistoric sites in Southern Colorado.

Mark, Robert [41] see Billo, Evelyn

Marken, Damien B. (Southern Methodist University)

[103] *Sasamal Performance: Variability in Ritual Contexts at El Peru-Waka'*

In recent years, greater archaeological consideration has been giving to sub-royal and non-elite domestic ritual performance in complex societies. Although evidential emphasis varies, these studies have generally drawn inferences of past performance from the physical context – the “stage” – of ritual, as well as its material components. Despite this recent trend, the majority of investigation into ritual performance in the Maya area remains focused on status-reinforcing spectacle by Classic Maya rulers. Examination of the varying contexts of performance within the Classic period center of El Peru-Waka' indicates that certain rituals were used to produce localized identities within non-royal residential precincts.

Marken, Mitch (PCR Services Corporation), Garcia, Kyle (PCR Services Corporation) and McMahon, Kate (PCR Services Corporation)

[213] *Correlations Between Yoni Features and the Luiseno Girls' Ceremony in Western Riverside County, California*

A “yoni” is a rock feature found in southern California that resembles the human female genitalia. A joint investigation by PCR Services Corporation and the Pechanga Band of Luiseno Indians has recently identified cluster of more than 30 yoni features in western Riverside County, California. Other examples of these features have been identified in association with Late Prehistoric archaeological sites in San Diego County as well. Contextual information drawn from Native American interviews, ethnographic literature, and archaeological associations strongly suggest that these yoni features are related to the Luiseno Girls' Ceremony.

Marken, Mitch [213] see Holmes, Amy

Markens, Robert (Centro INAH Oaxaca)

[46] *City State Organization in the Valley of Oaxaca: Historic and Archaeological Perspectives from Xaagá in the Mitla City State Hinterland*

Historic documents from the State of Oaxaca provide an invaluable resource for understanding the political organization of the señoríos that emerged as the dominant form of settlement in the Postclassic period. These sources focus on the prerogatives of elites living in city-state capitals. One supposes that hinterlands were homogeneous, populated by

commoners living in villages where they worked the land. Recent excavations at the village site of Xaagá located in the Mitla city-state hinterland revealed the presence of public buildings and specialized areas of craft production. Evidence from Xaagá provides insights as to how Postclassic city state hinterlands were organized.

Markovics, Michelle [39] *see Seinfeld, Daniel*

Markussen, Christine , Schmader, Matt (City of Albuquerque's Open Space Division), Dore, Christopher (Statistical Research, Inc.), Mathers, Clay (Statistical Research, Inc.) and Ogden, Jessica (Statistical Research, Inc.)

[33] *Probing the Past, Resisting Excavation: Results of Resistivity Surveys at Piedras Marcadas Pueblo, Albuquerque, NM*

Non-destructive geophysical and geospatial investigations at Piedras Marcadas Pueblo are beginning to shed new light on the size, composition and organization of a large prehistoric-historic pueblo (~1150-1650 AD) in the Rio Grande Valley. By agreement with the landowners and site stewards (i.e., the City of Albuquerque, NPS and local Native American communities), non-intrusive investigations at Piedras Marcadas are preferred. A range of complementary, non-destructive approaches focusing on resistivity have greatly enhanced current understanding about this pueblo. These results highlight the spatial organization of the pueblo providing a powerful visual medium for site interpretation and management.

Marler, Ben (Idaho State University) and Maschner, Herbert (Idaho State University)

[128] *Assessing Evolutionary Relationships across the Northern Pacific using Phylogenetic Analyses*

Heuristic cultural and chronological phylogenies, based on field experience, intuitive relationships, and key types, are commonly employed in the north to assess relationships across space and time. This is a very successful strategy and one that is gaining in sophistication. Mathematical phylogenetic trees, based on assessing similarities using the properties of things in a complex computer simulation are also gaining in importance in archaeology. These trees require different kinds of data and result is sometimes startling relationships. Both methods are employed here to assess spatial and temporal sequences and to better understand the evolutionary history of the north Pacific.

Marsh, Erik (University of California, Santa Barbara)

[137] *Domestic Architecture and Use of Space at Khonkho Wankane*

Domestic spaces at Khonkho, like other areas of this Late Formative ceremonial center, were the product of well-planned and executed architectural plans. Reminiscent of modern, cookie-cutter suburban residences, preliminary ceramic and architectural analysis reveal deviations over time to this rigid architectural tradition. Situated within closed spaces and large compound walls, some residential neighborhoods enjoyed preferential access to non-domestic and religious spaces. A relatively small population occupied these houses year-round, but the nature of that population, and the relationships to the site's temporary visitors, remains unclear.

Marshall, Fiona [37] *see Kimura, Birgitta*

Marston, John (University of California, Los Angeles)

[156] *Reconstructing the Functions of Domestic and Industrial Space through Charcoal Analysis at Gordion, Turkey*

Carbonized plant remains are often used to understand ancient diet and environment on a site-wide or regional scale, but are used less often to understand how household and industrial areas functioned within an ancient settlement. Wood charcoal is created through various activities and distributed within a site by distinct depositional processes. Identification of these at the scale of individual rooms can aid in reconstructing the functional history of those spaces. Analysis of over 1,000 charcoal samples from more than 2,000 years of occupation at Gordion, Turkey, shows synchronic variation and diachronic change in cultural practice at that site.

Martin, Cheryl (Desert Research Institute/Archaeo-Nevada Society), Mortenson, Helen (Archaeo-Nevada Society) and Shimer, Carol (Archaeo-Nevada Society/Desert Research Institute)

[123] *The Archaeo-Nevada Society: Forty Years of Preservation*

The Archaeo-Nevada Society is celebrating forty years of archaeological preservation in Southern Nevada. Begun by a few concerned citizens in 1966, we have taken part in numerous projects to protect archaeological sites, both prehistoric and historic. We are proud to have several professional archaeologists as members, and make ourselves available to help them when a site is at risk. ANS helped start the Site Stewardship program in Nevada and has participated in excavation, analysis, and curation endeavors. Upcoming projects include the reinstatement of an archaeological certification program and using our web site as a repository for gray literature on Nevada archaeology.

Martin, Fabiana Maria (CEQUA) and Borrero, Luis Alberto (CONICET)

[56] *Early Human Exploration of Fuego-Patagonia. The Evidence from Fossil Carnivore and Herbivore Dens*

The goal of this presentation is to discuss the relevance of carnivore and herbivore fossil dens -dated between 14,000 and 10,000 radiocarbon years BP- for the understanding of Fuego-Patagonian ecosystems at the time of the first human exploration and colonization of the region. These sites, which are characterized by the accumulation of dung, bones and plants, were sometimes used by humans as sources of food, shelter and other resources. Their study is useful for the analysis of human interactions with megamammals.

Martin, Lana (The University of Texas at Austin)

[3] *Variability in Social Dynamics of Texas Coastal Hunter-Gatherer Populations: An Analysis of the Crestmont Site (41WH39) Burial Inclusions*

In recent decades, archaeological excavations in Central and South Texas have uncovered a fascinating and rather unusual record of Middle and Late Archaic hunter-gatherer cemeteries. Why these cemeteries were created and what they might say about past social dynamics is unclear. To address these questions, my research explores variability in grave goods at the Crestmont site, a cemetery on the Texas Gulf Coast containing 31 burials, and then examines the site in relation to regional mortuary patterns. Possible contributing factors for differential burial include variation in patterns, regional interaction, increasing sedentism, and changes in political structure.

Martin, Louise [217] see Twiss, Katheryn

Martin, W.N. (IATH, University of Virginia), Hocking, Ashlie B. (University of Virginia) and Plog, Stephen E. (University of Virginia)

[104] *Migrating Historical Archaeological Records to Digital Resources*

While there are many issues of capture, organization and maintenance of newly created digital archaeological records, we will discuss the issues involved in migrating historical (i.e., paper based) records into digital resources and in integrating those records with other digital archaeological information resources. The project we will discuss is a collaboration between CDI, IATH and CCNHP. We will discuss the design of the database that organizes the digital versions of the stabilization records for Chaco Canyon, the workflow that is being used to migrate those records and the archaeological uses anticipated for the resulting digital resource and its interoperation with the CDI collection.

Martinez, Eva (University of Pittsburgh)

[7] *Regional Settlement Patterns and Social Organization in the Jamastrán Valley, Southeastern Honduras*

This poster presents some of the results of a full-coverage survey in Southeastern Honduras. The regional settlement survey of an area of 160 km² in the Jamastrán Valley identified prehispanic settlements and established settlement hierarchies in the valley, as well as the relationships between settlement patterns and agricultural production, local craft production and exchange, and interregional interaction. Data collected during fieldwork provided evidence of human occupation that spans from the Terminal Preclassic/Early Classic to the Late Classic Period (300-1000 AD). The evidence suggests an increase in the number of settlements, population, and interregional connections during the Late Classic Period.

Martinez, Horacio [14] *see Silverstein, Jay*

Martinez, Maria (University of Texas-Austin)

[38] *Changing Lithic Technologies and Residential Mobility During the Archaic to Basketmaker II Transition*

The transition from Archaic to Basketmaker II in the American Southwest marks a shift from an economy based on mobile hunting and gathering to a relatively sedentary lifeway relying on maize horticulture. The lithic technology at 23 sites in southern Utah, indicate that during the latter phase of Basketmaker II a shift occurred from a formal tool technology to an expedient one. Previous studies have demonstrated that prehistoric hunter-gatherer societies relied on a formal tool technology and sedentary societies on expedient tools. This suggests that early Basketmaker II populations remained relatively mobile during the incipient use of maize.

Martinez, Valentina L. (Florida Atlantic University) and Walter, Tamra L. (Texas Tech University)

[43] *The Manabita Oven: Two Thousand Years of Tradition*

For nine years the Florida Atlantic University field school in the Manabí province of coastal Ecuador has conducted research in the area with a multi-disciplinary approach. In particular both archaeological and ethnographic research are contributing to a better understanding of the area's prehistory and contemporary life. An example of this research is the 2006 excavations at Rio Salango. Excavations at this domestic Guangala site (500 BC - AD 500) led to the discovery of numerous cooking/oven features. Ethnographic research in the surrounding areas revealed that similar ovens are still utilized today helping to inform about their use in the past.

Martínez, Gustavo (CONICET-INCUIA-FACSO (Argentina))

[49] *Human burial variability in the lower basin of the Colorado River during the Late Holocene (Buenos Aires province, Argentina)*

An important variability of mortuary practices has been detected in the lower basin of the Colorado river. Whereas for the early late Holocene (2800-800 yrs BP) only primary burials were detected, human bodies received a complex treatment during the final late Holocene (500-300 yrs BP). Secondary burials became the most common funerary practice, the number of individuals at sites ranges between 2 up to 55, anatomical units are usually red painted and cut marks indicate body processing. This paper describes these funerary patterns and explores human burial variability in the transitional geographic area of Pampa and Patagonia.

Maschner, Herbert (Idaho State University), Jordan, James (Antioch New England Graduate School), Betts, Matthew (Idaho State University), Benson, Buck (Idaho State University) and Mack, Sean (Idaho State University)

[128] *The Archaeology and Human Biocomplexity of Sanak Island*

In 2004 and 2006, a suite of archaeological sites were tested on Sanak Island revealing relationships across the north Pacific. These sites, dating from 6000 to 200 years before present, indicate that Sanak Island was part of a continuum of related groups from Umnak Island in the west to Kodiak Island in the east. These data provide strong support for a revised archaeological and ethnic chronology of the North Pacific region for the middle Holocene. Later prehistoric occupations show a strong relationship to the north and share many of the same features as the western Alaska Peninsula and Bering Sea.

Maschner, Herbert [128] *see Misarti, Nicole*; **[128]** *see Jordan, James W.*; **[128]** *see Benson, Buck*; **[128]** *see Marler, Ben*

Mason, J. Bryan (Brown and Caldwell)

[159] *Spatial Analysis of Artifact Distribution at the Richard Beene Site*

Using both qualitative (interpretation of maps) and quantitative (unconstrained clustering) spatial analysis techniques, site structure and post-depositional disturbance are assessed by analyzing patterns among artifact categories, selected artifacts, and features from five components at the Richard Beene Site. Results of spatial analysis are compared to expectations of the archaeological record based on previous research. In well preserved components, spatial analysis showed clear distinctions between domestic and peripheral zones.

Massey, David

[5] *The Challenges of Using GIS in Cyprus: A Case Study - The Athienou Archaeological Project*

Using GIS to display and interpret spatial data is fast becoming standard practice among archaeologists; however, obtaining the necessary GIS datasets from foreign governments can sometimes be difficult or impossible. The Athienou Archaeological Project in central Cyprus extracted its own data from scanned-in maps of its survey area using ESRI's ArcMap 9.1. But, as any [GIS] maverick knows, bypassing bureaucratic red-tape requires a stealthy awareness of ESRI extensions, datums and map projections, and other possible logistical problems. This poster presentation will chronicle the challenges of using GIS in Cyprus and suggest some solutions to problems encountered there and elsewhere.

Masson, Marilyn (SUNY Albany) and Peraza Lope, Carlos (Centro INAH- Yucatan)

[107] *Craft Production, Social Identity and the Economy of Mayapan*

We examine the social context of craft production in the neighborhoods of the Postclassic Maya City of Mayapan to assess the role of craftspersons in provisioning the city's economy. Variation in the scale of production and spatial distribution of houselot workshops is documented for different kinds of crafts (obsidian blades, chalcedony tools, and shell ornaments). The degree of proximity of workshops to elite residences is assessed for evidence of supervision or patronage, and the relative affluence of specialists, as reflected in their houselot assemblages, is compared to other kinds of commoners to evaluate the benefits of craft manufacture.

Massouh, Paula (American University)

[72] *Household Organization and Function within the Largo-Gallina Branch of the Ancestral Puebloan Culture: A Case Study*

This paper discusses preliminary findings from the first extensive study of a household pertaining to the Largo-Gallina branch of the Ancestral Puebloan culture. L/102, a site located in Rio Arriba County, New Mexico, acts as a case study. The paper discusses the various methods of analyses being used to define the household and to infer household activities as well as social, economic and political interactions. Methods used include GIS to plot the distribution of artifacts, NAA to determine ceramic trace elements, protein residue analysis to identify plant and animal residue, and macrobotanical analysis to discern diet and subsistence patterns.

Matadamas, Raul [74] see Jaime-Riveron, Olaf**Matchen, Paul M. (TRC Environmental Corporation) and Quigg, J. Michael (TRC Environmental Corporation)**

[37] *Bell/Andice Peoples of the Middle Archaic: An Examination of Subsistence Strategies in Texas*

This paper examines preliminary findings from two Bell/Andice occupations recently investigated in central Texas. Prior evidence suggests these groups primarily subsisted on bison, while supplementing their diets with deer, smaller mammals, and plants. Theorized behavior of these groups based on new findings is discussed and compared to ideas and information previously published from cultural material about Bell/Andice (Calf Creek) sites found throughout the Southern Plains. New ideas concerning the actual use of bison, available food resources and procurement strategies are presented.

Mathers, Clay [33] see Markussen, Christine**Mathews, Jennifer (Trinity University)**

[156] *The Rise and Fall of Chicle: Pre-Columbian Use of Chewing Gum in Mesoamerica*

Although researchers have systematically documented the use of plant excretions such as rubber in Pre-Columbian Mesoamerica, the consumption of chicle (chewing gum), and the chico zapote tree (*Manilkara achras*) from which it comes, is poorly understood. This paper examines the differences between plant substances such as copal (incense), rubber, and chicle, as well as the ways in which Pre-Columbian peoples used the resin, fruit and wood of the chico zapote tree for practical, medicinal, and ritual purposes, including that of ritual sacrifice.

Mathews, Peter (La Trobe University)[16] *Epigraphic Investigations at Naachtun*

The epigraphic component of the Naachtun Archaeological Project is concerned with the historical reconstruction of the Naachtun kingdom. Key to this is the identification of the kingdom's emblem glyph. Although fragmentary emblem glyphs are present at Naachtun, no clear identification has yet emerged. However, we believe that the ancient name for the Naachtun kingdom was Masul, since this emblem glyph occurs in texts from Tikal, Calakmul, and Río Azul. If correct, then we can combine the surviving inscriptions from Naachtun with external references to Masul to construct a history of the Naachtun kingdom and its place in the Classic Maya world.

Mathews, Peter [16] see *Guernsey, Julia***Mathews, Ruth and Galindo, Mary Jo**[54] *Anne Fox: Steward of Texas' Colonial Past*

Anne Fox began her career in Texas archaeology during the 1970s and her influence continues to the present. As a specialist in the Spanish colonial period in Texas, she is among the few archaeologists who have worked extensively at missions, presidios, and ranchos. Through the years she assembled a comprehensive ceramic type collection at the Center for Archeological Research of the University of Texas at San Antonio, which has proved invaluable for generations of scholars. This presentation will provide highlights of her career and explore her lasting legacy.

Mathiowetz, Michael (UC Riverside)[138] *The Ceremonial Significance of Solar Ladders in Mesoamerica and the Greater Southwest*

In ancient and contemporary Mesoamerica and the Greater Southwest, a widespread concept is that of the solar "ladder", which concerns the emergence and daily passage of the sun. The concept of the celestial ladder in the eastern paradise of the dawning sun is closely related to the Flower World and Flower Mountain complex recently identified by a number of other scholars. This study will examine and discuss various archaeological and ethnographic examples including, but not limited to, the Aztec, Paquimé, Huichol, and Puebloan peoples.

Matisoo-Smith, Elizabeth (Lisa)[195] *The Commensal Model for Human Settlement of the Pacific 10 Years On – What Can We Say and Where to Now?*

In 1997 we published the first full analysis of the use of *Rattus exulans* mtDNA phylogenies as a proxy for tracing human colonisation and migration in Polynesia. In the ten years since that publication, we have extended this approach geographically beyond Polynesia and chronologically through the use of ancient DNA. We have also extended the approach to other commensal animals and plants. This paper will present some of the major discoveries and highlight some of the problems and potential solutions for the further development of the commensal approach for addressing questions regarding the human settlement of islands in general.

Matisoo-Smith, Elizabeth [167] see *Jones, Terry L.***Matney, Timothy (University of Akron)**[101] *Urban Planning in the Ancient Near East: The Role of Developers in Mesoscale Architectural Design in the Early Bronze Age*

Numerous examples of Early Bronze Age planned settlements exist in the Near East. Public architecture such as fortifications, temples, palaces, and thoroughfares are planned by elite corporate entities. Contemporary and later documentation demonstrate that these building projects are the purview of major, often royal, institutions. Epigraphic and archaeological evidence for the construction of planned, non-elite housing stock, on the other hand, is more ambiguous. This paper explores the idea that a professional class of developers was responsible for the design of this non-elite housing stock, operating below the level of the ruling elites but above that of the individual household.

Matson, R.G. (University of British Columbia) and Chisholm, Brian (University of British Columbia)

[33] *Basketmaker II Subsistence*

Basketmaker II subsistence is now known from four sources of information, macrobotanical remains, coprolites, settlement patterns, and human stable carbon and nitrogen analyses. Unlike earlier we now have information, which we summarize, from a number of geographical locations, demonstrating that the maize agriculture dependency found previously at Cedar Mesa, Utah, is broadly present in Basketmaker II. Still there are some interesting exceptions and variations in this pattern, as well as gaps in coverage, that merit further study.

Matsumoto, Go (Southern Illinois University), Shimada, Izumi (Southern Illinois University), Elera, Carlos (Museo Nacional de Sicán) and Farnum, Julie (Montclair State University)

[49] *Variability in Middle Sicán Elite Tombs in Peru*

Recent excavations of over dozen intact tombs dating to different moments of the Middle Sicán period (AD 900-1100) at the monumental Huaca Loro temple mound documented a considerable variability in tomb constructions, size, shape, orientation, and artifactual and osteological contents. Covariation and continuity among them are discussed and compared with previously documented tombs in the broader Lambayeque region.

Matsumoto, Go [59] see Shimada, Izumi

Matthiesen, Henning [171] see Dobson, Steve

Mattoon-Bowden, Sheri (USAF), Polk, Michael (Sagebrush Consultants) and Williamson, Andrew

[110] *Recent Discoveries of Paleoindian Sites in the Bruneau Basin: Results of Cultural Inventory*

Cultural resource inventories conducted by Mountain Home Air Force Base identified a number of archaeological sites affiliated with the Paleo-Indian occupation of southwest Idaho. Recent range fires have revealed additional artifacts and cultural materials that further demonstrate early prehistoric use of the area. The Paleo-Indian assemblage identified in the course of fieldwork includes projectile points associated with Clovis, Midland, and Haskett types as defined for this region. This paper summarizes inventory results and discusses the importance of recent discoveries for facilitating further understanding of this period of regional prehistory.

Matute, Varinia [103] see Rich, Michelle; [103] see Lee, David

Mauldin, Raymond (UTSA/CAR), Thompson, Jennifer (UTSA/CAR) and Kemp, Leonard (UTSA/CAR)

[99] *Bison, Bowls, and Bunnies; Exploring Intensification in Toyah*

Toyah material culture has been linked to the return of bison to Texas. Whether following herds into the state, or adapting in place to this new bounty, Toyah populations are often seen as mobile hunter-gatherers with a dependence on calorie rich bison. Yet, many Toyah components have expensive tools (e.g., ceramics) and evidence of diets that include various lower-ranked plants and small animals (e.g., rabbits, reptiles, fish). Broad diets are not commonly associated with a dependence on high-return animals or with high mobility. We explore this apparent contradiction, and present a revised model of Toyah adaptation.

Mauldin, Raymond [50] see Tomka, Steve

Mauricio, Douglas [35] see Morales-Aguilar, Carlos

Mauricio, Natalia (Universidad de las Américas, Puebla), Robles, Amparo (Universidad de las Américas, Puebla), Uruñuela, Gabriela (Universidad de las Américas, Puebla), Plunket, Patricia (Universidad de las Américas, Puebla) and Vera, Manuel (Universidad de las Américas, Puebla)

[63] *Early Classic Ritual Vessels from Cholula, Puebla, Mexico*

The construction of Great Pyramid of Cholula required tons of tepetate that were extracted

from outskirts of the emerging urban center. The resulting mining pits were filled with what seem to be "Potlach-type" deposits, including many figurines and censers. Documentation of five of these features from the Universidad de las Américas provides an excellent sample of ritual paraphernalia to explore the religious underpinnings of Early Classic cult activity in the city. We will focus here on a detailed description of the local-style "censers" and a consideration of their place within the larger Mesoamerican tradition of braziers and other ritual containers.

Maxwell, David (Statistical Research, Inc.) and Van Galder, Sarah (Statistical Research, Inc.)

[4] *Continuity and Change in the Fauna of the Ballona Lagoon, Los Angeles, California*

Sites in the Ballona Lagoon area show remarkable continuity of faunal exploitation throughout their occupation. Most of the occupation span strongly resembles desert and Great Basin cultural adaptations, with a particular emphasis on non-marine aquatic resources found in vernal pools, and on lagoonal—but not pelagic—marine resources. This pattern changes following European contact, with a sudden emphasis on pelagic fishing. At CA-LAN-211/H, this has resulted in the creation of a remarkably diverse and dense deposit of faunal remains. We suspect that at least some of this deposit reflects late prehistoric and early Contact-period ritual behaviors such as feasting.

Maxwell, Jay P. [202] see *White, Christine D.*

Maxwell, Pamela (U.S. Army Corps of Engineers)

[213] *Conflict and Opportunity in Regulatory Permit Actions: Section 106 versus the California Environmental Quality Act (CEQA)*

Regulatory is the branch of the U.S. Army Corps of Engineers that implement portions of the Clean Water Act. Construction permits from Regulatory are required under the Act. The federal action of issuance of a permit gives the Corps rare jurisdiction over private land. This authority requires that all investigations and analyses of cultural resources comply with Section 106 of the National Historic Preservation Act (36 CFR 800). The challenges of this authority come most often with the choice of the "permit area" by the regulator, and the extent and quality of existing cultural resources investigations, usually conducted under CEQA.

May, Elizabeth (University of Arizona)

[127] *Sunset Crater: Environmental Disaster and Human Response*

The eruption of Sunset Crater Volcano in the 11th century in northern Arizona resulted in significant alteration of the regional environment. Human response to these changes included sizeable population migrations, changed farming practices and an altered residence pattern. Establishing an exact eruption date and sequence is essential in understanding human response seen in the archaeological record. Dendrochronological analysis of archaeological wood samples reveals the nature and duration of the eruption and gives evidence of the movement of humans into new locations. This poster will detail on-going investigations in this area as well as the direction of future research.

May, Jared [173] see *Jackson, Edwin*

Mayfield, Tracie (DePaul University)

[71] *Pearlware Pearlware Everywhere! Utilizing Mean Ceramic Dating to Identify Landscape Use and Reuse at Polly Hill Plantation, San Salvador, Bahamas*

There are few historical references to Polly Hill, a loyalist plantation on the isolated Bahamian "out island" of San Salvador occupied from approximately 1783 to 1838. This lack of documentation leaves many unanswered questions regarding the daily lives of enslaved and later liberated African populations at Polly Hill. Archaeological investigations from two seasons of field work have yielded important evidence for understanding how the use of the local landscape changed over time to suit people's needs, lifeways, and aesthetics. An analysis of the ceramic assemblage from three different structures was combined with fragmentary documentary references to learn about this historically silenced population.

Mayor, Ann (University of Geneva)

[144] *Ceramic Traditions and Ethnicity in Central Mali: Between Population Dynamics and Transmission of Knowledge Regularities*

While ethnologists and ethnohistorians have clearly underlined the fluidity of human groups, ethnoarchaeologists, by contrast, have emphasized the fixity of modes of transmission of technical knowledge within ethnolinguistic groups. Tackling the material expression of social identities in the past requires that we transcend this apparent antagonism, by mobilizing and confronting lines of evidence from three distinct domains: ethnoarchaeology, ethnohistory, and archaeology. Time depth, however, coarsens the resolution of interpretations, forcing a shift of focus from the ethnic group to the linguistic family. The issue will be illuminated by recent research on ceramics undertaken in Mali by the University of Geneva.

Mazeau, Daniel E. (SUNY Buffalo & The New York State Museum), Dahlin, Bruce H. (Howard University) and Hixson, David R. (Tulane University)

[55] *Resources and the Regional Economy of Chunchucmil, Yucatán, Mexico*

The recently completed survey of Chunchucmil's regional hinterland sites has yielded information on the chronology, settlement pattern, and economic organization of the Chunchucmil's satellite sites. This paper will present initial interpretations of their ceramic and lithic assemblages, and how they compare with those of the larger settlement of Chunchucmil and the local availability of necessary resources. These interpretations will result in a general model of regional economy.

Mazza, Celeste [126] see DeMaio, Justin

Mbutu, Stephen K. (Center for Big Bend Studies, Sul Ross State University)

[73] *Re-Visiting the "Albritton-Bryan-Kelley Quaternary Geology Model" for Predicting Spatio-Temporal Distribution of Archeological Sites, Trans-Pecos Texas*

In 1938, a joint Harvard-Southern Methodist-Sul Ross expedition to the Big Bend region demonstrated association of Quaternary depositional cycles (Claude Albritton and Kirk Bryan) and spatio-temporal distribution of archeological sites (J. Charles Kelley, T. N. Campbell and Donald J. Lehmer). We are testing the model further at recently discovered deeply buried sites in the Green Valley and Elephant Mountain area, south of Alpine, Texas.

McAnany, Patricia (Boston University) [11] Discussant; [68] Discussant; [188] see Harrison-Buck, Eleanor

McAndrews, John (University of Toronto) and Turton, Charles (Royal Ontario Museum)

[36] *How Canada Geese Recorded Iroquoian Farming Around Crawford Lake*

Middle Ontario Iroquois flourished AD 1200-1500. Geese fed in their cornfields before roosting on the lake where they cast dung pellets. These pellets caused eutrophication, meromixis and the preservation of further pellets in the sediment. Fossil pellets contain abundant pollen of maize, squash, sunflower and purslane as well as corn smut spores. Perhaps the geese also fertilized the maize fields thus prolonging their usefulness. Fossil pellets also contain abundant herb charcoal derived from field burning not forest fires. Pollen succession reflects climatic change rather than human impact on the landscape. Iroquoians flourished around Crawford Lake during the Medieval Warm Period but during the Little Ice Age moved to a warmer elevation by Lake Ontario.

McBride, Kevin (Univ. of Connecticut)

[148] *Transformation by Degree: Eighteenth Century Native American Land Use at Mashantucket*

During the middle decades of the eighteenth century the people and landscape at Mashantucket (Connecticut) seemingly underwent a radical cultural transformation with documented changes in ideology, architecture, land use and foodways. I argue that changes in these aspects of Pequot lifeways were neither as dramatic nor as widespread as the documentary record indicates. The transformation of Mashantucket into a highly visible and "idealized" English community was part of a strategy by the Mashantucket people to maintain their landbase and identity.

McBride, Pamela (Museum of New Mexico)[105] *Coalition Period Archaeobotany from the Pajarito Plateau*

The opportunity for a much more detailed picture of diet and subsistence practices during the Coalition period on the Pajarito Plateau has been afforded by four years of archaeobotanical analysis of over two hundred flotation samples for the Los Alamos Land Conveyance and Transfer Project. Twenty wild taxa have been documented along with corn, beans and squash. Over three hundred vegetal samples have also been analyzed including 42 corn cobs and 452 kernels, providing a baseline database of corn morphometrics for the Plateau. Wood use demonstrates exploitation of resources from mixed conifer, pinon/juniper woodland and riparian habitats.

McBrinn, Maxine (The Field Museum) and Nash, Stephen (The Field Museum)[116] *Keeping Up with the Garcias: Mexican Technologies in the Mogollon*

Experts believe that southwestern artifacts show a number of traits imported into the region from Mexico. These "imports" include subsistence foods like maize and beans, new technologies like basketry plaiting, and ceremonial items like cane cigarettes. An extensive literature exists on the origins of southwestern maize, while other cultural imports, like turkeys, cotton and plaiting, have been less intensively examined. The Tularosa Cave collection, excavated by Paul S. Martin and recently re-cataloged, offers an opportunity to analyze early examples of objects with potentially Mexican antecedents, allowing explanation for when and how these technologies might have arrived into the Mogollon.

McCafferty, Geoffrey (U Calgary)[194] *Culture Change and Ethnic Identity in Cholula, 1000 BCE-1650 CE*

Cholula is notable for its longevity, spanning more than 3000 years as an urban center. Across this long time span, however, the city has undergone significant changes in cultural content and ethnicity as it emerged as a major religious center and economic hub. This paper will discuss shifting relations with Olmecoid groups, Teotihuacan, Gulf Coast Maya, Toltec, Mixtec, Aztec, and finally the Spanish. Particular attention will be paid to how ceramic assemblages from these different periods may be 'read' in terms of the adoption and communication of ethnic identity markers.

McCafferty, Geoffrey (U Calgary) [46] Discussant; [46] see McCafferty, Sharisse**McCafferty, Sharisse (U Calgary) and McCafferty, Geoffrey (U Calgary)**[46] *Buccal Masks in Fact and Mythstory*

A characteristic of the female earth/fertility complex of Postclassic Mexico is the use of skeletal masks around the lower jaw. These appear in numerous codices, especially associated with the Aztec goddess Cihuacoatl and the Mixtec goddess 9 Grass. Actual buccal masks have been found archaeologically, for example at Monte Albán's Tomb 7 and recently at Macuilxochitl. This paper will develop a context for these insignia and suggest possible symbolic associations.

McCall, Grant (University of Iowa)[100] *Later MSA Lithic Raw Material Use, Tool Design, and Land Use Strategies: Modeling Upper Pleistocene Foraging Ecology in South Africa*

This paper examines the later Middle Stone Age (MSA) of the southern South African coast. The paper argues that significant changes in tool design and lithic raw material exploitation during the later MSA resulted from deteriorating environments at the start of Oxygen Isotope Stage 4. This paper proposes that the biface-dominated Still Bay industry related to strategies of raw material economy in the context of increased mobility away from sources of raw material. It also argues that Howiesons Poort microlithic lithic technology and composite hunting weapons corresponded with the targeting of specific resources and longer logistical trips from residential centers.

McCall, Grant S. [95] see Thomas, Jonathan T.**McCallum, Myles (University of Nevada, Reno)**[191] *A Rocky Relationship: Rome and The Tiber*

The Tiber Valley was an important part of Rome's catchment area throughout antiquity. The Tiber was navigable for most of its course and functioned as the primary transport link between the Roman market and the resources of the peninsula's interior. The nature of this

relationship is difficult to determine. A careful consideration of the distribution of two types of stone quarried in the Tiber Basin upriver from Rome provides evidence for the role that the Tiber Valley played in defining Rome's supply area. Related textual evidence also provides insight into how the Romans conceived of the city's catchment area.

McClelland, John [59] *see Cerezo, Jessica*

McClure, Sarah B. (University of Oregon) and Kennett, Douglas J. (University of Oregon)

[158] *Cultural Transmission and the Generation of Variation in Spanish Neolithic Pottery*

This paper explores variation in Neolithic pottery production in eastern Spain. Eerkens and Lipo (2005) generated expected distributions for the amount of variation that occurs through time due to copying errors, and examined how cultural transmission processes amplify, reduce, or maintain variation. We compare data on Spanish Neolithic pottery, particularly Cardial pottery, to the null models for explaining variation in archaeological assemblages generated Eerkens and Lipo. These data are then compared to previous interpretations of inheritance mechanisms in Neolithic pottery production, particularly differences in Cardial Ware and other pottery types.

McConaughy, Mark (Pennsylvania Bureau for Historic Preservation)

[66] *Bird Effigy Pavement from Sugar Run Mound (36Wa359), a Hopewellian Squawkie Hill Phase site, Warren County, Pennsylvania*

Excavations conducted at the Sugar Run Mound (36Wa359) in 1941 uncovered the remains of three separate, but overlapping, mound building episodes. Sugar Run Mound is a Middle Woodland Squawkie Hill Phase site that manifests Hopewellian traits. The earliest mound constructed at Sugar Run Mound was composed of a central cremation cyst flanked by two cobblestone pavements. At least one, if not both, of the flanking pavements was an effigy figure. The southernmost pavement was identified as that of a bird. The bird effigy pavement and its implications will be examined in this paper.

McCormick, Carmen (University of Cincinnati)

[2] *Temporal Significance of Mean Sherd Thickness in San Francisco Mountain Gray Ware*

One objective of archaeological research is to place prehistoric cultural phenomena into temporal frameworks to show change over time. This goal is not always an easy task to achieve. Even though new absolute (chronometric) dating techniques have been developed in the recent past, they cannot always be used due to certain limitations (i.e., cost and availability, contamination problems, etc.). So, new techniques need to be developed that are not susceptible to the aforementioned restrictions. This poster will present the use of a relative dating technique recently introduced in northern Arizona to date prehistoric Cohonina pottery assemblages.

McCormick, Megan (Hunter College/CUNY)

[117] *Of Time, Typologies, & Seriation. The Gilund Pottery: A Synthetic Approach to Intrasite Variability*

A quantitative analysis of Gilund pottery combines typologies currently used to describe Ahar-Banas assemblages with one emphasizing pottery forms is presented. This study investigates intrasite pottery type variability by integrating these typologies with stratigraphic data and C14 assays. A non-random sample is analyzed using several statistical techniques. Relative frequencies are derived using seriation, similarity matrix analyses and nonmetric multidimensional scaling. The ultimate goal is to understand the chronological and cultural context of pottery production and function at Gilund, an agro-pastoral community which was also involved in a prehistoric trade network with ties to Central Asia, Iran, and northwestern South Asia.

McCormick, Megan [81] *see Kurchin, Bernice*

McCorvie, Mary [81] *see Carey, Heather*

McCoy, Mark D. (San Jose State University)

[51] *Landscape, Social Memory, and Society: An Ethnohistoric-Archaeological Study of Three Hawaiian Communities*

The foundation of hierarchical, complex society is examined here through a study of natural and social landscape change during the rise and fall of chiefdoms on the Kalaupapa Peninsula, Moloka'i Island, Hawai'i. In sum, the research presented shows that the Kalaupapa Field System had a chronology similar to other rain-fed agricultural systems in the region; large-scale social change had remarkably varied impacts on people's daily lives; and attempts to reshape the ritual landscape through the construction of temples, shrines, and other sites progressed through several stages linked to the study area's political history.

McCoy, Patrick [51] see Gosser, Dennis

McCullough, Robert G. [34] see Munson, Cheryl Ann

McDavid, Carol (University of Houston) [111] *Discussant*; [80] see Bruner, David

McDonald, Jo (Australian National University) and Veth, Peter (Australian National University)

[214] *Pilbara and Western Desert Rock Art: Art Graphics across Vast Landscapes*
Rock art systems in north-western Australia are highly complex and reveal structural patterning crucial for interpreting social organisation and spatial relations. There are distinctive style-provinces in the Pilbara and clear chains of stylistic connection through this region and the Western Desert. These graphic systems appear to link people over short as well as vast distances. The implication of shared graphic systems functioning over distance and through time is explored, as is the presence of starkly different graphic traditions within a single cultural bloc.

McDonnell, J.G. [134] see Robinson, Samantha

McDougall, Darin (WSU)

[90] *Typological and Technological Analysis of Ceramics from a Southern Great House Community*

Cerro Pomo Pueblo is a Chaco-era (ca. AD 1050-1130) great house located in west-central New Mexico, one of a small group in the Southern Cibola region. Two years of excavations at Cerro Pomo, and documentation of its surrounding community, have produced a sizable material assemblage used here to investigate aspects of community organization and identity. Among the southernmost great houses, ceramic assemblages contain plainwares associated with both northern and southern (Mogollon) traditions. This poster presents typological and technological data from Cerro Pomo used to evaluate local ceramic production, exchange, and the potential for ethnic coresidence in southern frontier communities.

McEwan, Gordon (Wagner College)

[186] *The Identity of the Lucre Archaeological Culture and Their Relationship to the Inca*
The archaeological culture associated with the Lucre ceramic style in Cuzco clearly served as a cultural bridge connecting the Middle Horizon Wari and Tiwanaku polities with the later Inca Empire. The question remains - Who were the Lucre people and what can we say about them? Archeological research in the Lucre Basin over the past 14 years together with ethnohistoric information now provides us with new insights. The Lucre ceramic and architectural styles most likely represent at least two ethnohistorically known polities—the Pinagua and the Muyna – who were major actors in the history of the early Inca state.

McFarlane, William [85] see Stockett, Miranda

McFarlane, William J. [147] see Bill, Cassandra R.

McGaha, Shaun [39] see Taylor, Robert

McGahee, Gaea [82] see Graham, Patrick

McGee, Jon (Texas State University) and Palka, Joel (University of Illinois- Chicago)[180] *Lacandon Ritual in the Homes of the Gods*

Like other Mesoamerican peoples, the historic Lacandon Maya believed that supernatural agents affected their lives. They performed rituals to mitigate these forces which involved sacrificial offerings to ensure the well being of humans and good harvests. Here we discuss the ethnographic and archaeological information on Lacandon ritual in caves, cliffs, and ancient Maya ruins. We conclude that the Lacandon do not view these places as associated with the past; they are locales where individuals communicate with supernatural agents on behalf of living humans. Although physically 'outside' Lacandon society these beings are manifested in Lacandon ceremonial landscapes and material culture.

McGee, Kevin [2] *see Shooner, Andrew*

McGhee, Fred (Fred L. McGhee & Associates)[51] *Some Thoughts on the Conductance of Federal Archaeology in Hawaii*

The role played by various branches of the federal government in directly or indirectly funding archaeology in Hawaii is obvious. It has been over three years since my service as the first staff archaeologist for the Air Force in Hawaii came to an end, and I have not publicly spoken about my experiences in that job before. Until now. Utilizing my own participant observation as a springboard, I will be making some personal observations about the opportunities and challenges that federal archaeological practice in Hawaii faces going forward.

McGhee, Fred (Fred L. McGhee & Associates)[80] *Archaeological Opportunity and Challenge Within a Context of Urban Renewal*

The latest phase of urban renewal projects—often called "transformations," "renaissances" and similar things—is having major impacts in minority communities throughout the United States. Historic preservation professionals working in these situations usually find themselves in sticky ethical waters. My ongoing work in Houston's Fourth Ward furnishes another indication that the separation between the "business client" and the "ethical client" is usually a politically messy one. How should archaeologists position themselves in such situations? Some practical advice, in addition to the usual "war stories" are offered.

McGhee, Fred L. (Fred L. McGhee & Associates)[1] *Archaeological Politics Among and About African-Americans in Texas*

Although the situation is by no means monolithic, a general sense of distrust characterizes many of the interactions between archaeologists and African-Americans in Texas. Part of the problem is a difference in perception. Many Afro-Texans encounter archaeology within the context of urban renewal and gentrification; archaeologists participating in these projects are thus seen as encroachers. The archaeological political battles that often take place as a consequence usually reveal a great deal about the nature and workings of CRM and state agency practice in the Lone Star State vis-à-vis African-Americans and Indigenous populations.

McGimsey, III, Charles (Arkansas Archeological Survey) [130] Discussant

McGovern, Thomas [195] *see Brewington, Seth D.*

McGuire, Randy (Binghamton University) and Villalpando, Elisa[131] *Moving Through Northern Mexico*

Southwestern archaeologists once imagined northern Mexico as a great empty quarter that set the Southwest apart from Mesoamerica. Itinerant merchants, migrating peoples, roving raiders and wandering explorers crisscrossed this desert wilderness. Today, archaeologists working in México have transformed this picture. Instead of movement and migration, they have found local developments that created both diversity and continuity. This diversity and continuity calls into question theories of cultural development in the Southwest that depend upon migrants or travelers from the south. It also challenges the idea of a distinct boundary between the Southwest and Mesoamerica.

McInnis, Heather (DePaul University)

[81] *From Student to Colleague: Graduate Students as Mentors, Advisers, and Role Models*

All graduate students have been overwhelmed by workloads associated with teaching responsibilities and research opportunities at some point during their graduate career. In the midst of grading, course preparation, grant writing, and data analysis the unique opportunities these same responsibilities present for graduate students to serve as mentors, advisors and role models are often overlooked. Moreover, advising and mentorship are frequently dismissed as extraneous components of academic professional development. I discuss the importance of building skills in these areas as a graduate student and their impact on research development, implementation, teaching and job seeking at a graduate level and beyond.

McIntosh, Roderick (Yale University)

[52] *Long-Term Sustainability; Low-Scale Water Engineering*

Civilization on an arid-lands floodplain classically has implied massive despotic investment in large-scale hydrological programs, with all the suffering of corvée labour. However, along the Middle Niger of West Africa one finds dense networks of early cities without, apparently, any signs of earth preparation beyond that within the means of households. Has a web of niche specialization provided an alternative mechanism for ecological resilience?

McKee, Brian (University of Arizona)

[127] *Volcanism, Human Response, and Chronology in the Zapotitán Valley, El Salvador*

The residents of the Zapotitán Valley were repeatedly affected by explosive volcanism. At least nine eruptions left recognizable deposits during the last 2,000 years. Dating the eruptions is crucial to understanding human response to them. Four prehistoric eruptions have been radiocarbon dated, while historical records date four others, providing a rough absolute chronology. However, several eruptions fall in problematic portions of the calibration curve, introducing large uncertainties. I use Bayesian calibration of the Zapotitán Valley volcanic sequence to tighten our dating of these events and improve our understanding human response to them, and to catastrophic environmental events in general.

McKee, Jeffrey [100] *see Chambers, Erica*

McKenna, Jeanette (McKenna et al.) and Lindgren, Kristina (McKenna et al.)

[169] *Show Me the Midden*

Midden is a term used frequently in archaeology, but rarely discussed in any depth in the archaeological literature - be it in text books or technical reports. In Southern California, midden is more often associated with shell deposits on the coast. The identification of midden deposits in inland sites or non-shell midden is problematic and often misidentified. So, when is midden truly midden? Only when the cultural context can be illustrated through the presence of organic material, its relative density, and presence of artifacts that support the exploitation of the organic materials.

McKillop, Heather (Louisiana State University), Somers, Bretton (Louisiana State University), Robinson, Mark, Sills, Cory (Louisiana State University) and Evans, Amanda (Louisiana State University)

[178] *Underwater Maya: Spatial Analysis of Wooden Structures Below the Sea Floor in Belize*

We report the discovery, mapping, and spatial analysis of wooden structures preserved in a peat bog below the sea floor in southern Belize. The size and patterning of wooden posts at 40 sites mapped in 2005 and 2006 reveal structures of various sizes and shapes, as well as linear arrangements of posts. The structures are associated with briquetage- ceramics used to boil brine in pots over fires to produce salt. Our ongoing underwater survey indicates there was substantial infrastructure for the production and distribution of salt for the Late Classic Maya.

McKillop, Heather (Louisiana State University) [57] *Discussant*; **[57]** *see Morris, Zoe*; **[57]** *see Winemiller, Terance*

McKinnon, Duncan [65] *see Herrmann, Jason*

McKnight, Justine [64] *see Gallivan, Martin*

McLaren, Duncan (University of Victoria, Canada), Fedje, Daryl (Parks Canada) and Mackie, Quentin (University of Victoria, Canada)

[184] *Relict Shorelines and Archaeological Prospection on the Continental Hinge of North Coastal British Columbia*

The Dundas Islands are situated between two regions with different sea level histories. To the east, the mainland cordillera was isostatically depressed during the Fraser glaciation, resulting in higher relative sea levels during the late Pleistocene and early Holocene. To the west lies Haida Gwaii, islands that were forebulged, resulting in lower relative sea levels. From research undertaken between these areas, this paper presents the results of the following goals: to create a relative sea level history of the Dundas Islands, to identify relict shorelines, and to undertake archaeological prospection aimed at identifying late Pleistocene and early Holocene archaeological sites.

McLaren, Duncan [184] see Mackie, Quentin; [184] see Fedje, Daryl

McLean, Janice A. [39] see Hoard, Robert

McLean, Roderic (LSA Associates, Inc.)

[213] *Buried Sites Archaeology: Life by the Lakes in Laguna Canyon during the Middle and Late Holocene*

People have been living by the lakes in Laguna Canyon, California for thousands of years, given the reliable availability of fresh water resources. The canyon is the only good travel route through the San Joaquin Hills, linking inland resource areas with the ocean. Recent construction exposed hearth features, artifact caches, and a dog burial. This paper will present in landscape context the results of excavations and scientific analyses of the data, including macro-botanical studies. Issues of nomadism versus sedentism will be addressed. Additionally, the limitations of hand excavations in identifying deeply buried, low density, feature based sites will be discussed.

McMahon, Kate [213] see Marken, Mitch

McMahon, Todd C. (Colorado Historical Society - Office of the State Archaeologist of Colorado)

[203] *West Central Colorado Formative - Piecing the Inter-Connected Culture Puzzle Together*

Formative archaeological sites in West-Central Colorado continue to stimulate debate related to archaeological cultural terminology. Comparing traits and recent analysis from neighboring areas such as northwest Colorado, southwest Colorado and northeastern Utah points to a conjectured high level of cultural and ideological interaction, the result of a pan-Ancestral Puebloan sphere of influence spanning from 200 B.C. till A.D. 1200. From a regional general scheme, the material evidence of West-Central Formative and resources within the Weimer Ranch area of Colorado specifically resembles a similar transmission of ideas that affected other areas of Colorado and Utah which have been termed "Fremont."

McManamon, Francis (Archeology Program-NPS) [179] Discussant

McManamon, Francis (Archeology Program-NPS) and Mudar, Karen (Archeology Program-NPS)

[155] *Archaeological Looting on Federal Land: The Tip of the Iceberg*

Federal agencies report that the destruction of archaeological resources, from metal-detecting on former battlefields to removal of ancient pictographs, has risen since 1985. The number of reported incidents from each land-managing agency compared to the number of acres managed, however, suggests that damage to archaeological sites on federal lands is underreported. Analysis of prosecuted cases indicate that the majority of persons who are apprehended remove objects for personal possession or occasional sale. While "professional" looters are the smallest group of people apprehended, they cause the greatest amount of damage to sites. These findings suggest that a strategy combining strong penalties for convicted "hard-core" looters and public outreach/education and site steward programs to address "casual" looting may be effective for site protection.

McNeil, Cameron L. (CUNY)

[85] *Lessons for the Present in Ancient Land-Use Patterns*

Paleoecological research in Honduras elucidates the successes and failures of land-use practices from ancient times to the present. Research suggests that in the past, people sustained their environment by balancing their use of field and forest products. Participation in today's globalized economy has led to massive deforestation and soil depletion in many areas and successful methods for utilizing the environment have been discarded. The current level of deforestation in Honduras was sustained only briefly in the past before nature or people reigned in such abuse. A return to traditional land-use practices would preserve Honduras for the future.

McNichol, Anthony (URS Corporation)

[204] *A Social Contradiction Model for the Trend toward Sedentism in the Middle Archaic Midwest*

Carved and engraved bone pins from the Koster, Black Earth and Modoc Rockshelter sites have been used to investigate the development of regional-scale interaction between hunter-gatherer groups of the Middle Archaic Midwest. Using this and other contemporaneous data, this pilot study suggests that these artifacts may also be representative material embodiments of inherent social contradictions within and between hunter-gatherer groups beginning at an even earlier date. These contradictions and the conflicts that arose from them may rival in importance ecological and demographic paradigms as catalysts for increasing sedentism and territoriality in the Middle Archaic.

McReynolds, Theresa (University of North Carolina at Chapel Hill), Franklin, Elaine (Western Carolina University) and Samford, Patricia (North Carolina State Historic Sites)

[96] *History from Things: Teaching a Meaningful Past through Cultural Materials*

"History from Things" is a loan-kit program for 4th-8th grade classrooms developed through the collaborative efforts of archaeologists and educators. Designed to be compatible with education theories about how students engage with the past, the program encourages students to construct their own meaningful interpretations based on archaeological evidence, inquiry activities, and simulations. Six kits include cultural and contextual materials, lesson plans, and activities pertaining to daily life in North Carolina from Paleoindian through modern times. Upon completion, students understand how human lifestyles changed over time, the relationship between lifestyles and environments, and how archaeology contributes to interpretations of the past.

McVickar, Janet L. (Western Cultural Resource Management, Inc.)

[72] *The Shifting Sands of Time: Buried Cultural Deposits in SE New Mexico*

Recent investigations yielded substantial archaeological data in southeastern New Mexico east of the Pecos River where documented sites are sparse. The region is characterized by unstable shifting sands that alternately expose and bury surface features. Geomorphic processes, vegetation history, paleoclimate, and regional studies were examined to reconstruct the physical environment where sites are located, to identify the original site environment, and to understand subsequent processes that continue to affect sites in this region. Site types are examined to determine the rationale for their location in this sandy arid environment, and physical criteria are outlined for future site discovery.

McVicker, Donald (North Central College/Field Museum)

[75] *Figurines Are Us? - Reconstructing the Social Organization of Jaina, Campeche, Mexico*

This paper evaluates how ceramic figurines and figurative carved shell plaques taken from Jaina have been used to reconstruct the Late Classic social organization of the island's population. The figurines and plaques have been described consistently as depicting elite statuses. Yet, the vast majority of pieces have been recovered from thousands of adult primary burials and infant burials in urns. This disjunction between elite figurines and commoner graves is critically examined, and an attempt is made to sketch out the social structure of Jaina based on recently excavated data rather than aesthetically and commercially valuable objets d'art.

Meade Davis, Katharine [43] *see Chapa, Reymundo*

Meadow, Richard H. (Harvard University) [217] *Discussant*

Me-bar, Yoav [9] *see Lewis, Brandon*

Medrano González, Xochitl (Instituto Chihuahuense de la Cultura) and Lozano Villarreal, Ariadne Itzel (Instituto Chihuahuense de la Cultura)

[136] *Management and Logistics of the Archeology and History Workshop, "El Camino Real de Tierra Adentro" in Chihuahua*

The archeology and history workshop came about in Mexico thanks to the coordination of the Chihuahuan Institute of Culture with BLM, the New Mexico Department of Cultural Affairs, and the SRI Foundation. The major points considered in organizing the workshop were as follows: Who would teach the workshop; Translation and adequacy of the didactic materials; Venue in which the workshop would be held; Specific information about the invited teachers and their classes. The objective was to have the teachers take the curriculum to their classrooms, teach it to their students, and additionally create an educational project that would involve their community.

Meegan, Cathryn (Arizona State University), Adams, Karen (Crow Canyon Archaeological Center), Ortman, Scott (Crow Canyon Archaeological Center and Arizona State University) and Howell, R. Emerson (University of Arizona)

[33] *The Color of Maize*

Farmers in northern Mexico and the pueblos of the southwestern United States report using maize kernel color in planting and other decisions. In a project conducted by Iowa State University agronomists, many different varieties of Native American maize grown in an identical environment under optimal conditions promoted maximum trait expression in the plants. Here we explore the relationship between kernel color, morphological features, and growth and development of several maize landraces to assess how closely color and plant growth and reproductive traits are related. We focus on Puebloan varieties of maize, as these appear to have the greatest conservation of color.

Meegan, Cathryn [116] *see Hegmon, Michelle*

Meeks, Scott C. (University of Tennessee) and Anderson, David G. (University of Tennessee)

[15] *Large-Scale Late Prehistoric Abandonments in the Southeastern United States:*

Examining Mississippian Demographic Shifts from an Ecological Perspective

Tree-ring based reconstructions of water availability from A.D. 1200 to 1600 in the southeastern United States, coupled with archaeological records from the Savannah and Tennessee River valleys, are used to calculate crop yields to investigate the relationship between Native American storage capabilities and climate fluctuations. In each case, portions of both regions were depopulated by Mississippian peoples following prolonged droughts. Although caution must be exercised in interpreting climate-culture relationships, the results indicate that drought and agricultural shortfalls impacted the historical trajectories of Mississippian societies in both river valleys, fostering declines in sociopolitical structure and large-scale abandonments.

Meeks, Scott C. [142] *see O'Donoghue, Jason M.*

Meier, Holly (Texas State University)

[39] *Antelope Creek Phase Ceramics: An NAA Comparison*

Neutron activation analysis (NAA) chemical analysis will help to determine the production zones of the ceramics of Antelope Creek phase sites. The Antelope Creek Phase refers to a group of prehistoric sites in the Texas and Oklahoma panhandles that date to AD 1350 – 1500. By using ceramics from 41PT109, Landergin Mesa, and Alibates Ruin 28 analysis will consist of samples from different architectural phases and different population densities. The sherds recovered will be used to examine ceramic manufacturing and production techniques using local or non-local/exotic materials via chemical composition analysis.

Meier, Holly [56] *see Bousman, Britt*

Meignen, Lilianne [23] *see Burke, Ariane*

Mejia, Hector (Mirador Basin Project / FARES)

[35] *Desarrollo Cultural e las Ciudades de la Cuenca Mirador, Peten, Guatemala*

El proyecto Cuenca Mirador ha iniciado exploraciones sistemáticas de las ciudades arqueológicas en la zona geográfica-cultural denominada como Cuenca Mirador. Los resultados obtenidos son el registro y mapeo de sitios arqueológicos que han mostrado el alto grado de desarrollo social que los habitantes prehispánicos alcanzaron en esta región. Varias de las ciudades mayores han sido exploradas con datos sobre los componentes arquitectónicos que fue parte de un desarrollo urbanístico. Esto ha permitido observar el alto grado de complejidad que las ciudades alcanzaron involucrando la integración y la transformación de su ambiente.

Meléndez, Juan Carlos (Universidad de San Carlos)

[103] *The Ballcourt Complex at El Perú-Waka'*

The ball game was one of the most culturally relevant ritual laden traditions for the Ancient Maya. Recent investigations at El Perú-Waka' have revealed only one ball court which is located in Plaza 4. Excavations carried out by the author revealed three occupations: one apparently domestic dating to the Early Classic predating construction of the ball court; the construction of parallel structures which form the Late Classic complex; and the Terminal Classic architectural modifications. The following will describe the investigations carried out at the ball court and interpret the results.

Melgar Tisoc, Emiliano Ricardo (Posgrado UNAM) and Solís Ciriaco, Reyna (ENAH)

[74] *Objects Made of Serpentine from the Great Temple of Tenochtitlan: Identification of the Technological Styles by Scanning Electron Microscopy (SEM)*

In the offerings of the Great Temple of Tenochtitlan there have been recovered hundreds of objects made of foreign raw materials to the Basin of Mexico. They are volcanic, and also metamorphic such as serpentinites, travertines, and marbles. One of the most important sets of artifacts made of serpentine are Tlaloc, god of water, and Mezcala style masks. This paper examines the identification of process of production on the surface of these artifacts and provides with a methodology for comparison among different regional styles.

Meltzer, David (SMU)

[165] *Did Folsom Paleoindians Even Notice the Younger Dryas? Thoughts on Late Glacial Climate Change and Human Responses on the Plains*

Folsom Paleoindians occupied the Plains amidst the Younger Dryas (YD), a geologically brief, rapid return to harsh glacial conditions around the North Atlantic, with synchronous but often variable climatic and ecological changes elsewhere. But how was the YD manifest on the Plains: was it as severe here, or did it even have a detectable impact on human foragers or the resources on which they depended? Assessing its effects requires understanding local conditions (in a spatial and temporal sense). Data from the Folsom site and other localities help piece together the paleoenvironmental stage on which Folsom adaptations may have played out.

Meltzer, David (SMU) [28] Discussant

Mendez, Alonso [143] see Barnhart, Edwin L.

Mendez Toporek, Alonso (Maya Exploration Center) and Karasik, Carol (Maya Exploration Center)

[143] *Centering the World - Astronomical Alignments at Palenque*

Over the last six years the authors conducted solar observations during zenith and nadir passage at Palenque. The importance of zenith and nadir is reflected in the dramatic solar alignments of the Temple of the Cross, Inscriptions and Palace. Zenith and nadir passages also resonate in the hieroglyphic texts, from the creation event to the succession of Palenque rulers. The interrelationship between astronomy, myth and history suggests that divine kingship was bound by the movement of the sun. By timing royal events to pivotal solar stations, the ruler gave potency to his role as the axis of space and time.

Mendizabal, Tomas (Museo Antropológico Reina Torres de Araiz)

[151] *La Arqueología en Panama, Sus Recientes Logros y Futuras Perspectivas*

La arqueología en Panama esta cambiando. Los rescates ganan espacios debido al desarrollo Del país. Sin embargo las leyes siguen enfocadas hacia la arqueología científica y

la búsqueda de "tesoros". La Dirección Nacional de Patrimonio Histórico adelanta la redacción de un nuevo proyecto de ley. Simultáneamente, la habilitación del nuevo Museo Antropológico Reina Torres de Araúz, ofrece espacios a científicos locales y extranjeros con colecciones de referencia. La nueva Ley y estos espacios tendrán un impacto positivo para la arqueología de Panamá.

Mendoza, Rubén (CSU Monterey Bay)

[146] *Yndios, Mestizos, y Gente de Razon: Nativism, Syncretism, and Identity in the Hispanicized Indian Missions of Alta California, 1769-1848*

That corpus of works concerned with the colonial encounter in Alta California has grown exponentially with the influx of recent contributions by anthropologists, archaeologists, historians, geneticists, and linguists. Significantly, while scholars continue to expand the playing field of colonialism and mission studies research, interrogating extant evidence for a Mexicanized hybridity and syncretistic transformation of the native populations of Alta California remains a formidable challenge. This paper explores the extent to which Franciscan millenarianism and Mexican Indian cultural traditions, folk Catholic beliefs, and material cultures ultimately transformed the social and cultural landscapes of the newly formed Hispanicized Indian communities of California.

Mendusic, Marko [145] see Moore, Andrew

Mengoni, Luisa Elena (University College London)

[109] *Cultural Interactions and the Construction of Local Identities in SW China during the Late Bronze and Early Iron Age*

This paper discusses the archaeological material from the slate and megalithic tombs of the late Bronze Age and early Iron Age in Sichuan and Yunnan. Analysis of the distribution and combination of specific classes of material and stylistic attributes suggests that regional interactions existed across Tibet, Sichuan and Yunnan. The identified variability also shows that similar funerary traditions developed in fact into localised and often hybrid forms, where the integration, imitation or discard of certain materials and attributes can be interpreted as evidence of an on-going process of adjustment and redefinition of group identities at local level.

Mercede, Jennifer (Cal State, Los Angeles)

[108] *Gender and Jakaltek Cave Use*

My role as the only woman on an ethnoarchaeological field project studying ritual cave use forced me to confront a host of Jakaltek Maya gender related values linked to caves. The widely documented prohibition against women entering caves was consistently reaffirmed by male informants. In actual practice, a good deal of variation exists in behavior by women, including one case that appears to indicate women have fundamentally different values. Finally, much of the taboo against women surrounds the menstrual cycle. Jakaltek attitudes toward male versus female blood are analyzed in specific examples.

Mercede, Jennifer [108] see Garza, Sergio

Meredith, Steven [123] see Carr, Philip

Merewether, Jamie [75] see Baxter, Erin

Merwin, Darla (Stony Brook University)

[170] *Revealing What Lies Beneath: Public Archaeology and the Hudson River*

A major study sponsored by New York State to map the bottom of the Hudson River for environmental purposes had the unintended result of spurring a long-term effort to explore the river's underwater cultural resources, mostly shipwrecks. What began as a challenge - how to disseminate sonar mapping data without revealing site locations - has turned into an exciting opportunity to undertake academic research at these sites, and to engage the public as the submerged archaeological record is brought to light. This paper presents some of the highlights and issues encountered to date, especially regarding the balance between outreach and site protection.

Mesia, Christian (Stanford University)

[43] *The Profane Meets the Sacred: Secular Activities at Chavín de Huántar (1100 – 500 B.C.)*

Excavations at Chavín have yielded evidence of secular activities segregated spatially and chronologically in a 14ha sector located at the north of the Ceremonial Center. This area is composed by five subsectors that include trash areas, workshops and platforms of different sizes and uses. They were transformed over 600 years; the major labor investment occurred in the final 400 years associated with the maximum construction effort at the Temple and with ceramic styles defined as Janabarriu. This paper offers new data about secular activities in Chavín and sheds light on the chronology of the ceramic styles defined as Janabarriu.

Mesick, Cassandra (Brown University)

[65] *Maya Architecture and its Builders: Towards an Archaeology of Labor*

This poster presents preliminary excavation data concerning architectural remains at the Maya site of El Zotz, Guatemala. While offering information about structural stratigraphy, chronology, form, and function, primacy will be awarded to aspects of architectural construction. Specific points to be addressed include the choice of building materials, methods of dressing and joining stone, mortar composition, and finishing techniques. This work offers an initial attempt to formulate an "archaeology of labor," a framework that combines an energetics model based on the quantification of human labor with a political economic approach focused on the recruitment, deployment, and social organization of human laborers.

Messer, A'ndrea Elyse (Penn State)

[183] *There and Back Again, Rehabilitation of Small Sites in the Mesa Verde Southwest*

Reuse of small habitation sites in the Mesa Verde area of the Southwestern U.S. is far from unusual. While many sites are reused through time, the reuse of sites during the early and late Pueblo III can tell us much about the choices made when determining where to live and what they did when the best places were no longer available. A comparison of Pueblo III pristine and reinhabited sites across four surveys from southwestern Colorado can help tease out the importance of such influences as population and aggregated sites and illuminate the importance of social, economic and environmental forces.

Meyer, Regina [113] see Day, Grant

Meyers, Maureen (University of Kentucky)

[63] *Edge of the Mississippian World: Chiefdoms in Southwest Virginia*

Recent research in southwestern Virginia has reexamined the evidence for Mississippian chiefdoms there. Such evidence includes the presence of mounds, burials with high-status, non-local goods, and a hierarchical settlement pattern. An analysis of ceramic collections from the region indicate much interaction with polities in both eastern Tennessee and western North Carolina. This poster will present these data, and outline planned future research in the region.

Michaels, George (Instructional Development, UCSB)

[178] *Archaeology and the 'New Student': Pedagogy, Technology and Best Practices*

Archaeology has always had many advantages over other disciplines in terms of inherent interest to students, as well as a remarkable breadth and depth of material that lends itself to presentation in many compelling formats. Barbara Voorhies has a long and distinguished history of combining rigor and innovation in teaching archaeology. This paper explores the possibilities for effective teaching and active learning, even in large class formats, made available by a variety of new technologies, new ways that students approach learning, and methods for archaeologists to take advantage of them.

Miksa, Elizabeth J. (Manzanares Research) and Castro-Reino, Sergio F.

[105] *Material Use in Pajarito Plateau Ceramics: Petrographic Studies for the Los Alamos Land Conveyance and Transfer Project*

Survey and excavation on the Pajarito Plateau for the Los Alamos Land Conveyance and Transfer Project yielded a comprehensive ceramic collection spanning several centuries, wares, and sources. Petrographic analysis was geared toward supporting basic ceramic studies. Qualitative and quantitative petrography were used to define temper types, identify source materials and material types, and seek resource use patterns over time. Compositional and textural signatures were identified for anthill sand, both primary and secondary volcanic deposits, and stream sand. Variations in materials selected for utilitarian versus decorated

wares reveal specific technological and economic choices made by prehistoric potters through time and space.

Milbrath, Susan (Florida Museum of Natural History)

[143] *The Maya Venus Almanac*

The Venus almanac is well documented in the Postclassic Dresden Codex. Venus imagery is linked to warfare in the codices and Postclassic murals. Earlier evidence of the almanac is seen in Maya imagery related to Tlaloc, the year-sign, and sets of five and eight in visual arts. The Classic and Terminal Classic Maya linked military campaigns to the cycle of Venus events, recording such events in militaristic imagery and inscriptions referring to "Star Wars." Ultimately, Teotihuacan may be the origin point of this basic cycle integrating an eight-year solar period with five Venus cycles and 99 lunar months.

Miljour, Heather [38] see Wegener, Robert

Miller, Alexandra (Arizona State University)

[95] *Exploring the Land: A Comparison of Land-Use Patterns in the Middle and Upper Paleolithic of the Western Mediterranean*

By examining the patterning of artifacts across a physical landscape, prehistoric behavior regarding land-use can be delineated. Analysis of geographic and lithic variables, using survey data from three valleys in eastern Spain, demonstrates this for the Middle and Upper Paleolithic. Significant differences between time periods would support the idea that the Middle to Upper Paleolithic transition coincided with changes in land-use. Results indicate that the occupation of Mediterranean Spain was spatially patterned in relation to topography. However, there is little evidence for a difference in land-use between the Middle and Upper Paleolithic for any of the studied valleys.

Miller, Bryan and Lee, Christine (Arizona State University)

[133] *Cultural and Ethnic Identities in Early Iron Age Burials of Eastern Inner Asia*

The socio-political and ethnic assumptions inherent in culture-historical names ascribed to burial sites excavated in Eastern Inner Asia have oversimplified the complex issue of identity for those interred. In the case of the Xiongnu nomadic confederacy, we propose to individually address variables of material culture (grave structure, manner of internment, burial goods) and human remains (cranial and dental non-metric traits, diet, disease load) from sites throughout Mongolia and northern China. The dynamics apparent between these variables of the material remains may then help to inform us of social, economic and political dynamics in Eastern Inner Asia during the Early Iron.

Miller, D. Shane (University of Tennessee), Goodyear, Albert C. (South Carolina Institute of Archaeology and Anthropology) and Steffy, Kenn (South Carolina Institute of Archaeology and Anthropology)

[110] *Exploring Clovis Intra-Site Organization at the Topper Site, South Carolina (38AL23)*

The Topper Site (38AL23) in Allendale, South Carolina, has yielded a stratified, cultural sequence spanning approximately 13,500 calendar years and perhaps much more. In 2004, the hillside overlooking the Savannah River tested positive for Paleoindian-aged deposits. During the 2005 and 2006 seasons, a 4 x 16 meter block excavation was completed yielding numerous diagnostic Clovis lithics including typical point preforms, prismatic blades, and unifacial tools. The results of a lithic and spatial analysis from the block excavation will be presented in an initial attempt to determine how Clovis people may have used Topper based on intra-site organization.

Miller, Heather M.-L. (University of Toronto)

[117] *In Small Things Mistaken: Fired Clay Objects and Slags of the Indus Civilization*

Researchers have long been intrigued by the terracotta cakes and nodules of the Indus, offering a variety of suggestions for their functions, from heat retention in pottery kilns to sling ammunition. In spite of their ubiquity, however, very few studies of these objects have been undertaken, and they have frequently been confused with materials indicative of high-temperature firing. Some of the assumptions made about the functions of these nondescript objects have led to large-scale misunderstandings about the activities occurring at Indus sites. I untangle the diversity of object types involved and suggest some techniques for identifying associated activities.

Miller, Jim (James J Miller PhD LLC)*[71] Planning Clifton Heritage National Park*

Clifton Heritage Park on New Providence Island will be the first National Heritage Park of The Bahamas. Long recognized as the location of William Wyly's Clifton Plantation, the 200 acre property was preserved by an unprecedented expression of public and government support. This paper presents highlights of heritage and environmental planning for Clifton Heritage Authority incorporating public participation, resource evaluation and protection, resource interpretation, and conceptual design. Resources interpreted through trails and signage include a coastal Lucayan settlement, plantations of grantees John Wood and Lewis Johnston, and the standing structures of Wyly's slaves along with associated plantation buildings and walls.

Miller, Joseph (University of Missouri-Columbia)*[4] Bison Exploitation at the Dirt Lodge Village*

The exploitation of bison was central to the faunal economy of most protohistoric Great Plains cultures. While a great deal of research has focused on the utilization of Bison at kill sites, very little data has been generated on the exploitation and representation of Bison at village sites. The Dirt Lodge Village (39SP11) was a significant Yanktonai Sioux habitation site on the James River of eastern South Dakota. The analysis of a long term habitation site, like the Dirt Lodge, will allow a greater understanding of how the Yanktonai based their economy and subsistence on Bison.

Miller, Kevin [204] *see Houk, Brett***Miller, Mickey (University of North Texas) and Wolverton, Steve (University of North Texas)***[33] Did the Bow and Arrow Increase Foraging Efficiency for High and Low-Rank Taxa in North-Central Texas?*

The advent of the bow and arrow is often characterized as an important technological advancement during the Late Prehistoric in north-central Texas because it confers greater hunting efficiency. However, based on the number of taxa exploited, most researchers argue that subsistence changed little with a broad-spectrum hunting strategy being utilized during both the Late Archaic and the Late Prehistoric periods. This study takes a more detailed look at changes in foraging efficiency with the adoption of the bow and arrow by examining not only richness, but by investigating the possibility that high-ranked resources were harvested at a relatively higher rate.

Miller, Myles [61] *see Speakman, Robert J.***Miller, Naomi F. (University of Pennsylvania Museum) [86]** *Discussant***Miller, Naomi F. (University of Pennsylvania Museum) and Zeder, Melinda (National Museum of Natural History)***[217] From Food and Fuel to Farms and Flocks: Considering Context of Use in Reconstructing Ancient Agricultural Economies*

Some aspects of ancient economies are best studied at the level of site and phase rather than sample by sample. Controlling for context of use (remains of bones as food and seeds as fuel), we show that the subsistence economy at Gordion integrated wild and domesticated plants and animals in an archaeologically recognizable pattern. Proportions of bones of food animals and the ratio of seeds of wild plants to cereals vary according to periods when herding or farming were emphasized at Gordion (Early Iron Age to medieval times). Orientation toward farming was greatest at Middle Phrygian Gordion (King Midas's era).

Miller, Shane [110] *see Goodyear, Albert***Mills, Barbara (University of Arizona)***[131] Puebloan Migrations as Diasporic History*

Because of the intense amount of research on migration in the Southwest, we know a great deal about the social scale, intensity, distance, and directionality of past population movements. In this paper, I argue that Southwestern Puebloan migration histories are best

viewed within comparative diaspora theory. Diasporas are defined by (1) widespread depopulation, (2) movement into already settled areas, and (3) the construction and maintenance of memories of homelands. Reconsidering Puebloan migrations as diasporic history leads to a broader conceptualization of how large-scale migrations transformed local societies and how migration became such a fundamental part of Puebloan oral traditions.

Mills, Barbara (University of Arizona) [8] *Discussant*; [180] *see* Ferguson, T.J.; [39] *see* Fenn, Thomas

Mills, Peter (University of Hawaii, Hilo) and Lundblad, Steven (University of Hawaii, Hilo) [167] *Using Energy-Dispersive X-Ray Fluorescence (EDXRF) to Address Stone Tool Exchange Patterns in Hawaii*

The authors present the results of the first large-scale geochemical sampling of the Mauna Kea Adze Quarry, located between 9,000 and 12,500 feet in elevation and spanning more than seven square miles. The geochemistry of the quarry was defined by non-destructive analyses of 820 flakes and 47 geological samples using Energy Dispersive X-Ray Fluorescence (EDXRF). This database was then compared with EDXRF analyses of 300 basalt artifacts recovered from the Kahalu'u Rockshelter, a stratified site dated between the A.D. 1400s and A.D. 1700s in Kona, Hawaii on the slopes of Hualalai Volcano. Results indicate that use of Mauna Kea Adze Quarry material in the rockshelter correlate with three periods of most intensive use (chi square $p < .005$). These findings have implications regarding the role of chiefly sponsorship and craft specialization in Hawaiian lithic procurement strategies, and illuminate the benefits of large-scale EDXRF analyses in addressing such issues.

Mills, Peter [51] *see* Naleimaile, Sean

Milner, Ehren (Bournemouth University), Russell, Bronwen (Bournemouth University) and Darvill, Timothy (Bournemouth University)

[210] *Tracking Projects and Sourcing Grey Literature: The Work of the Archaeological Investigations Project in England*

Between 1990 and 2004 more than 50,000 archaeological interventions took place in England. Most resulted in client reports with a limited print-run and restricted distribution; grey literature. The Archaeological Investigations Project, funded by English Heritage, was established in 1995 to record archaeological investigations and to catalogue work carried out. Data is collected by a team of researchers who visit archaeology offices and archaeological contractors annually. Published gazetteers and an on-line index is now available to guide researchers towards relevant material. A complementary on-line archive of reports is being established by the Archaeology Data Service that will improve physical access.

Minchak, Scott (Texas A&M University; LaPorta & Associates)

[89] *Microwear Analysis of Blades from the Clovis Component at the Gault Site, Texas*

Texas A&M University excavations within the Lindsey Pit revealed two distinct sediment layers containing Clovis artifacts, units 3a (ponded clay) and 3b (overbank clay/silt). Within these layers, excavators uncovered over 400 blade and blade fragments made from locally available Edwards chert. Microwear analysis demonstrated that: (1) Clovis blades were used on site; (2) differences exist between the blades from units 3a and 3b; and (3) most blades that exhibit usewear show little polish, suggesting ephemeral use. This study also illustrates broader implications for microwear and quarry/workshop research and analysis.

Minchak, Scott (Texas A&M University; LaPorta & Associates) [121] *Discussant*

Minchak, Scott A. [87] *see* Conrow, Michael

Mink, Philip [163] *see* Sullivan, Alan

Minovi, Niloufar [98] *see* Muranaka, Therese

Miroff, Laurie [142] *see* Wilson, Jeremy

Misarti, Nicole (Institute of Marine Scienc-UAF), Finney, Bruce (Institute of Marine Science) and Maschner, Herbert (Idaho State University)

[128] *Paleoenvironmental Records of Sanak Island, AK*

Carbon and nitrogen isotopes of marine mammal and fish bone recovered from archaeological middens spanning 4000 years were analyzed to examine temporal changes in trophic relationships and ecosystem fluctuations of surrounding coastal waters. Species derive from both open-ocean and nearshore communities. Lake sediment cores were used to construct high-resolution paleoenvironmental records employing multi-proxy analyses of magnetic susceptibility, organic matter, biogenic silica, stable isotopes, and pollen. Lacustrine sedimentation began ~15,500 BP and is impacted by numerous volcanic events. Pollen records clearly indicate Holocene climatic influences. Together these two data sets aid in reconstructing terrestrial and marine paleoenvironments of Sanak Island, Alaska.

Miss, Christian [155] see Hamilton, Fran

Mistak, Sarah (Mississippi State University)

[81] *Generalists or Specialists? Exploring the Stereotype of Female Graduate Students*

This paper examines generalist versus specialist approaches to archaeology and how these approaches affect female graduate students. There are pressures at work in traditional programs that lead to females being channeled into specialist sub-fields (e.g., paleoethnobotany) rather than being generalists. Programs with a generalist approach produce students, even students in a specialty like zooarchaeology, to be generalists first in both theory and practice. This paper presents some thought as to why the specialist stereotype exists including family issues and fieldwork concerns and provides personal insight on the influence of a generalist course of study.

Mitchell, Mark (University of Colorado) and Scheiber, Laura (Indiana University)

[112] *Crossing the Divide: Archaeology as Indigenous History*

Since the Columbian Quincentennial in 1992, archaeologists have made steady progress in breaking down institutional, methodological, and epistemological barriers to the study of interaction between Europeans and Native North Americans during the last 500 years. However, theoretical obstacles remain. Many of these can be traced to colonial-period discourses about the differences between indigenous and European societies that were accepted during the nineteenth and early twentieth centuries by the fledgling field of anthropology. Archaeologists are well positioned to challenge these ideas, but to do so they will need to rethink many of the key concepts they use to study the past.

Mitchell, Patricia (Greystone, an Arcadis Company)

[49] *The Pathological Conditions of a Royal Lineage from the Classic Period Maya in Belize*

Fourteen burial deposits from the Protoclassic through the Terminal Classic periods (A.D. 200-950) at Buenavista del Cayo and Cahal Pech in Belize were examined in detail. Several interesting observations were made during the course of this project that included evidence of a short life span of the Maya elite; common afflictions like osteoarthritis, dental decay, and healed fractures; conditions not commonly associated with the Maya such as gout, and possibly Madelung's Deformity; as well as the high incidence of porotic hyperostosis at Cahal Pech, and its absence at Buenavista.

Miyamoto, Kazuo (Kyushu University)

[20] *The Spread of Early Agriculture to Far Eastern Russia*

The latest archaeological evidence through the Russian and Japanese collaborated excavations in Far Eastern Russia indicates that the timing of the spread of agriculture to the southern part of Far Eastern Russia dates c. 3000 BC. I will explain the development process of early agriculture in North-Eastern Asia and evaluate the meaning of agricultural spread to Far Eastern Russia.

Mock, Shirley Boteler (University of Texas, San Antonio; Institute of Texan Culture)

[189] *Traders of the Caribbean*

As political dynasties waned in the Late to Terminal Classic Maya Lowlands, trading sites flourished along coastal lagoons lining the north coast of Belize. The sites, rooted in optimal ecological niches and covarying in size, specialized in the manufacture and/or transport of ceramics, salt, salted products, and shell tools and ornaments. These commercial enterprises

involved complex economic, social, and political processes that go beyond the definition of "trade" as a cultural phenomenon. Investigations of multi-sites in this coastal arena expand our knowledge of the movement of resources and permit the expansion of more specific trade models.

Moe, Jeanne (Project Archaeology, Bureau of Land Management) [136] *Discussant*

Moecher, David [74] *see Jaime-Riveron, Olaf*

Mohanty, R.K. [135] *see Smith, Monica L.*

Molist, Miquel [68] *see Guerrero, Emma*

Molto, J.E. [3] *see Wheeler, Sandra*

Molyneaux, Brian Leigh [12] *Discussant*

Monaghan, G. William [156] *see Lovis, William*

Monigal, Katherine (Texas Christian University)

[23] *The Leptolithization of the Levantine Paleolithic*

Despite more than a century of Levantine research, the word "blade" was not used in conjunction with the pre-Upper Paleolithic until recently. The seemingly straightforward significance of the term "blade" hides connotations not attached to equally prosaic lithic terms: including unique invention by anatomically modern humans, cultural advancement, and effectiveness in the consumption of raw materials. More than just a label (variously defined and inconsistently employed) one cannot disengage its definition from the context of prehistoric research and paradigmatic polarizations. This communication will examine the origin of the word "blade" against the backdrop of the Levantine leptolithic tradition.

Monnat, Jennifer (Texas Tech University)

[47] *Salt Production in the Mid-Nineteenth Century on St. Charles Bay, Texas*

Site 41AS95 represents a salt production facility that operated between the 1830's and the 1860's near the town of Lamar, Texas. Salt was an extremely valuable commodity during these decades, and this salt works may have provided a necessary staple for growing communities in the Republic of Texas and for Confederate garrisons during the Civil War. Survey and excavation completed in 2005 and 2006 provide new data that helps to illuminate the processes used to produce salt as well as the function of the salt works in the community of Lamar and on the Texas coast.

Monroe, J. Cameron (UC Santa Cruz)

[144] *In the Belly of Dan: Space and the Politics of Ethnicity in Precolonial Dahomey*

Dahomey emerged as a small polity in coastal West Africa in the seventeenth century AD. As Dahomey became a central player in the Atlantic slave trade, it extended authority over many neighboring Huedan, Aja, Mahi and Yoruba communities. This resulted in the massive relocation of people into and within the kingdom, resulting in ethnically heterogeneous urban communities. In Dahomey space, ethnicity, and elite power strategies were closely intertwined. This paper explores the nature of multi-ethnic towns in Dahomey, and the spatial strategies employed by elite to impose political order: from the construction of palaces, to the design of urban communities.

Monterroso, Mirza (Universidad de San Carlos) and Woodfill, Brent (Vanderbilt University)

[26] *Trade, Transit, and Pilgrimage in the Alta Verapaz Land Trade and Transport Route*

Recent research in northern Verapaz in shrines and associated settlements revealed the shifting of the highland-lowland cultural border, the changing utilization of the great western trade route, and the effects of eventual control by the Late Classic kingdom of Cancun. The region is largely unoccupied before AD 600 but shrines were used by distant highland and lowland populations. A large population influx from the highlands in the Late Classic shifted the border north and the new populations began to control ritual activity and perhaps the route itself.

Monterroso, Mirza [26] *see Forne, Melanie*

Monterroso-Rosado, Enrique (Mirador Basin Project / FARES) and Monterroso-Tun, Enrique (Mirador Basin Project / FARES)

[67] *Conservacion de Estucos en El Mirador, Peten, Guatemala*

Los relieves de estuco conservados en el Mirador establecen uno de los mejores ejemplos de decoracion arquitectonica del periodo preclasico en el area Maya. Son significativos desde la perspectiva cientifica, historica, y estetica. Se examinaron los resultados obtenidos, evaluando metodologias y materiales empleados, enfatizando los impactos negativos y positivos obtenidos en las diversas intervenciones. Se disenaron y limitaron las intervenciones Para no comprometer la autenticidad e integridad de los valores y atributos que proporcionan caracter de importancia al Mirador.

Monterroso-Tun, Enrique [67] *see Monterroso-Rosado, Enrique*

Mooney, James [104] *see Newlan, Ralph*

Moore, Andrew (RIT), Mendusic, Marko (Ministry of Culture, Croatia), Zaninovic, Josko (Drnis Museum), Legge, Anthony (University of Cambridge) and Reed, Kelly (Institute of Archaeology, University College, London)

[145] *The Impact of Early Farming on the Mediterranean Landscape: Preliminary Results from the Investigation of Two Neolithic Villages in Dalmatia*

Excavations at two village sites near the Dalmatian coast, Danilo and Pokrovnik, have yielded significant samples of plant remains and animals bones that provide evidence for their economies during the Early and Middle Neolithic. Studies of the modern landscape, including vegetation, geomorphology and site catchment, afford points of departure for interpreting the Neolithic evidence. Interviews with local farmers yield insights on traditional agricultural practices that illuminate ecological factors operating in the past and the present. The research demonstrates the necessity of employing a variety of field studies to understand the impact of the inception of farming.

Moore, Andrew [39] *see Fadem, Cynthia*

Moore, Barbara [39] *see Fadem, Cynthia*

Moore, David (Warren Wilson College), Beck, Robin (University of Oklahoma) and Rodning, Christopher (Tulane University)

[19] *Native Resistance to Spanish Incursions in La Florida: The Juan Pardo Expeditions of 1566-1568*

Spanish accounts of 16th century expeditions in the American Southeast describe a variety of indigenous responses ranging from cooperation to large scale conflict. The native town of Joara, in western North Carolina, represents a locale in which the Spanish expedition under Juan Pardo experienced the full range of indigenous responses. Investigations at the Berry site appear to confirm Spanish accounts suggesting that Joarans were initially cooperative in meeting Pardo's demands for assistance in the construction of Fort San Juan (1567), but eighteen months later they destroyed this Colonial venture in actions analogous to the better known Pueblo Revolt of 1680.

Moore, Lora [94] *see Bender, Susan*

Moore, Roger (Moore Archeological Consulting, Inc.)

[80] *From Paper Maps to GIS: Twenty-Five Years of Spatial Analysis for Archeological Purposes in the City of Galveston*

Excavations at Ashton Villa house in Galveston introduced a uniquely urban site formation process: raising the ground surface over large areas by placement of imported fill. This fill was introduced as part of the engineering response to the 1900 Hurricane. The fill mantled the natural surface of the city with between a few inches to many feet of sand, a process with decided archeological consequences. The author has examined these consequences and the predictive utility of documentary information since the early 1980s. He has rolled over this early work into the digital age via GIS, and integrated new digital information.

Moore, Roger A. (Chaco Culture National Historical Park) [8] *Discussant*

Moore, Scotty (Northland Research, Inc. / University of Washington) and Dosh, Steven (Northland Research, Inc.)

[122] *Landscape Geomorphology and Lithic Resource Procurement within the Marine Corps Air Ground Combat Center, Twentynine Palms, California*

The Marine Corps Air Ground Combat Center (MCAGCC) occupies approximately 2,400 square kilometers within the Mojave Desert province of southern California. Cenozoic plutonic and Mesozoic volcanic outcrops dominate the local mountain ranges. These formations have provided high quality lithic raw material, especially cryptocrystalline quartz, to human populations for the last 11,000 years. Over the past 10 years, Northland Research, Inc. has catalogued lithic procurement locations, chipping stations, and other activity areas related to raw material exploitation within the region for MCAGCC. This poster presents the first synthetic attempt to link regional landscape geomorphology with lithic resource distributions within the area.

Mora, Claudia [86] *see Horn, Sally*

Moragne, Steven (SUNY-Albany)

[170] *Public Outreach and Collectors: An Example from the Pethick Site*

Archaeology needs the public to survive but at times archaeologists have been hesitant to interact with their most important audience out of concern that it could lead to an increase in the looting and destruction of sites. With the acceleration of other causes of site destruction, such as environmental change and development, archaeologists must engage this issue and find ways to encourage site preservation. This purpose of this paper is to outline one possible method for engaging with both the public and collectors in a constructive manner and show how it was implemented at the Pethick Site.

Morales-Aguilar, Carlos (Universidad de San Carlos, Guatemala / Mirador Basin Project), Hansen, Richard D. (Idaho State University / FARES), Morales-Lopez, Abel (Universidad Autónoma de Campeche, Mexico) and Mauricio, Douglas (Mirador Basin Project / FARES)

[35] *Patrones de Asentamiento de El Mirador, Peten durante los periodos Preclásico y Clásico Tardío*

El Mirador alcanzó su apogeo durante el periodo Preclásico Tardío con arquitectura mayor. El patrón de asentamiento de El Mirador ha indicado datos relacionados con el sistema hidráulico y agrícola del sitio, especialmente en la periferia y en áreas adyacentes a los bajos. El análisis de las variaciones en la arquitectura y la densidad de estructuras dentro del área de El Mirador se deben a las ocupaciones ocurridas en el Preclásico Tardío y Clásico Tardío, dando una cronología del patrón de asentamiento de la región maya.

Morales-Guos, Paulino I. (Mirador Basin Project / FARES), Lopez, Francisco (Mirador Basin Project / FARES) and Velasquez, Juan Luis (Mirador Basin Project / FARES)

[35] *Transformacion Arquitectonica y Funcional del Preclasico al Clasico Tardio: El Caso de la Danta, el Mirador, Peten, Guatemala*

Investigaciones de la pirámide La Danta han revelado evidencias de construcción y ocupación que se fechan para el Preclásico Tardío y el Clásico Tardío Terminal. Las construcciones masivas reflejan el poder alcanzado por los gobernantes Preclásicos. La primera ocupación concluye con el abandono del sitio, mientras la segunda fue la transformación de estructuras ceremoniales en áreas de habitación domestica. Este fenómeno es comparable con otras ciudades prehispánicas y se trata de la dinámica del desarrollo temprano del sitio y el abandono y reocupación de conjuntos arquitectónicos monumentales.

Morales-Lopez, Abel [35] *see Morales-Aguilar, Carlos*

Moran, Kimberlee (Forensic Outreach)

[102] *Forensic Archaeologist or Crime Scene Investigator?*

The excavation of an archaeological site in many ways mimics that of crime scene examination. A forensic archaeologist acts in the dual role of outside expert and crime scene investigator when excavating a clandestine grave as part of a criminal investigation. As such, it

is beneficial for the forensic archaeologist to have completed awareness training in a number of forensic fields. Are current degree programmes meaning this need? If not, in what forensic techniques should a forensic archaeologist be trained to ensure optimal performance in the field?

Moratto, Michael J. [213] *Discussant*

Moreno-Cortes, Jose E. [85] *see Wells, E. Christian*

Morett, Luis [206] *see Frederick, Charles*

Morett Alatorre, Luis [145] *see Borejsza, Aleksander*

Morgan, Christopher (California State University, Stanislaus)

[56] *Environmental Imperatives Redux: Rethinking Late Holocene Climate Change and Its Effect on Sociocultural Evolution*

The Western Mono migrated to the western slope of the Sierra Nevada, California, displacing more sedentary groups some 600 years ago. They did so during a shift to Little Ice Age conditions, a period typically characterized as one of environmental ameliorization. Recent research, however, indicates these conditions increased the temporal and spatial variability of resource distribution. The Mono averaged this variability with dispersed food caching, resource transport, and mobility, behaviors conferring them a competitive advantage over other groups. This research thus indicates that conditions often thought of as benign can be stressing and selective within the context of cultural evolution.

Morgan, Colleen (University of California, Berkeley)

[111] *Geohacking, Memory Maps, Spatialized Wikis, and Landscape Archaeology*

As archaeologists we know that people have long demonstrated an interest in inscribing the landscape in highly visible ways. What happens when the inscription is explicitly invisible? Geohacking, by definition, is the public reclamation of place by alternate inscription, made possible by the increased availability of GPS-enabled devices. This creates a highly personalized, invisible geographical overlay to which archaeologists can add temporal depth. In my paper I discuss the new developments in geospatial technology that allow archaeologists and an active, engaged public to co-create the modern and historical landscape.

Morgan, Molly (Vanderbilt University)

[188] *Advances in Formative Period Household Archaeology in Mesoamerica*

Household archaeology is an important means for social archaeologists to create dynamic interpretations of heterogeneous household groups, offering a peopled perspective of the past that brings us closer to individuals and their practices. Especially in the investigation of small-scale societies, household studies further the explanation of communities varying in composition and configuration. The focus on the domestic zone has been widely employed across Mesoamerica, and this paper explores how it has more recently been used to make important advances in the archaeology of the Formative period, contributing to our understanding of the internal community dynamics involved in the emergence of social complexity.

Morgan, Vera (Cultural Resource Analysts, Inc.) and Barber, Jennifer (Cultural Resource Analysts, Inc)

[6] *Historic and Prehistoric Occupations near the Confluence of the Great Miami and Ohio Rivers in Lawrenceburg, Indiana*

Phase I and phase III investigations between 2004 to 2006 in Lawrenceburg, Indiana, documented 20 residential sites and nine new localities of a known extensive prehistoric site on a terrace above the confluence of the Ohio and Great Miami rivers. The 13 historical residences, first occupied from the late 1840s/1850s primarily by German immigrants, have structural remains that included additions and modifications which occurred into the twentieth century. The prehistoric localities at the Keller Site (12D509) represent short-term processing locations that date from as early as 4470 ± 40 BP (Beta 216180) to 1070 ± 40 BP (Beta 216178).

Moriarty, Matthew (Tulane University)

[189] *Inland Trade and Commensal Politics: a Perspective on 'Visiting Trade Institutions' from Trinidad de Nosotros, El Petén, Guatemala*

The operation of long-distance trade networks requires both physical facilities and elaborate social institutions. Recent investigations at Trinidad de Nosotros, a small site on the north shore of Guatemala's Lake Petén Itzá, have delineated a complex set of port facilities and extensive evidence for long-distance trade. These investigations have also identified the residues of lavish, ballgame-related feasting. This paper explores the potential linkages between Trinidad's function as a minor trading center and its role as host to large-scale commensal events.

Mormontoy Atayupanqui, Alfredo (INC -Cusco)

[9] *La Ingeniería Constructiva de Machupicchu*

La cancha inca es uno de los elementos que caracterizan a la edificación inca. Para los incas, uno de los aspectos principales fue la planificación, a partir de ello poder edificar la ciudad. Primero tuvieron un conocimiento cabal de su geografía, por que escogieron y definieron el lugar exacto, donde se construyó la ciudad, es decir la relación que debería tener la ciudad con el sol y sus deidades las montañas sagradas: los apus. Consideramos que este factor fue el factor determinante para escoger el sitio donde esta asentado Machupicchu.

Morris, Ellen (Columbia University)

[69] *(Un)Dying Loyalty: Meditations on Retainer Sacrifice*

The ritualized death of the captive, the virgin, or the scapegoat to thank, nourish and/or appease the gods is much theorized. Retainer sacrifice is less often so, save as a particularly dramatic example of conspicuous consumption or "waste" in early states. The socially sanctioned violence perpetrated on the intimates and underlings of a ruling elite, however, reveals the radically changing notions of divine right, rank, and property that together actively enabled the creation of the state. This paper employs diverse evidence to explore the dialectics between the elites who instituted the practice and the communities that—for a time at least—condoned it.

Morris, Ian (Stanford University)

[69] *Greeks Bearing Arms: Civilization and the Decline of Everyday Violence, 700- 400 BCE*

In ancient Greece weapons almost completely disappeared from burials, individual dedications at sanctuaries, and everyday scenes on painted vases between 700 and 550 BCE. Literary sources tell us that by 400 BCE bearing arms and resolving disputes through violence were both seen as primitive. This paper links the abandonment of weapons and self-help to three other processes: the emergence of the new persona of the male citizen in an egalitarian city-state; the movement of armed combat to increasingly ritualized inter-state warfare; and a new idea of "Greek" civilization, defined in part against arbitrary violence.

Morris, Ian (Stanford University) [219] Discussant

Morris, Margaret [129] see Cox, Shanna; [21] see Salisbury, Roderick

Morris, Zoe (Louisiana State University) and McKillop, Heather (Louisiana State University)

[57] *Demographics of Two Coastal Maya Sites: The burials from Moho Cay and Wild Cane Cay, Belize*

The burials from two island sites off the coast of Belize are compared and contrasted. Burials, including single and multiple individuals, were associated with houses made of perishable materials at Moho Cay. Radiocarbon and ceramic analyses provide a late Early Classic to early Late Classic age for the interments. Burials at Wild Cane Cay were recovered associated with structures with coral rock foundations and perishable superstructures, dated to the Postclassic. Age, sex, and health status, as well as cranial and dental modification, are summarized for the two island communities.

Morrison, Alex E. (University of Hawaii, Manoa)

[195] *Unifying Zooarchaeology with Broader Theoretical Issues in Island Archaeology: Case Studies from Polynesia*

Zooarchaeological research in island environmental contexts often focus on documenting

trends in subsistence, human impacts to natural ecosystems, and the effects of environmental change on the abundance of fauna. While all of these research agendas are critical for understanding spatial and temporal variability in subsistence patterns, zooarchaeological research also offers explanatory power when dealing with broader research questions, such as the development of cultural diversification, isolation, and spatial organization. Drawing upon zooarchaeological research on marine fauna from Samoa, Fiji, and Hawaii, I demonstrate how zooarchaeology can aid in the development of theoretically derived hypotheses which can be linked to additional issues in island archaeology.

Morrison, Kathleen (University of Chicago)

[52] *The Impact of Big Dams: Archaeological Perspectives on a Contemporary Debate*

Across Asia, large dam projects have come under attack as ecological and social disasters. In India, well-organized protests have failed to stop the construction of new dams and planning of many more. Are the protesters right? Do the costs of reservoirs outweigh their benefits? If so, why are politicians so enthusiastic about such projects? Do traditional systems of irrigation provide viable alternatives? I address these questions against the backdrop of historical, archaeological, and paleoenvironmental analysis of southern Indian reservoirs and irrigation systems, research that may shed some light on contemporary development debates as well as elucidate patterns of long-term change.

Morrison, Kathleen (University of Chicago) [145] Discussant; [64] see Rozo, Jennifer

Morrow, Juliet (Arkansas Archeological Survey)

[49] *Atlatl Knoll: A Late Archaic Cemetery in Northeast Arkansas*

Dated to circa 4500 B.P., Atlatl Knoll (3CY455) was discovered inadvertently during precision leveling operations in Clay County, Arkansas. The site is interpreted as a small family cemetery. Preliminary osteological analysis suggests that one higher status individual, based on the presence of grave goods, was an elderly female. Associated grave goods suggest the possibility of a two-tiered social hierarchy based on achieved status.

Morrow, Juliet [110] see Fiedel, Stuart; [39] see Taylor, Robert

Mortensen, Lena (University of Toronto at Scarborough) [85] Discussant

Mortenson, Helen [123] see Martin, Cheryl

Morton, Shawn (Department of Archaeology, University of Calgary)

[16] *A Path to Power: The Socio-Political Purpose of the Naachtun Processional Route*

At its height in the Late Classic period the site plan of Naachtun reflected nearly a millennium of growth and change. By this time the focus of Naachtun's growth had long since shifted away from its Late Preclassic epicentre in Group C to Group B, half a kilometre to the east. And yet, in this plan a formal path was established and maintained along a causeway and through a series of conspicuously marked plazas that integrated the whole of the site's architectural epicentre and served as the stage for a spectacular statement of power.

Mosher, Matthew (University of Toronto)

[202] *The Ancient Minanhá Community*

Recently the Social Archaeology Research Program (SARP) has begun investigations aimed at broadening our understanding of the non-elite components of the ancient Maya polity of Minanhá, Belize. This paper reports on one aspect of these investigations: the excavation of several lower-strata residential groups. In addition to differences in material remains and construction methods from groups nearer the site's epicentre, preliminary analyses indicate that the ancient Minanhá community enjoyed a longevity not shared by the royal court itself. This has important implications for how archaeologists conceive of community identity, and of the role of the non-elite in processes of political transformation.

Moss, Joshua [129] see Solometo, Julie

Moss, Madonna (University of Oregon)

[22] *Islands Coming Out of Concealment: Traveling across Dixon Entrance between Canada and the United States*

The Kaigani Haida migrated from their homeland on Haida Gwaii (Queen Charlotte Islands, Canada) north to the Prince of Wales Archipelago of southeast Alaska during the AD 1700s.

The Kaigani canoed across a minimum of 50 km to cross the open waters of Dixon Entrance. Since Native people have lived in this region for over 10,000 years, earlier seafarers made comparable journeys. This paper explores the logistics and oral history of late prehistoric crossings along with sea level history to better understand the conditions faced by the earliest people who traveled these waters of the northern Northwest Coast.

Motsinger, Thomas [39] *see* Lundin, Richard

Mountjoy, Joseph V. (University of North Carolina at Greensboro; University of Guadalajara)

[74] *Jadete and Other Stone Jewelry from Middle Formative Burials in the Mascota Valley of Jalisco, Mexico*

Archaeological excavations of nearly 50 tombs in two Middle Formative cemeteries dating ca. 800 B.C. in the Mascota Valley of Jalisco have resulted in the discovery of over 100 items of stone jewelry, approximately 50 of which are of emerald-green jadedite from the Motagua Valley source in Guatemala. It is believed that the jadedite jewelry, arrived in the Mascota area via Pacific coastal transport in an exchange system that reached as far south as northwestern South America, and that also introduced iron pyrite, rock crystal and other items of jewelry into the Mascota valley, all in exchange for local plants with medicinal properties.

Mowrer, Kathy [196] *see* Perry, Elizabeth

Moya, Jorge [65] *see* Rivera, Mario

Moyer, Alexandra (University of Minnesota)

[12] *Through A Glass Darkly: British La Tene Mirrors in Context*

It is commonly believed that ornately decorated bronze mirrors from late La Tène Britain were deposited as grave goods in elite female burials. However, this analysis reveals that only a third of the mirrors are associated with burials, and the remainder were found in varied contexts. In every mirror burial, determination of biological sex was inconclusive. It is thus argued here that while the traditional interpretation of the mirrors finds little support from archaeological evidence, they are productively viewed as evidence of changing attitudes toward the individual human body in Iron Age Britain.

Moyes, Holley (University at Buffalo), Prufer, Keith (Wichita State University) and Myers, Bethany (Southern Illinois University)

[108] *The Canoe in the Cave: A Case for a Burial Shrine in Southern Belize*

A survey of caves surrounding the site of Uxbenká in southern Belize has discovered a site containing a formal masonry tomb and the fractured remains of a wooden canoe. The formal architectural qualities of the site suggest that this was a burial shrine that was visited on particular occasions. This behavior is compared with examples from surface contexts in which sealed tombs are reopened to conduct ceremonial activities.

Moyes, Holley [202] *see* Schwarcz, Henry

Mudar, Karen [155] *see* McManamon, Francis

Mueller, Jenn

[90] *Consumptive and Ritual Resources in a Great House Community: Analysis of the Cox Ranch Pueblo Faunal Assemblage*

The Chacoan Great House community of Cox Ranch Pueblo had between 200 and 500 individuals. A characterization of the relative inequality, based on differential access to consumptive and ritual resources, has important implications for general theories about Chaco. Faunal analysis on the excavated remains from Great House and roomblock contexts illustrate that residents largely practiced equality of consumptive access to food and ritual resources. However, subtle evidence for feasting, found only in Great House contexts, suggests that other means of public consumptive practice may have impacted access to social power by residents at Cox Ranch Pueblo.

Mueller, Raymond (Richard Stockton College of NJ) [139] *Discussant*

Mueller, Raymond (Richard Stockton College of NJ) and Joyce, Arthur

[15] *Environmental Degradation and Erosion Related to Demographic Changes: Nochixtlán Valley, Oaxaca, Mexico*

Extensive and severe erosion seen in the Nochixtlán Valley of Oaxaca, Mexico is often attributed to European agricultural practices. Our research indicates that environmental degradation and subsequent erosion was related to demographic changes occurring much earlier during the Formative and Classic Periods. Population increases during times of urban growth led to an increase in agricultural land and additional hillside land clearance. Subsequent erosion resulted in valley alluviation and the burial of existing landscapes. Recent incision revealed these landscapes in the form of paleosols which were radiocarbon dated and showed most of the erosion occurred prior to Spanish occupation.

Mullen, Patrick (University of Wyoming), Huckell, Bruce (University of New Mexico) and Sharp, Zach (University of New Mexico)

[62] *Isotopic Reconstruction of Younger Dryas Grass Flora in the Middle Rio Grande Valley*

This study compares stable-carbon isotope samples from tooth enamel of ancient bison from the Boca Negra Wash Folsom site to modern bison and evaluates differences between the climate of the Younger Dryas and the modern climate in the Middle Rio Grande Valley. Results show a strong C4 grass signal for the Younger Dryas, contrary to the expected results, because all other data indicate that the Younger Dryas was a time of significantly cooler climate that should favor C3 grasses. This data informs us of potential behavioral implications for Folsom people and could predict effects of rapid climate change as well.

Mulligan, Connie [37] see Kimura, Birgitta

Mullins, Deborah [71] see Keegan, William

Mulrooney, Mara (University of Auckland)

[106] *Spatial Patterning and Social Complexity on Rapa Nui (Easter Island): Assessing Settlement and Land Use in Hanga Ho'ou*

The archaeological landscape on Rapa Nui contains a palimpsest of surface archaeological features, reflecting a long history of settlement and land use. This project utilizes theoretical tenets from evolutionary ecology to develop a diachronic model for changing social complexity. The model shows that changing cooperative and competitive behavioural strategies shaped by environmental constraints were employed by individuals, resulting in social stratification and political and ideological integration. This paper presents preliminary results of a seriation and GIS-based spatial analysis of features in a 6 km² project area. A temporal model for settlement is presented, which is currently being tested using absolute dating techniques.

Munoz, Cynthia (Center for Archaeological Research) and Kemp, Leonard (Center for Archaeological Research)

[113] *Creating a Geospatial Data Management System for Archaeological Sites*

At the request of the Texas National Guard (TXANG), the Center for Archaeological Research developed an interactive, searchable, database for the management of cultural resources on TXANG facilities. The integration of Microsoft Access and ArcGIS programs provides current information on the status of archaeological resources, including links to collection inventories, photographs, and maps correlated to geospatial data. This database is easily updated, and can be adapted to explore a variety of management as well as research issues.

Munoz, Rene [189] see Golden, Charles

Munoz R., Lizette [83] see Green, Ulrike M.

Munro, Natalie [217] see Smith, Alexia

Munson, Cheryl Ann (Indiana University), McCullough, Robert G. (Indiana University - Purdue University, Fort Wayne) and Stafford, C. Russell (Indiana State University)

[34] *On The Northeastern Mississippian Frontier: Investigations at the Prather Site (12CL4), Clark County, Indiana*

The Prather site (Clark County, Indiana) is a small, early Mississippian mound center located

in the central Ohio Valley. This little known site marks the northeastern frontier of Mississippian settlement. Two seasons of survey were made to identify the range and distribution of artifacts, site size, integrity, and structure. Artifact distributions combined with soil profiles indicate a central plaza surrounded by four mounds, a core residential area, a possible palisade wall, and peripheral Mississippian activity areas or habitations. Geophysical surveys in select areas identified probable features for excavated samples. Geoarchaeological study examined the structure and dating of one of the mounds.

Munson, Marit K (Trent University)

[214] *Structured Space, Restricted Use: Examining the Social Aspects of Rock Art Production in the Rio Grande Valley, AD 1325-1580*

This paper considers the relationship between physical space and the social context of rock art in the Rio Grande Valley of New Mexico, examining the use of space as evidence of the nature of the rock art's artists and audiences. Such research requires incorporating multiple scales of data, from the placement of a single image to the proximity of panels relative to habitation sites. In particular, I argue that understanding the social aspects of rock art requires critical evaluation of the many ways in which space can be used to restrict or provide access, whether visual, physical, or aural.

Munson, Marit K. [125] see Head, Genevieve N.

Munson, Patrick [10] see Bush, Leslie

Murakami, Tatsuya (Arizona State University), Vonarx, AJ (University of Arizona) and Thibodeau, Alyson (University of Arizona)

[194] *Inter-Valley Relations in the Formative to Classic Transition: A Preliminary Analysis of Architectural Technology at Teotihuacan*

Recent excavations at the Teotihuacan's Moon Pyramid have yielded substantial data on the chronological sequence of seven superimposed pyramids. This paper presents a preliminary analysis of diachronic changes in construction materials and techniques using construction fill, facing stone, mortar, and lime plaster. We explore implications for 1) Teotihuacan's relation with the Puebla-Tlaxcala region, where talud-tablero style originated, specifically the timing and nature of this interaction, and 2) the imperial expansion of the Teotihuacan state to the adjacent valleys, specifically to the Tula region, where limestone was likely quarried by Teotihuacan colonizers to produce lime in the Classic period.

Muranaka, Therese (California State Parks), Hernandez, Cynthia (California State Parks) and Minovi, Niloufar (California State Parks)

[98] *The Second International Border Fence: Locations and Logistics*

Border Field State Park contains two large village sites, CA-SDI-222 (7300 years B.P.) and CA-SDI-4281 (4500 years B.P.) which are threatened by the second border fence at San Diego-Tijuana. With an 1851 U.S. Boundary Commission monument, and a WWII military base, the park is to be intersected by the second border fence to be required by Homeland Security. Comparison of the archaeological site records with the fence routes considered, and with the staging, construction and finished footprint maps, provides background on park service negotiations to change routes and alter impacts.

Murata, Satoru (Boston University)

[14] *Mounds of Mystery: Explaining the Function and Location of a Maya Site in the Mangrove Swamp of Belize, Central America*

Ever since Junius Bird was shown a mound among the mangrove swamp near Belize City in 1931, archaeologists and the public alike have been puzzling over the location and function of the site, which we call Wits Cah Ak'al, comprised of multiple large earthen mounds. Since 2005, a team led by Patricia A. McAnany has been conducting the first-ever intensive research there and have accumulated evidence suggesting it was one of many Classic Period Maya salters now known along the Caribbean coast of Belize. Survey in 2005/2006 and excavation this spring are providing the first solid answers to the puzzle.

Murphy, Joanne (University of Akron)

[133] *It's All in the Details: Mortuary Dynamics in South-Central Pre-and Proto-Palatial Crete*

This study combines current mortuary theories with a detailed examination of the differences

among the tombs in south-central Crete during the Early and Middle Bronze Age periods. In contrast to previous views of these tombs as a monolithic entity, which stressed the similarities among the tombs and related communities, this paper emphasizes the architectural, artifactual, and chronological differences among them. This study reveals the dynamic choices of individual communities in the use of similar burial forms and underlines the subtle but real variations in the functions of the tombs and how they relate to the nuanced micro-ideologies of the region.

Murphy, Melissa (Bryn Mawr College), Goycochea Díaz, Elena (Puruchuco-Huaquerones Project) and Cock, Guillermo (Puruchuco-Huaquerones Project)

[19] *Inca Resistance to Spanish Colonization: Violent Uprising and Nonviolent Resistance at Puruchuco-Huaquerones*

With bioarchaeological data from the Inca cemetery (circa 1450-1560) of Puruchuco-Huaquerones, this paper explores how one community engaged in both violent and non-violent tactics to resist Spanish colonization and domination on the central coast of Peru. Atypical patterns of trauma combined with a high frequency of perimortem injuries indicate that individuals from Puruchuco-Huaquerones engaged in violent conflict and challenge written sources that deny the participation of communities from the central coast in violent uprising against the Spanish. These data also illuminate how these communities resisted the extirpation campaigns directed at traditional Andean mortuary practices and ancestor worship.

Murr, Priscilla

[154] *Painted Indian Cave:(41BC1): A Central Texas Ritual Site*

41BC1 is one of the rare rock art sites found on the Edwards Plateau. The setting was probably viewed as having supernatural importance, being not just a cave but also a cave alongside rapids whose sound is non-stop. Around 750 BP pictographs were executed that were inspired by the appearance of bison in central Texas. The presence of bison led to significant changes in the native cultures possibly causing both stress and apprehension or conversely elation and joy because bison is a highly valued food source. In either case, rituals held in the cave would be a means of expressing and containing such emotions.

Murray, Mary Anne [217] see Redding, Richard

Murray, Matthew (University of Mississippi)

[11] *Landscapes of Ancestors? The Structuring of Space Around Iron Age Funerary Monuments in Central Europe*

Large-scale archaeological explorations in southern Germany are increasingly revealing an intensive and extensive structuring of space that served to organize action and guide movement across the landscape. This structuring focused attention and physical action on paramount funerary monuments. These revelations support the contention that ancestor veneration, in the form of monumental constructions for the dead and the long-term use and maintenance of these monuments by Iron Age communities, was a central process in a transformation of the landscape that reflects conflict and the dynamic negotiation of power relations between rival polities during a period of rapid social change.

Murray, Shawn (SWCA) and Adams, Karen (Crow Canyon Archaeological Center)

[196] *Plant Use in Early Puebloan Communities of Ridges Basin*

Analysis of macrofossil and pollen samples from several spatially distinct clusters of habitation sites in Ridges Basin provides insight into subsistence and wood use during the early Pueblo I period (AD 750-850). Differences in use of plants during this limited occupation span may complement differences in household and community organization, helping to distinguish variability among Puebloan groups occupying Ridges Basin.

Murray, Shawn [10] see Adams, Karen

Murrell, Jesse (Zuni Cultural Resource Enterprise)

[150] *Analogy, Experiment, and the Use Efficiency Argument in Ground Stone Research*

The use efficiency argument claims an inverse relationship between the use surface area of a milling tool and the amount of time spent producing a set amount of meal. In making this argument and building upon it, analysts use different forms of analogy including immanent and behavioral (configurational) analogies. A design and performance analysis involving replica

milling tools examines a number of performance characteristics including use efficiency, ease of manufacture, and ease of maintenance as well as their interplay in the design process. The use of efficient milling tools has evolutionary implications including a positive impact their users' potential adaptiveness.

Murrell, Monica L. (Zuni Cultural Resource Enterprise)

[33] *The Geoarchaeology of a Late Prehistoric Water Management Feature in Central New Mexico*

During a survey in the Chupadera Arroyo Basin of central New Mexico, a water management feature was identified at the late prehistoric site of Pueblo Oso Negro. Most functional interpretations regarding these features are based on assumption rather than being founded on evidence corroborating the presence of water. During test investigations a subsurface water source was identified within the depression. A geoarchaeological analysis of sediments from the feature yielded geological evidence and invertebrate remains that indicate a past water-rich environment. This evidence substantiates the interpretation that the depression functioned as a water control feature for the prehistoric community.

Myers, Bethany (Southern Illinois University)

[108] *In the Maya's Own Words: The Use and Context of the Ch'en Glyph*

This paper investigates the quantity, time depth, and areal extent of the Ch'en hieroglyphs in the carved record. There are several variants of the Ch'en glyph, however the connotative differences between them remains poorly understood. The primary focus will be on: (1) identifying whether particular variants of the Ch'en glyph are associated in texts with specific ritual actions (i.e. verb phrases); (2) identifying the chronological usage of each variant to investigate whether variants had an evolutionary cycle of use and disuse; (3) investigating the possibility that different variants refer to different types of caves.

Myers, Bethany [108] see Moyes, Holley

Myers, Terri [5] see Cassedy, Daniel

Nagai, Kenji (The University of Tokyo)

[94] *Technological Variability in Tanged Point Production During the Incipient Jomon of Japan*

This paper describes research of flake scar orientation on tanged points produced by oblique parallel pressure flaking (OPPF) during the Incipient Jomon of Japan. The results indicate a highly significant geographically conditioned pattern of technological variation. Generally, OP PF points from the midwest are flaked from the lower left to the upper right, while points from the northeast are flaked from the lower right to the upper left. Experimental evidence suggests that this variation may indicate the adoption of different pressure flaking techniques in these two regions. Implications for previous interpretations of cultural variability are also discussed.

Nagaoka, Lisa (University of North Texas)

[195] *Zooarchaeological Research in New Zealand: Studying the Effects of Anthropogenic Environmental Change*

A major focus of New Zealand zooarchaeological research has been on the effects of anthropogenic environmental change. Faunal data demonstrate significant changes in population abundances and distributions of native fauna after Polynesian colonization. The human consequences of these faunal changes have also been considerable; these include increased energy input and mobility to extract comparable returns from declining availability of faunal resources. More recently, zooarchaeological studies have come full circle. Applied research is using prehistoric faunal data to more accurately identify areas on which to focus management efforts for expanding ranges of relict populations of threatened or endangered native fauna.

Nagaoka, Lisa [4] see Densmore, Julie; [4] see Fullerton, Ben; [81] see Hughes, Susan S.

Nakamura, Seiichi (Copan Archaeological Project: PROARCO)

[147] *Formation and Development of the Peripheral Centers in the Copan Kingdom: The Case of La Entrada Region*

In the La Entrada region, some 50km southeast from Copan Valley, at least 8 regional centers of the Late Classic period have been confirmed by the archaeological investigations done in

the 1980's and 90's. The results of the investigation show that the formation processes of these centers are mutually different. While some regional centers seem to have been formed as the strategic outposts of the Copan Kingdom, others seem to have become regional centers as a result of more indigenous developments. This point will be discussed from the viewpoint of the expansion of the political system of Copan to the periphery.

Nakayama, Seiji (Yamanashi Prefectural Museum)

[20] *The Beginning and Spread of Rice Cultivation in the Japanese Archipelago*

Current study of the origin of agriculture, especially rice cultivation, is developed through scientific analyses such as plant-opal and pollen analyses as well as an observation of grain impressions on pottery shards. Based on these direct lines of evidence for the presence of rice and artifacts concerned with rice cultivation recovered from archaeological sites, I want to discuss the beginning and expansion of rice cultivation in the Japanese archipelago.

Nakazawa, Yuichi (University of New Mexico)

[209] *Current Paleolithic Research in Japan: A Brief Introduction*

The increased number of excavations and site identifications over the last several decades has made the Japanese Archipelago the highest density location of the Paleolithic archaeological record in eastern Asia. Because of little effort toward a synthesis and a language barrier, the available information and data have not been fully disseminated to an international audience. In order to research potential significances between the Old and New World prehistories, the present paper will give some critical aspects of Japanese Paleolithic research, including the context of site discovery, the relationship between human antiquity and public interest, and major research topics.

Nakoro, Elia [167] see Stockdale, Neil

Naleimaile, Sean (University of Hawaii-Manoa) and Mills, Peter (University of Hawaii-Hilo)

[51] *Is "Hawaiian Archaeology" Really Hawaiian?: Ethical Dilemmas in Establishing an 'Indigenous' Archaeology in Hawai'i*

There is a movement towards Native Hawaiian involvement in archaeology beyond mere back-end consultation. There is a growing level of participation by Native Hawaiians in the field as archaeologists, in degree programs in archaeology, anthropology and cultural resource management. These individuals realize the need to implement an alternative process of research and cultural resource management that is sensitive to the needs, traditions and practices of Native Hawaiians. This paper examines the Hawaiian in 'Hawaiian archaeology' and the ethical challenges to the realization of an indigenous Hawaiian practice of archaeology.

Nanfro, Claire (University of Alabama)

[212] *Evaluating Elite Control of Resources with Residential Remains at Moundville*

This study focuses on the results of subsurface survey conducted at Moundville during the summer of 2006. This fieldwork is part of an on-going research project discussing the range of variability in household status and wealth, to determine the degree of elite control over resources that were thought to be items of value. To examine these distributions, six hectares were tested to ascertain the location and density of residential remains and accompanying middens. To model elite control the density of burnished and unburnished ceramics, non-local lithics, and other valued items will be compared to determine the variability in wealth across the site.

Nash, Stephen [116] see McBrinn, Maxine

Natalie, Brewster [4] see Burchell, Meghan

Natoli, Amelia [38] see Wegener, Robert

Naumann, Aaron (Geo-Marine, Inc.)

[154] *Examining Differentiated Space at the Gottschall Rockshelter, a Proposed Ceremonial Locale, through the Lithic Assemblage*

The Gottschall Rockshelter in southwestern Wisconsin is hypothesized as a ritual locale of an

unspecified function. The data used to support this interpretation includes the presence of 40 pictographs, a carved and painted sandstone head, unique in North America, in association with both feasting debris and sediments interpreted to be anthropogenic. The primary goal of this research is to address questions related to the hypothesized partitioning of sacred and secular space at the Gottschall Rockshelter in Wisconsin, through the analysis of the Gottschall Rockshelter lithic assemblage.

Navarro Farr, Olivia (Southern Methodist University) and Arroyave Prera, Ana Lucía (La Universidad de San Carlos)

[103] *A Palimpsest Effect: Multi-Layered Meanings of Termination and Dedication Ritual Activities Carried out at Structure M13-1 of Waka'*

Structure M13-1 is a monumental public building of commanding presence within the site center of El Perú-Waka'. Excavations have revealed extensive termination ritual deposits and architectural modifications marking its final phase. The artifact assemblages and contextual evidence indicate both desecrating termination and reverential dedication. Given the diverse archaeological signatures suggesting both violence and reverence, a closer examination of context and accompanying interpretations on the layered meanings within these dense deposits is explored. Considerations of their ritual and political significance will, in turn, shed light on Structure M13-1's function and larger role within the ancient community of Waka'.

Ndiema, Emmanuel (Rutgers, The State University of New Jersey), Dillian, Carolyn (Princeton University) and Braun, David (University of Cape Town)

[191] *Mid-Holocene Pastoralist Adaptations in East Africa: Evidence from Geochemical Analysis of Obsidian Sources and Artifacts from Koobi Fora, Kenya*

Artifacts from the Galana Boi Formation in Kenya, present a rare view of the dynamics of ancient lifestyles. Archaeological materials include evidence of hunter-gatherer and fishing economies, and the beginnings of the earliest pastoralism in Kenya. Through the use of X-ray fluorescence analysis for sourcing of obsidian artifacts, we present theories of social networks, mobility, and exchange that may ultimately shed light on the nature of pastoralism's introduction to East Africa.

Neck, Raymond W. [159] see Brown, David O.

Nedelcheva, Pepa (New Bulgarian University)

[87] *The Problem of Millstones in Northern Aegean, Neolithic and Bronze Age Periods*

This report includes the last results from the investigation of millstones from the area of Northern Aegean – especially from the Early Bronze Age site at Yenibademli, island of Gogceada, Late Neolithic and Early Bronze Age site at Mikro-Vouni, Samothrace and from Troia as well. Additionally some information about millstone problematic' has been given from the region of NW Turkey. The presentation shed light on the quarries, manufacturing, spreading and usage of the millstones in the region under discussion during the Late Neolithic and Bronze Age periods.

Nedelcheva, Pepa (New Bulgarian University) [121] Discussant

Neely, James (University of Texas at Austin)

[52] *Central Highland Mesoamerican Water Management During the Pre-Formative and Formative Periods*

An interregional overview of prehistoric water management features and systems in the Central Highlands of Mesoamerica is presented. Beginning by ca. 7,900 B.C., the distribution and development of features and systems are described and discussed through the end of the Formative Period (ca. A.D. 250). Case studies are considered for environmental, technological, and socio-political comparison and contrast. Observations and interpretations of the data are presented. It appears that by the end of the Formative Period most of the water management technology and much of the related landscape modification of Highland Mesoamerica had been established, and was sustained through subsequent periods.

Neff, Hector (IIRMES/CSULB)

[178] *Post-Formative Climate and Population History in the Eastern Soconusco Region*

Recent paleoenvironmental research in Pacific coastal Guatemala and Chiapas suggests that climate fluctuations might have driven some of the post-Formative population changes in the

eastern Soconusco region. Early Classic population loss, dramatic Late Classic population expansion signaled by the proliferation of Plumbate pottery, and Postclassic contraction all appear to correlate with rainfall changes documented in sedimentary records obtained from the lower-coastal mangrove-estuary zone.

Neff, Hector (IIRMES/CSULB) [139] *Discussant*; [158] *Discussant*; [39] *see Garcia-Herbst, Arleen*; [61] *see Darling, J. Andrew*; [7] *see Rosenswig, Robert*; [92] *see Harper, Veronica*; [92] *see Thomas, Roberta*

Neff, Margaret (University of Arizona)

[21] *An Evaluation of Geophysical Prospection Techniques at Körösladány-Bikeri*

As part of the Körös Regional Archaeological Project, magnetometry was used to map the magnetic properties of several sites, including Vésztő -Bikeri and Körösladány-Bikeri. The data were interpreted to suggest areas for excavation, and to establish site layout. The identification of triple concentric trenches surrounding both sites proved the value of the study. Comparison of interpretations of the data versus excavated features indicates that the usefulness of the dataset lies in the applications stated above, and not in describing small-scale features.

Neiman, Fraser (Monticello) [172] *Discussant*

Neitzel, Jill (University of Delaware)

[132] *The Magician and Yoffee's Rule: Studying Complexity in the Prehispanic Southwest*

The Magician and Yoffee's Rule exemplify two approaches to organizational complexity in the prehispanic Southwest. The Magician, a rich burial from a small site, prompts studies of the diverse ways in which complexity can be manifested in middle range societies. Yoffee's Rule denies the possibility of variation, declaring that if you can argue about whether a society was a state, then it was not. In its broader application to non-states in the Southwest, this rule perpetuates the use of societal types and ignores the significance of much of the region's archaeological evidence, including that from the Magician's burial.

Neller, Angela [48] *see Arbolino, Risa*

Nelson, Ben (Arizona State University)

[116] *Complexity, Cosmology, and Coercion at La Quemada, Zacatecas*

Linda Cordell's work has spurred thinking about Southwestern organizational diversity; she also strives to understand Southwestern societies in their widest contexts, including their connections with northern Mexico. In this paper I characterize La Quemada's complexity in the light of recent theoretical developments and empirical findings. The site, which dates ca. 500-900 CE, is important for mapping material connections and the macroregional emergence of social inequality. At this particular site, one can rule out a strong focus on commercialism and elite control of production as bases of such power and is led to consider ritualized warfare, theatricality, and physical coercion.

Nelson, Ben (Arizona State University) [70] *Discussant*

Nelson, Margaret (Arizona State University) and Cameron, Catherine (University of Colorado)

[131] *Honoring Linda Cordell Part II: Demographic, Social, and Ideological Perspectives on Population Movement. An Introduction*

Linda Cordell has contributed enormously to Southwestern archaeology throughout her active and productive career. This session focuses on key themes that she has pursued and to which she has made pioneering and enduring contributions. These themes include population dynamics, ceramic studies and the archaeology of the Pueblo IV period in the northern Rio Grande. We trace these themes throughout her career and highlight the major contributions she has made to knowledge in these areas. The papers that follow are presented by her colleagues and students who also contributed to these themes and who exemplify her tradition of superb scholarship.

Nelson, Margaret [116] *see Hegmon, Michelle*

Nelson, Zachary (Brown University)[208] *As the Bat Flies: Survey in and around El Zotz, Guatemala*

Satellite imagery and foot surveys in the area around El Zotz, Peten, Guatemala have uncovered ancillary settlement around this small regnal state. Using IKONOS satellite imagery followed by ground-truthing surveys, many small residential structures have been located despite the thick canopy of the area. The combination of satellite and foot survey holds great promise for the Maya region.

Neme, Gustavo [124] *see Johnson, Amber*

Netherly, Patricia J. (Vanderbilt University)[188] *What Does It Matter? The Contribution of Andean States to a Global Definition of Archaic States*

A theoretical consideration of archaic states has not engaged many Andeanists. Nevertheless, recent works by Trigger and Yoffee raise questions which archaeologists in the Andes must address if they are to interpret Andean polities correctly. An examination of the common features of the Moche polities, Chimor, and Tawantinsuyu suggests the possibility of new theoretical contributions from the Andes to the global discourse. It will also take us from what-ought-to-be to an empirical reality.

Neusius, Phillip (Indiana Univ of PA), Neusius, Sarah (Indiana Univ of PA) and Wymer, Dee Anne (Bloomsburg U of PA)[126] *Developing the Database: Lessons From the Brant I Site*

Although many archaeological sites dating after AD 1000 are identified within the drainages of central western Pennsylvania, too often these sites actually have not been excavated. Our program of testing sites recorded in the state site files is helping us gain a better picture of what these various sites represent. Among the several sites tested recently the Brant I site has yielded surprisingly interesting lithic, ceramic, faunal, floral and feature data indicating that it is indeed a village and is contributing in significant ways to our understanding of utilization of the area as well as to our continued testing program.

Neusius, Phillip [126] *see Rowles, Ryan*

Neusius, Sarah (Indiana University of Pennsylvania) [153] *Discussant; [126]* *see Neusius, Phillip*

Neusius, Sarah (Indiana University of Pennsylvania) and Chiarulli, Beverly (Indiana University of Pennsylvania)[126] *New Dates From the IUP Late Prehistoric Project*

Recently, archaeologists from Indiana University of Pennsylvania have investigated a series of villages located along tributaries of the Allegheny River in central western Pennsylvania as part of a regional study known as the IUP Late Prehistoric Project (LPP). Traditionally, most of these sites were thought to date to the 16th century, although the chronology was based on few radiocarbon dates. One of the goals of the LPP was to determine when the sites were occupied through a systematic radiocarbon dating program. A new series of radiocarbon dates suggests that many of these sites are significantly earlier than has been assumed.

Neuzil, Anna (Center for Desert Archaeology), Boyer, Georgiana (Center for Desert Archaeology) and Boyle, Peter (Center for Desert Archaeology)[33] *Comparing Surface and Excavated Collections: A Case Study from Three Sites in the Safford Valley, Southeastern Arizona*

The Dewester, Cray, and Murphy sites (AZ CC:1:56, 53, and 52[ASM]), located in the Safford Valley, were excavated in 1997 by Jennifer Rinker for her 1998 University of Texas at Austin Master's Thesis. These three sites were subsequently revisited in 2003 for Neuzil's dissertation research at the University of Arizona, during which surface collections were made. This poster explores whether the surface collections made by Neuzil accurately reflect the diversity in the ceramic assemblage found in the excavated collections made by Rinker, and whether surface collections can capture the variability in subsurface assemblages found at archaeological sites.

Neves, Eduardo [58] *see* Kipnis, Renato; [15] *see* Denevan, William M.

Newlan, Ralph (Michael Baker Jr., Inc.), Belfast, Jesse (Michael Baker Jr., Inc.), Mooney, James (Michael Baker Jr., Inc.) and Folb, Lisa (Michael Baker Jr., Inc.)

[104] *The Historic Context of Structures that Protect our Nation's Borders*

Is there a pattern in the style of the buildings that we drive through when crossing the border? US-VISIT implemented a large-scale fieldwork effort to evaluate the historic structures at land ports of entry. This study found that in the 1920s, automobile traffic across the border had increased to a level that created a need for the border to be monitored and current facilities improved. This paper presents a summary of the patterns in the structure styles and the background for the national context that implemented their construction. US-VISIT is evaluating the buildings as a Multiple Property Nomination.

Newman, Bonita (New Mexico State University) and Loendorf, Lawrence (New Mexico State University)

[41] *Woolie Brushes or Brushing Woolies: A Look at Amorphous Paint Smears*

Amorphous paint smears and lines present on boulder outcrops in Colorado and Wyoming may be the result of paint transfer from sheep which have been marked for branding or breeding purposes. To investigate this possibility, the paint pigments were examined with a portable x-ray fluorescence spectrometer. The data were subsequently analyzed and compared to that recovered from two sites with documented sheep paint images. In the process we learned that some paint smears, previously identified as prehistoric pictographs, are more likely from brushing woolies.

Newman, Elizabeth Terese [160] *see* Colten, Roger

Newman, Linda [61] *see* Darling, J. Andrew

Newton, Cody (Colorado State University)

[37] *I Brought the Gun Who Brought the Knife: Analysis of an 18th Century Faunal Assemblage in Northern Colorado*

The Lykins Valley Site (5LR263) is an open stratified campsite located in the foothills of northern Larimer County, Colorado, which contains evidence of Protohistoric period occupations. The surface and first two levels of the site yielded artifacts of indigenous manufacture, along with items of European manufacture (sans knives), as well as a faunal collection that includes *Equus* caballas and butchered *Bison* bison, *Odocoileus* sp. and *Antilocapra americana*. The faunal assemblage provides a window into the butchering practices of post-contact groups and this assemblage is analyzed to discern if these practices are recognizable without the explicit evidence of European butchering tools.

Neyland, Robert (DON/Naval Historical Center)

[215] *Salvaged, Dredged, and Looted: Assessing the Potential of Impacted Shipwrecks*

U.S. Navy shipwrecks are archaeological sites that can be impacted by salvaging, dredging, and looting. This is particularly true of wrecks within shallow waters and riverine environments. It can be argued that these sites have lost archaeological integrity as a result of these activities. The total loss of archaeological information may be the exception rather than the rule. This paper takes several examples of Navy shipwrecks that have been impacted by salvage, dredging and looting and looks at what has been learned through new investigations of these sites and if they are still significant sites.

Nials, Fred (GeoArch; Center for Desert Archaeology), Gregory, David (Center for Desert Archaeology) and Hill, Brett (Center for Desert Archaeology)

[38] *The Stream Reach Concept: Prehistoric Agriculture in Southwestern Riverine Environments*

Irrigation may have accompanied the introduction of maize in the Southwest ca. 4,000 b.p. Earliest known agricultural sites often occur in specific riverine locations. These locations bound naturally-defined stream reaches that respond in predictable ways to specific climate and river regimes. This allows quantification and characterization of environmental variables pertaining to prehistoric irrigation agriculture, allowing analysis of specific locations in relation to irrigation agriculture and archaeological sites of any age. The stream reach concept thus serves as an explanatory model for prehistoric agricultural practices and distributions of irrigation-farming populations.

Niccolucci, Franco [169] *see Hermon, Sorin*

Nicholas, George [201] *see Hollowell, Julie*

Nicholas, Linda [219] *see Feinman, Gary*

Nichols, Deborah (Dartmouth), Elson, Christina (American Museum of Natural History), Cecil, Leslie (University of Missouri) and Glascock, Michael (University of Missouri)
[194] *Chiconautla and East-West Relations in the Basin of Mexico*

Chiconautla, situated on the northeastern shore of Lake Texcoco and the southern edge of the Teotihuacan Valley, lay at an important juncture for east-west exchange in the Basin of Mexico with connections to as far away as the Gulf Coast. We use INAA data of ceramics to examine how Chiconautla fits into current understandings of marketing and exchange patterns from AD 950 to 1521. We also evaluate whether or not the site's particular position at the crossroads of important trade routes affected ceramic consumption by Chiconautla's elites, and what the patterns say about shifting political affiliations in this critical region.

Nichols, Deborah (Dartmouth) [107] Discussant

Nicodemus, Amy (University of Michigan)

[134] *Bronze Age Animal Economy of the Maros River Cultures (Southeast Hungary/Western Romania): A Synchronic and Diachronic Perspective*

The Bronze Age was a period of profound social change throughout Europe. In the Carpathian Basin, complex polities emerged in the midst of autonomous village societies. Economic systems were substantially reorganized, spurred largely by the intensification and centralization of long distance metal trade. This study of Maros River cultures demonstrates significant changes in animal economies paralleling these developments, including local specialization in animal products. The deeply stratified sites examined represent both centralized (Periam-Pecica) and autonomous societies (Maros), providing important data on long-term changes in production strategies within settlements as well as functional differences between them.

Nicolay, Scott

[82] *Water from a Stone: A Reexamination of the Feather Cave Archaeological Complex in Lincoln County, New Mexico*

The Feather Cave Archaeological Complex includes two caves, two rock shelters, a Lincoln Phase pueblo, and a pithouse village in the Rio Bonito valley of southeastern New Mexico. New research suggests that Feather Cave was not merely an adjunct shrine to the nearby pueblo or other settlements along the Rio Bonito but was instead an important Jornada Mogollon ceremonial center. Recent fieldwork has provided a fuller and more integrated picture of prehistoric activity at the four karstic earth opening sites and suggests previously unrecognized parallels to other major cave shrines in the Southwest and Mesoamerica.

Nielsen, Axel (CONICET, Argentina)

[180] *The Life of Corporate Emblems in the South Andes*

I argue that within the South Andean cultural tradition emblems of authority are alive and rule over communities. This fact is crucial for the long-term reproduction of corporate power and operates as an important check over the ambitions of individuals who contingently occupy political office. These propositions are illustrated with the example of the Tata Rey, a staff used as the main emblem of office by traditional political authorities in the Andes since early colonial times. Similar practices were associated with some prehispanic weapons, such as axes, which were simultaneously understood as animated entities and as embodiments of collective power.

Nievens, Nina [149] *see Callaghan, Michael*

Nigh, Ronald [178] *see Ford, Anabel*

Ninnemann, Laura (Mesa Verde National Park), Vlass, Glenn (Spatial Data Technologies, Inc.) and Loy, Allan (Mesa Verde National Park)

[91] *Use of a Mobile Computing Solution with Relational Database Applications at Mesa Verde National Park*

Mesa Verde National Park, in partnership with Spatial Data Technologies, Inc., Fort Collins, Colorado, has developed a mobile computing solution for field capture of its archaeological data at the site survey and condition assessment levels. Utilizing CartoPac Enterprise software, data flows from the Park's main databases to the field data capture device and back to a QA/QC database, while maintaining relational data models throughout the process. Implementation of this software has resulted in significant cost and time savings, as well as increased data integrity. This poster presents the design and implementation of the mobile computing solution.

Niquette, Charles (Cultural Resource Analysts, Inc.) [130] Discussant

Nisengard, Jennifer (Los Alamos National Lab)

[105] *Architecture and Aggregation on the Pajarito Plateau: Case Studies from the Land Conveyance and Transfer Project*

One of the most compelling aspects of archaeological research is understanding how people come together to form communities. While communities are organized in a wide variety of ways, there are recurring and recognizable patterns. Population aggregation appears to have been one of the primary ways in which communities formed on the Pajarito Plateau in northern New Mexico between A.D. 1200 and 1550. Recent research on the plateau, as part of the Land Conveyance and Transfer project, has provided information about aggregation. This paper provides examples of the ways in which archaeologists can use architectural evidence to measure ancient aggregation.

Nishimura, Yasushi [208] see Goodman, Dean

Niziolek, Lisa (University of Illinois at Chicago) and Junker, Laura (University of Illinois at Chicago)

[175] *Pottery Production in a Prehispanic Chiefdom in the Philippines: A Geochemical Perspective*

Recent research in the Philippines suggests that the rise of large-scale, politically dominant polities in the millennium preceding Spanish colonization was accompanied by changes in many aspects of political economy, including greater centralization and specialization of craft production. This paper discusses approaches to studying pottery production in the prehispanic Philippine chiefdom of Tanjay, focusing on preliminary results of geochemical analysis of archaeological ceramics and clay samples using laser ablation-inductively coupled plasma-mass spectrometry and what they reveal about changes in ceramic production from A.D. 500 to 1600. Contributions from ethnohistoric and ethnographic research and ethnoarchaeological observations also are presented.

Noah, Anna [195] see Rick, Torben C.

Noah, Anna C. (UCLA Cotsen Institute of Archaeology), Bernard, Julianne (UCLA Department of Anthropology) and Graesch, Anthony P. (UCLA Department of Anthropology)

[112] *A Cross-Cultural Study of Subsistence and Food Choice among Indigenous Communities Following European Contact*

Studies of subsistence and food choice provide an important perspective on the changing social, political, and economic worlds of native people living free from direct daily involvement with colonials in western North America. Drawing on research from several Historic era socially indigenous villages on the northern Channel Islands, the south central California interior, and the Fraser River Valley of southern British Columbia, this paper explores the role of food in expressions of status and political authority, assertions of plural and changing identities, ideologies of resistance, and adaptations to changing environmental and economic conditions.

Nolan, Kevin C. (The Ohio State University), Kellecker, Mark A. (Cleveland Museum of Natural History), Eren, Metin I. (Southern Methodist University) and Deppen, Jacob E. (The Ohio State University)

[150] *Experiments in Prismatic Blade Production: Lessons for Archaeological Interpretation*
Blades and blade-cores are nearly ubiquitous on Ohio Hopewell sites. The degree of skill required for blade production has played a role in interpretations of Hopewell settlement patterns (e.g., Cowan 2006); however, the level of skill required for their production is debated. We attempt to assess how variations in skill/experience level are reflected in quantitative and qualitative variability in the assemblage. Additionally, we compare our experimental blades to those from archaeological contexts to gain insights into time requirements for blade production, probable removal techniques employed, and formation processes associated with Hopewell blade assemblages.

Noll, Christopher (Washington State University) and Andrefsky, Jr., William (Washington State University)

[150] *Micro-Debitage and Stone Tool Production*
Manufacture of small-sized chipped stone tools as well as resharpening and reshaping of dulled stone tools often produces micro-debitage. This study explores the morphological variability in micro-debitage assemblages produced from controlled replication experiments of hafted bifaces, scrapers, and flake knives. Results of the experimental investigations are applied to an excavated assemblage of debitage recovered from the Birch Creek site (35ML181) in southeastern Oregon to assess tool production and resharpening activities.

Nomokonova, Tatiana [45] see Losey, Robert

Nordby, Larry [185] see Holmlund, James; [185] Discussant

Norder, John (Michigan State University)

[201] *From "Native American" to "Indigenous": The Pluses and Perils of Greater Inclusiveness in Archaeological Discourse*

This paper examines the developments of 'indigenous' archaeology and the implications of this discursive voice within and beyond the discipline. It takes the view that the use of 'indigenous' as a more inclusive term to 'Native American' is a strategic move by a small community within the discipline that has implications that are both beneficial and problematic. Using the framework used in recent research by the ethnographer Kirk Dombrowski, which blends elements of political economy and identity politics, this paper will explore this contradiction and the potential future directions of this discursive turn in archaeology.

Nordt, Lee (Baylor University), Boutton, Tom (Texas A&M University), Jacob, John (Texas A&M University) and Mandel, Rolfe (University of Kansas)

[159] *Relative C4 Plant Productivity and Temperatures of South-Central Texas from the Isotopic Composition of Buried Soil Organic Matter*

We present a buried soil organic carbon $\delta^{13}C$ record from the Richard Beene Site in Texas to track relative C4 plant productivity and temperature during the last 15,000 years. During the latest Pleistocene meltwater pulses into the Gulf of Mexico suppressed C4 productivity, which increased substantially during the Holocene as global circulation patterns became more pronounced. Our results correlate favorably with pollen records from east-central Texas and planktonic foraminifera curves from the Gulf of Mexico indicating strong coupling between continental and marine during major climate events.

Noriega, Aldo [17] see Conlee, Christina

Norman, Garth (ARCON Inc.)

[14] *Mesoamerican and Parowan Fremont Trade Contact: Turquoise for Sea Shells, Architecture and Ritual Calendar Culture Exchange*

Parowan Gap, Utah Fremont Temple Center Observatory with 260-105-day cycles. This calendar, plus evidences for Toltec turquoise trade from Nevada, and a Quetzalcoatl serpent at the Gap, tend to confirm Toltec era culture exchange with Mesoamerica. Site planning research at the Gap and Paragonah tie to Mesoamerica, including Late Preclassic site planning at Izapa. Decipherment of Gap petroglyphs reveal multiple panel records of the

earliest and only known observatory records of the Venus-sun-moon 2920-day conjunction. Did Parowan Gap astronomers share this discovery recorded later in Mexica Codex Borgia and Maya Dresden Codex?

Norman, Neil (University of Virginia)

[144] *An Archaeology of Negative Space: Bracing and Bounding the Savi Countryside, Bénin West Africa 1650-1750 AD*

Soon after the Huedan Kingdom entered trans-Atlantic systems of exchange in the mid-17th century AD, Dahomean troops from the Abomey area razed the Huedan palace at Savi (1727 AD). This military operation provided Dahomey with unimpeded access to coastal trading routes and effectively ended efforts by Huedan kings to administer the ethnically diverse and often contentious communities surrounding Savi. This paper explores landscape features used to negotiate social boundaries separating palace and countryside and by Dahomean kings to mark the political boundaries of their newfound territories.

Norment, Aaron [129] see *Kimbell, Bennett*

Norris, Stephen [96] see *Bernardini, Wes*

Novak, Shannon [35] see *Kollman, Dana*; [35] see *Balcarcel, Beatriz*

Novic, Juliana (ASU School of Human Evolution and Social Change)

[12] *Miniature Monuments: Decoding Aztec Ceramic Temple Miniatures*

Monumental architecture as a means to examine social phenomena has traditionally been a focus in Mesoamerican archaeology. Relatively little attention has been paid to how representations of architecture in other media can aid understanding monumental and public architecture. These alternative representations can provide insights on how past peoples viewed their built environment. This study focuses on Aztec ceramic temple miniatures and the information on architecture, space, politics, and religion encoded within them. The association between specific motifs on temples, miniatures, and other pictorial representations and Aztec "deities" will be discussed within the context of changing perspectives on Mesoamerican iconography and ideology.

Novotny, Anna (Arizona State University) and Clayton, Sarah (Arizona State University)

[49] *The Teotihuacan Social Identity Project: Biological Distance between Teotihuacan and Axotlan during the Classic Period*

This paper will address the social interaction and biological relatedness between Teotihuacan and a small site located 35km west of it, Axotlan, by analysis of biodistance data. These biological data were collected from skeletons dating to the Classic period (200-700 A.D.) when Teotihuacan was at the height of its power and Axotlan was likely subordinate to it. Analysis of biological distance between Axotlan and Teotihuacan will demonstrate whether residents were observing similar patterns of post-marital residence customs and whether the two groups were inter-marrying. This has important implications for our understanding of Teotihuacan interaction with its neighbors.

Novotny, Claire (University of South Florida) and Wells, E. Christian (University of South Florida)

[161] *Revisiting the Maya Market Hypothesis: Quantitative Models for Ancient Lowland Maya Market Exchange*

In a 1979 issue of *American Antiquity*, Robert E. Fry published what would become a heavily cited quantitative analysis of modes of pottery exchange at Tikal, Guatemala. Using multidimensional scaling (MDS) of serving vessel distribution data, Fry concluded that Tikal's inhabitants likely participated in a centralized marketing system. A quarter of a century later, we can now test this hypothesis with a more robust dataset and with similar data from other contemporary lowland Maya centers. In this paper, we employ MDS and Monte Carlo simulations of ceramic locational diversity to suggest which Maya cities may have supported market places.

Novotny, Mike

[40] *Managing Isolated Artifacts in the United States Forest Service*

This paper examines how different regions within the United States Forest Service (USFS)

manage isolated artifacts. Currently, national standards do not exist for isolated artifacts. Management criteria for isolated artifacts vary by region, forest budget, and SHPO (State Historic Preservation Office) standards. The way in which isolated artifacts are managed, however, is important because isolated artifacts have helped answer research questions about prehistoric social organization, technology, and subsistence procurement in recent years. As a result, this paper provides a new perspective about how the USFS can standardize management criteria for isolated artifacts.

Nunn, Patrick (The University of the South Pacific)

[167] *A Shock to the System: Effects of Climate Change on Pacific Island Societies around AD 1300*

Rapid cooling and sea-level fall during the transition from the Medieval Warm Period to the Little Ice Age was accompanied by an increase in storminess in many parts of the tropical Pacific. The consequent environmental changes led to profound and enduring effects on most Pacific Island societies. Conflict became widespread as coastal settlements were abandoned in favor of upland, inland (often fortified) settlements. Long-distance cross-ocean interaction ceased. Externally-driven change is superior to internal changes (such as those associated with population growth or resource mismanagement) as an explanation for the observed societal crisis at this time.

Nuzad, A.H. [174] see *Blackwell, Bonnie A.B.*

Obata, Hiroki (Kumamoto University)

[20] *Diffusion of Cultivated Cereals to Prehistoric Japan Seen from Seed Impressions on Jomon Pottery Shards*

Since the end of 1960s, Japanese archaeologists have recognized cereals impressions on Jomon pottery or even recovered actual carbonized grains from the sites dating from 4,000 to 2800 BP in Kyushu. While these pieces of information have suggested the existence of cereals cultivation, is this real? In order to evaluate validity of Jomon agriculture, we examined the impressions on Jomon pottery shards using SEM. Consequently, we identified about 100 samples with cereals, fruit, and insect impressions. The result strongly indicates that agriculture was diffused from Korean Peninsula several times during prehistoric times.

O'Boyle, Robert (University of Montana), Prentiss, Anna (University of Montana) and Haymans, Dylan (University of Montana)

[50] *Good Runner: A Multi-Component Site in the Bear Paw Mountains, Montana*

During the summer of 2006, The University of Montana and the Chippewa-Cree Tribe of Rocky Boy's Reservation developed a partnership to conduct data recovery excavations at the Good Runner site (24HL1215) in the Bear Paw Mountains of north-central Montana. Excavations revealed a stratified multi-component site with Middle to Late Holocene occupations. Excavated artifacts include an unusually large assemblage of groundstone tools in addition to a wide range of chipped stone items. The site provides new insight into patterns of prehistoric land-use in this little known "Island in the Plains."

O'Connell, James (University of Utah)

[152] *Social Hierarchies among Indigenous Australians*

Ethnographically known Aboriginal populations are marked by the presence of hereditary social hierarchies. Senior men exercise control over land, material resources, ritual knowledge, women's reproduction and the labor of others. The overall pattern differs significantly from socio-political organizations reported for hunter-gatherers elsewhere in the world, and may have evolved as recently as the middle Holocene. Its general characteristics are described; explanations for its development are reviewed and critiqued.

O'Donoghue, Jason M. (University of Tennessee) and Meeks, Scott C. (University of Tennessee)

[142] *Steatite Exchange and Pottery Adoption in the Lower Southeastern United States: Social Resistance or Technological Indifference?*

Several hypotheses have been advanced from various perspectives to address the possible relationship between the use of steatite vessels and the adoption (or lack thereof) of pottery technology in the lower southeastern United States. This paper employs Geographic

Information Systems (GIS) analysis to investigate the cost associated with the movement of steatite vessels across the lower Southeast within the context of Late Archaic (i.e. Poverty Point) exchange. Least cost pathways are identified and compared with the distribution of archaeological sites containing steatite vessels and/or early prehistoric pottery in order to examine the relationships between these disparate coeval container technologies.

Ogburn, Dennis (University of California Berkeley)

[9] *Inca Manipulation of the Ceremonial Landscape of Saraguro, Ecuador*

Survey in the Saraguro region in the southern highlands of Ecuador shows that manipulation of ceremonial places within the landscape was a significant component of the Inca occupation. This included establishing their administrative site, Willkamarka, alongside the sacred hill of León Dormido, routing roads to pass by sacred places, and building a roadside usnu and a ceremonial site, Ingapirca. The Incas also modified prominent natural features, such as waterfalls and bedrock outcrops. This manipulation of the ceremonial landscape is seen as a strategy of control that combined the cooption of local religious sites with imposition of state religious practices.

Ogburn, Dennis (University of California Berkeley) [88] Discussant

Ogden, Jessica [33] see Markussen, Christine

Ohl, Ann (Center for Big Bend Studies, Sul Ross State University) and Mallouf, Robert J. (Center for Big Bend Studies, Sul Ross State University)

[73] *Gaining Insights into Archaic Lifeways of the Texas Big Bend*

Prior to initiation of the Trans-Pecos Archaeological Program in 2004, archaeological interpretations concerning Archaic lifeways in the Big Bend were based almost exclusively on interpolations from the much more intensely studied Lower Pecos River region to the east. Recent investigations by the Center for Big Bend Studies are yielding a wealth of sorely needed baseline data for the Big Bend Archaic, and inroads into long-standing interpretive issues are being made for the first time since the pioneering research of J. Charles Kelly, T. N. Campbell, and Donald J. Lehmer during the 1930s.

Ohnorsorgen, Michael A. [30] see Glascock, Michael D.

Ohnstad, Arik (Vanderbilt University)

[137] *Khonkho Wankane and the Ritual Landscape of the Formative-Period Titicaca Basin*

Like other ritual centers across the Andes, Khonkho Wankane was defined by—and helped to define—the physical landscape on which it was emplaced. This paper argues that certain landscape characteristics, such as water flows both subterranean and surficial, were crucial to the siting of Formative-period ritual centers in the southern Titicaca Basin. Drawing on regional settlement data and on results of excavation and iconographic studies of stone statuary at Khonkho and beyond, I analyze the interpenetration of landscape, ideology, and economy in the interactions between Formative-period ritual centers and the populations they served.

Ojeda, Bernardino [43] see Benfer, Robert

Oksanen, Eric (Center for Archaeological Studies, Texas State University- San Marcos) and Bousman, C. Britt (Center for Archaeological Studies, Texas State University-San Marcos)

[197] *All Creatures Great and Small: The Cultural Implications from Prey Size and Selection during the Early Archaic in Central Texas*

We compare faunal assemblages from four Early Archaic components in Central Texas. The sites are located along an ecotone region where major biotic communities converge, and a wide variety of animal and plant resources are available. Variations in assemblage composition at each site have behavioral implications for Archaic social structure, the acquisition of raw materials, and the selective use of technology of the occupants.

Oksanen, Eric [56] see Bousman, Britt

Oliver, James [4] see Delaney-Rivera, Colleen

Olsen, Karyn C. (University of Western Ontario), Goodfellow, Stephanie (University of Western Ontario), White, Christine D. (University of Western Ontario) and Longstaffe, Fred J. (University of Western Ontario)

[202] *Exploring Residential History of Dedicatory Burials at Altun Ha, Belize Using Enamel Microwear and Isotopic Analyses*

Stable isotope compositions ($\delta^{18}\text{O}$, $\delta^{13}\text{C}$, $\delta^{15}\text{N}$) and enamel microwear patterns of second molars from a Preclassic non-residential dedicatory burial at the Maya coastal site of Altun Ha were analyzed in order to test the hypothesis that these individuals were foreign to the site. Microwear and dietary isotopic data indicate that they were consuming different foods and/or differently prepared foods than other inhabitants of the site, and oxygen isotope values suggest that the burials comprised both local and non-local individuals. The results are discussed in light of Preclassic socio-political dynamics.

Olsen, Nancy (De Anza College)

[72] *A Case for Ethnic Boundaries of Pajarito Plateau, New Mexico Rock Art*

Building on statistical results of rock art image distribution on the Pajarito Plateau (Olsen 2004), this study applies Fredrik Barth's (1969) investigation of boundary maintenance to test archaeological image distributions by site type, feature type and agricultural type. Do they conform to Barth's dynamic criteria of ethnic boundary maintenance? Differential distribution of rock art images among site types, feature types and agricultural types mandate further testing of differences because Keres and Tewa speakers have interacted for hundreds of years.

Omar, Jamal (King Saud University)

[187] *The Wider Reach: Documentation and Presentation*

The framework of the UGR is so structured as to allow a multi-dimensional access to its layers of information. Therefore a scholar can consult single facts or follow a fully developed argument, while simultaneously a younger student or lay person may be enticed to discover unexpected complexities as they are led, at their own pace, from broader introductory statements to ever deeper and more substantive data explorations. The Global Record becomes thus a portal for general audiences whereby they may gain progressively more differentiated access to the scholarly documentation.

Orchard, Trevor (McMaster University)

[204] *Late Holocene Haida Economic Changes and Salmon Specialization on the Northwest Coast*

Archaeological projects in southern Haida Gwaii on the northern Northwest Coast of North America have produced materials spanning the past 2,000 years. These data allow the identification of two distinct cultural phases. The earlier Xyuu daw Phase (ca. 2,000 BP to 1,000 BP) is characterized by relatively generalized economies oriented towards rockfish, while the later Qayjuu Phase (ca. 1,000 BP to contact) is characterised by specialized economies dominated by salmon. The shift to a salmon-focused economy in Haida Gwaii occurs much later than on much of the Northwest Coast, and has implications for general models of Northwest Coast cultural development.

Oriol, Raquel [147] see Barnes, Edwin

Orr, David (Temple University) and Steele, Julia (National Park Service)

[208] *On the Manner of Laying Out a Camp: Regulation and Reality in the Pennsylvania Line at Valley Forge*

In the winter of 1777-78 the American encampment at Valley Forge rivaled Philadelphia as the largest population center in North America. Nonetheless, the "log city" was ephemeral. When Washington visited shortly after the war he noted that all the huts were gone and the signs of war obliterated. Remote sensing and GIS applications would seem to be ideally suited to uncover the footprint of this military community so important in American history. We recount the successes and failures of these techniques as they have been used in the past 30 years to try and illuminate the details of the revolutionary past.

Orr, Kelly (University of Georgia)

[37] *Weeden Island Subsistence and Settlement in the Gulf Coastal Plain: Zooarchaeological Evidence from Bayou St. John (1BA21), Alabama, USA*

The nature of vertebrate resource procurement along the Gulf Coastal Plain during the Woodland period is debated, yet comparison of several southeastern faunal assemblages indicates a distinct coastal Weeden Island subsistence adaptation. Zooarchaeological evidence from Bayou St. John, Baldwin County, Alabama, indicates that inhabitants of the site relied on locally-available estuarine resources with an emphasis on bony fishes. The collection is characterized by the dominance of mullets and sea catfishes, a relatively high biomass contribution from sheephead, and a minor reliance on fishes in the drum and jack families. This Gulf coast adaptation differs from inland and Atlantic coast sites.

Orr, Maria (Kaimipono Consulting Service LLC) and Bayman, James (University of Hawaii)

[201] *Archaeology and Contemporary Native Hawaiian Society*

The overthrow and occupation of the sovereign Kingdom of Hawai'i in 1893 by the USA left a historical legacy that profoundly challenges the practice of archaeology in the islands. This paper chronicles the history and consequences of this ongoing occupation for contemporary Native Hawaiian society and archaeology. In the aftermath of the overthrow, Native Hawaiians are still struggling to define and implement a vision for restoring sociopolitical self-determination. This paper concludes by acknowledging the imperative for archaeologists to comprehend this epic struggle. Doing so could enable archaeologists to play a meaningful role in the restitution of past and present injustices.

Orr, Maria [51] see *Desilets, Mike*

Ort, Jennifer (Climate Change Institute) and Robinson, Brian (Climate Change Institute)

[94] *Artifact Distribution at the Bull Brook Paleoindian Site: Preliminary Observations*

The Bull Brook Paleoindian site has 42 discrete artifact concentrations arranged in a circular pattern measuring over 500 ft. across. Located in Ipswich, Massachusetts, the site was excavated between the 1950's & 1960's by avocational archaeologists before its destruction by gravel operations. The site is currently being reanalyzed with NSF support by multiple researchers through the University of Maine. Analysis by the presenter is focused on distributional patterns of artifact classes and lithic materials. This poster will present preliminary observations on patterns and problems of interpreting distributions across the site.

Ort, Michael [100] see *Elson, Mark*

Ortiz, Edith (UNAM) [139] *Discussant*

Ortiz, Ponciano (Universidad Veracruzana)

[140] *La Cronología Cultural de Matacapán y la Definición de un Enclave Teotihuacano*

Uno de los objetivos principales del Proyecto Matacapán fue tratar de definir y caracterizar la presencia Teotihuacana, reportada por Valenzuela en los años 40's. Santley sugirió que podría haber funcionado como un punto estratégico en el intercambio de la obsidiana y otros productos hasta sitios lejanos como Kaminaljuyu. Sin embargo, los datos recuperados indicaron que se trataba de un posible enclave. Las investigaciones en el sitio permitieron además, conocer en detalle los procesos del cambio cultural y establecer una larga secuencia cronológica.

Ortman, Scott (Crow Canyon / ASU)

[181] *Population Biology of the Four Corners to Rio Grande Migration*

Although individuals can change their culture or language over their lifetimes, they cannot alter their genes. Thus, genetic data should provide the most reliable method of tracing population movements. In this paper I present a population genetic analysis of the classic 13th century migration from the Four Corners region to the Rio Grande using phenotypic variation as a proxy for genetic variation. Preliminary results suggest that ancestral Tewa populations of the Rio Grande derive almost wholly from the Mesa Verde region, and ancestral Keres populations from the San Juan Basin. Neither group is closely related to indigenous Rio Grande populations.

Ortman, Scott [33] see *Meegan, Cathryn*

Orvis, Kenneth [86] *see* Horn, Sally

O'Shea, John (University of Michigan)

[53] *And A River Runs Through It: Landscape and the Evolution of Bronze Age Networks in the Carpathian Basin*

The homogeneous and bounded character of the Carpathian Basin makes it an ideal setting for examining the interplay of topography and resource distribution in the development of Bronze Age social networks. It is argued that the substantial river systems of the region provided the principal axes for the movement of metal work, along with bulk goods and luxury items, and that control of these water routes was contested among neighboring polities. Overland trade connections also developed which, at least initially, transported distinct materials. Later, these routes challenged the primacy of the long standing riverine based networks.

O'Shea, John (University of Michigan) [153] *Discussant*

Otarola-Castillo, Erik (Iowa State University)

[4] *Examination of Differences between NISP and MNE in Cutmark Analysis*

Documentation of cutmarks is standard protocol in contemporary zooarchaeology, however, there is no consensus about how to best quantify them. This study examines differences in cutmark patterning using a single faunal assemblage independently quantified as the number of identifiable specimens (NISP) and as comprehensive minimum number of elements (cMNE). Results reveal significant differences in cutmark proportions between the two counting methods. Further, chi-square tests indicate that significant NISP cutmark patterns are no longer significant after conversion to cMNE. These results suggest that interpretations of butchering behavior based on cutmark patterning may be influenced by the selected unit of quantification.

Otarola-Castillo, Erik [5] *see* Schoville, Benjamin

Otis Charlton, Cynthia L. [97] *see* Charlton, Thomas H.

Ousley, Stephen (Smithsonian Institution), Hollinger, R. Eric (Smithsonian Institution) and Byrd, John (Central Identification Laboratory at JPAC)

[48] *The Nature of Evidence in the Repatriation Process: Evidence in Theory*

Under the NMAI Act and the NAGPRA, decisions regarding cultural affiliation are to be based upon evidence in the form of "geographical, kinship, biological, archeological, anthropological, linguistic, folklore, oral tradition, historical, or other relevant information or expert opinion." But what constitutes evidence, as opposed to irrelevant data or mere assertion, has rarely been given serious consideration. All evidence must be valid and relevant, but after changes in the Federal Rules of Evidence in 2000, expert opinion must also be backed up by replicable and reliable methods. These rules reflect the scientific method and result in more accurate and reliable assessments.

Ousley, Stephen [48] *see* Hollinger, R. Eric

Ouzman, Sven (University of Pretoria)

[214] *Eutopia: What Happens When Rock Art is Out of Place?*

Most rock art is firmly embedded in a landscape and has spatial integrity, providing a basic foundation for contextual interpretation. But sometimes emic and etic factors disrupt this stability. In the former instance, the engraved plaquettes of the European Upper Palaeolithic and small engraved stones at a site in central South Africa suggest an art mobilier that was physically as well as situationally transferable. In the latter case there is rock art removed from its primary locus to museums, private collections and disembedded representations. What does such dislocation do to our understanding of specific sites certain rock art 'traditions'?

Owen, Bruce (Sonoma State University)

[43] *The Columned Court Complexes of Camaná Were Not What They Appeared*

Three large architectural complexes with cylindrical stone columns suggested extensive ceremonial or administrative infrastructure in the Camaná valley of southern Peru. Surface ceramics pointed to Late Horizon occupation, while architectural features hinted at Wari

influence, consistent with other evidence in the valley. Mapping and excavation indicates that despite seemingly formal and non-utilitarian architectural features, the sites were domestic agropastoral settlements occupied when the volcano Huaynaputina erupted in A.D. 1600. Evidence of a long or earlier occupation is weak. Since Spanish Camaná was founded in 1539, these sites represent early colonial developments, perhaps originating in a previously unknown late prehispanic tradition.

Owsley, Douglas [129] see Jodry, Margaret

Oyuela-Caycedo, Augusto (University of Florida) and Raymond, J. Scott (University of Calgary)

[166] *Spatial and Temporal Patterns of Early Pottery Invention and Technological Dispersion in the Neotropics*

We analyze the production and use of pottery during the early to mid-Holocene in the Neotropics. The pottery was associated with both hunter-gatherers and early food producers. We compare pottery use in varying economic contexts of mobility, sedentism and social organization. The adoption of pottery as a new invention occurred with varying speed among the people of the Neotropics, and was delayed by hundreds or thousands of years in some regions. Here we attempt to explain the spatial and temporal discrepancies in the dispersion and how the dispersion articulated with varying territorial strategies.

Ozga, Andrew [3] see White, Benjamin

Page, David (Desert Research Institute/University of Nevada, Reno)

[174] *Paleoarchaic to Archaic Transitions in Lithic Raw Material Procurement: Basalt Sourcing Results from the Bonneville Basin*

Identifying lithic sources is central to understanding toolstone use by prehistoric hunter-gatherer groups. The distribution of archaeological materials in relation to geologic sources creates a spatial pattern of use that varies through time. These patterns of distribution, in conjunction with analysis of technological organization can be used to infer behavior, especially levels of mobility. This paper presents preliminary lithic sourcing data, with a focus on basalt artifacts from Bonneville Basin of western Utah and eastern Nevada.

Painter, Catherine (University of California, Berkeley)

[77] *Kenan Tepe: Exploring a Late Chalcolithic Village of the Upper Tigris*

The upper Tigris region of southeast Turkey remains a terra incognita for the study of the Late Chalcolithic period, especially in terms of developing social complexity emerging in greater Mesopotamia at this time. By drawing upon primary data from Kenan Tepe, this paper will discuss the economic and social relationships that shaped the character of this local community. These data will be applied to two questions of broader significance: 1) What role did the upper Tigris region play in socio-cultural developments of the late fourth millennium? 2) How did local economic associations mix with and affect larger networks of interaction?

Palacios F., Patricia (Museo Contisuyo, Moquegua, Peru)

[83] *Prácticas Mortuorias y ofrendas en Chen Chen cementerios 28 y 29, Moquegua Perú*

La mayoría de la colonización de los Tiwanaku en Moquegua es definido por patrones mortuorios y ofrendas conocidos como estilo Chen Chen. Sin embargo, en las excavaciones realizadas el año 2005 en los cementerios 28 y 29 del sitio Chen Chen (M1), sector 28 presenta el estilo característico Chen Chen, mientras que en sector 29, se encontró fosas con entierros flexionados y echados de costado; con ofrendas que presentan una cantidad de objetos metálicos y cerámica mayormente utilitaria o con formas diferentes a las ya conocidas. Todo esto sostendría la idea de una diversidad social en la estructura Tiwanaku.

Palacios F., Patricia [83] see Carbajal S., Barbara; [83] see Green, Ulrike M.; [65] see Rivera, Mario; [33] see Woodson, Kyle

Palka, Joel (University of Illinois-Chicago) [18] *Discussant*; [180] see McGee, Jon

Panich, Lee (University of California, Berkeley)

[146] *Persistence of Native Identity at Mission Santa Catalina, Baja California*

Mission Santa Catalina was located on the northeastern frontier of the Dominican mission system in Baja California, and was in operation from 1797 until 1840. The descendents of

Santa Catalina's neophyte population—the Paipai, Kumeyaay, and Kiliwa—are today among the only indigenous groups in Baja California to maintain distinct tribal identities. This paper will present findings from recent archaeological research at the mission site with an eye toward understanding the persistence of native identity during the colonial period. Particular attention will be paid to the continued engagement of neophytes with the physical and social landscapes beyond the mission walls.

Pappas, Christina (University of Kentucky) and Pollack, David (Kentucky Heritage Council)

[192] *Caborn-Welborn Social Boundaries*

An understanding of interaction within and between archaeologically defined cultures is important for the study of prehistoric boundaries. Social groups, ranging from household clusters within settlements to different cultural traditions, may be bounded by social, political, and/or economic interaction. This study explores Caborn-Welborn social boundaries through an examination of textile-impressed ceramics and other data from the Slack Farm site (15Un28) in Kentucky.

Paredes, Blanca (Instituto Nacional de Antropología e Historia)

[97] *The Multiethnicity of Ancient Tollan, State of Hidalgo: An Example of Complex Society*

The stage of major brilliance in the Tollan's ancient city, State of Hidalgo, is during the postclassic period, this one is revealed as a clear example of the social complexity in which one lived, since in the moments of maximum expansion the city of Tula sheltered a great population, apparently multiethnic. The present work tries to show the social interaction of different groups that coexisted in the same zone, where it is probable that there existed neighborhoods or sectors of people specializing in certain activity, as well as also the location of accessions is perceived with different ethnics.

Paris, Elizabeth (University at Albany-SUNY)

[188] *The Cutting Edge: Expedient Lithic Technology and Emerging Social Complexity at San Estevan, Belize*

During the Formative Period, San Estevan in Northern Belize developed a lithic industry which emphasized expedient lithic tools. While producers at San Estevan used mainly lesser-quality local chalcedonies, they increasingly imported chert in raw material form from Colha as the site developed from a small agricultural village to monumental center of an independent polity. The ratio of cutting tools to digging implements suggests that agricultural intensification of staple crops did not accompany increasing social complexity, but that craft production and game from hunting practices provided the economic foundation for San Estevan's position as a Late Formative market community.

Parker, Bradley (University of Utah)

[77] *An Overview of the Ubaid Period Remains at Kenan Tepe*

This paper will present the results of recent field work at the site of Kenan Tepe where members of the Upper Tigris Archaeological Research Project (UTARP) have unearthed well preserved domestic structures dating to several phases of the Ubaid period (ca. 5000-4000 B.C.). By outlining the chronology and cultural characteristics of the Ubaid complex discovered at Kenan Tepe, this paper will emphasize both similarities that link this site to other Ubaid sites in northern Mesopotamia, and differences that argue for an indigenous cultural development within the Tigris piedmont during this period.

Parkinson, William (Florida State University)

[58] *Tribal Social Dynamics and the Emergence of Hereditary Inequality: A Long-Term Perspective*

This paper examines the relationship between the organization of social groups and the emergence of hereditary inequality on the prehistoric Great Hungarian Plain. In contrast to recent models that emphasize the role of individual human agents in enacting social transformations, the model proposed here suggests that changes in household and settlement organization were necessary before hereditary inequality could become formalized and institutionalized during the Bronze Age. A theoretical perspective that deals not only with the role of human agents, but also the long-term trajectory of social organization in a region, is essential for modeling the emergence of 'complexity' generally.

Parkinson, William [21] see Yerkes, Richard; [21] see Gyucha, Attila

Parks, Shoshaunna (Boston University) and Kindon, Andrew (West Valley College)

[14] *Owning the Past in a Post-Colonial World: Competing Claims to Archaeology in the Maya Region*

This paper explores the language of ownership of the past in the Maya region and the post-colonial construction of claims over archaeological sites. In the context of this region, ownership functions as a means of obtaining both cultural and political authority. Those that seek rights to ownership over archaeological resources must work within the structure of post-colonial society. The opening of political and civil spaces through the language of indigenism is expanding this construct to include the rights of descendent groups over the past. Claims within this framework challenge established ownership by providing new forms of legitimacy for Maya stakeholders.

Parry, Roberta (University of Calgary)

[16] *Excavations in Naachtun's Reservoir: Classic Period Maya Water Management from the Guatemalan, Peten*

This paper presents the findings from the 2004 excavations in Naachtun's reservoir. Situated in the interior lowlands of the Peten the pre-Columbian Maya city of Naachtun was built next to swampy lowland bajos and like many other Maya cities constructed a reservoir within its urban limits to provide a reliable source of potable water. The reservoir was constructed during the Early Classic in Naachtun IV A.D. 292/300-554 along with the surrounding architectural platforms and was in constant use until Naachtun VI A.D. 652-790. Findings from Naachtun's reservoir will be compared to findings from other Maya sites.

Parslow, Carla [23] see Burke, Ariane

Parsons, Jeffrey (University of Michigan)

[140] *Santley and Rose (1979) Revisited: Aquatic Resources in Prehispanic Economies in the Basin of Mexico*

In their 1979 article in *World Archaeology*, Robert Santley and Eric Rose highlighted the nutritional importance of spirulina algae to Late Horizon diets in the Basin of Mexico. The current paper uses the Santley and Rose article as a point of departure to update ideas about the larger significance of aquatic resources in the economies of urbanized societies in the Basin of Mexico.

Patel, Shankari (University of California, Riverside)

[108] *Regional Pilgrimage, Caves, and the Politics of Class*

Oracular cave shrines in the Maya area served state interests by legitimizing the rule and authority of the elites. Ethnohistoric and excavation data suggest that local cave shrines were appropriated and then expanded into larger pilgrimage networks by neighboring polities to maintain ideological and political control over the masses. Traditionally pilgrimage in the Maya area has been defined as an elite affair. Yet the politicalization of oracular shrines within regional pilgrimage centers by elites suggests that such ideological messages were intended and utilized by all classes of Maya society.

Pateman, Michael (University of South Florida)

[71] *Reconstructing Lucayan Lifeways: A Bioarchaeological Approach*

In 1492, Christopher Columbus described the inhabitants of The Bahamas as being tall, handsome, healthy, and in good shape. Some of these descriptions of the Lucayan Taino has survived into the current historic literature of the first inhabitants of The Bahamas. This study looks at nearly 70 individuals recovered from the Bahamas in an attempt to reconstruct diet, health, nutrition and lifestyle. Methods include isotopic and phytolith studies; to reconstruct diet, and osteological analysis; to study health, nutrition and lifestyle.

Pateman, Michael [71] see Keegan, William

Patino, Alejandro [16] see Walker, Debra

Patterson, Stuart [125] see Cohen, Leslie

Pauketat, Tim (University of Illinois)[25] *Explaining Continuity: Third Time's a Charm*

Archaeological explanations of long-term developments implicitly or explicitly rely on undertheorized notions of time and continuity. This paper argues that archaeologists identify as continuities that which should be understood as alternative temporalities. These are constructed continuously but appear punctuated by social change only when that construction is coordinated at large spatial scales. The point is made by adapting Soja's notion of thirdspace using three related American Indian examples involving cosmologies, the night sky, and the materiality of a trans-regional episode of Mississippian narrativizing. The paper highlights how temporalities and explanations of continuity are contingent on the materiality of thirddtime experiences.

Pavao-Zuckerman, Barnet (University of Arizona)[37] *Zooarchaeology of Mission Nuestra Señora del Pilar y Santiago de Cocóspera*

Excavations by the Instituto Nacional de Antropología e Historia at Mission Cocóspera in present-day Sonora, Mexico provide the opportunity to explore the role of missions in subsistence change and economic networks during Spanish colonization of southwestern North America. Zooarchaeological remains from Cocóspera indicate the success of cattle ranching in the Sonoran region in the eighteenth century, and also indicate that missionized Native American groups engaged in specialized production of secondary animal products for trade with other Spanish colonial entities, including mining communities.

Payne, Sebastian [53] *see Evershed, Richard***Peacock, Evan (Mississippi State University)**[114] *The Distribution of Archaeological Mussel Shell in Mississippi*

Freshwater mussel shell is a common constituent of archaeological sites in Mississippi. To date, no state-wide, comprehensive overview of the use of this resource by prehistoric populations has been available. A thorough review of the gray literature, published works, and the state site files suggests some broad spatial and temporal patterns in freshwater mussel exploitation. The degree to which these patterns are real or are a product of the considerable biases in the records is discussed, along with the implications of the data for helping to understand prehistoric settlement and subsistence patterns in Mississippi.

Peacock, Evan [60] *see Rafferty, Janet***Pearl, Frederic (Texas A&M University, Galveston) and Sauck, William (Western Michigan University)**[167] *Geoarchaeological and Geophysical Investigations at Aganoa; an Early Polynesian Site in American Samoa*

In 2006, archaeologists excavated a site deeply buried in coastal sediments at Aganoa, Tutuila Island, American Samoa. Sediments were analyzed from over 40 test units, some of which were probed to 3 m. Complementary geophysical exploration (ground-penetrating radar) revealed a series of buried beach deposits, and led archaeologists to discover a discretely buried deposit of artifacts, generally associated with "Ancestral Polynesian" culture, approximately 1.6 m beneath otherwise sterile sands. Preliminary analysis suggests a prograding shoreline. An overview of the archaeological results and the geochronology is also presented.

Pearl, Frederic [93] *see Johnson, Phillip***Pearsall, Deborah [156]** *see Holst, Irene***Pechenkina, Ekaterina (Queens College of CUNY) and Ma, Xiaolin (Henan Provincial Institute of Cultural Relics and Archaeology)**[49] *Burial Status and Life-Histories at the Middle Yangshao Site of Xipo, Northern China*

During Middle Yangshao, Xipo, a 40 ha site in western Henan province, is hypothesized to have functioned as a regional center. There was considerable heterogeneity in the wealth of funerary offerings associated with twenty-two human burials recovered from just outside the

ditch that surrounds the site. We evaluate the life histories of these individuals on the basis of activity markers, bone pathology, and dental characteristics in relation to the material wealth of their respective burials. All Xipo individuals examined apparently experienced heavy physical loads during their lifetimes, with the exception of a male from the richest adult burial.

Pedler, David [192] *see* *Adovasio, James M.*

Peebles, Giovanna (VT Division for Historic Preservation (VTSHPO))

[170] *Public or Perish*

The State of Vermont's guidelines for archeology devote 3 pages to "Public Education and Outreach," reflecting the goal of providing "significant public benefits." With nearly 100% of archeological investigations a result of regulatory (federal and state) review, the "public" is a major stakeholder in Vermont archeology, a situation mirrored in many other parts of the country. After two decades of increasingly energetic education and outreach (non-technical publications, programs, Archeology Month, etc.), whom have we reached and not reached? Are sites any better protected? What more do we need to do to reach these stakeholders?

Peel, Reeda J. [73] *see* *Williams, Mary Melissa*

Peeples, Matthew [116] *see* *Hegmon, Michelle*

Penny, Dan [52] *see* *Fletcher, Roland*

Peraza Lope, Carlos [107] *see* *Masson, Marilyn*

Perdikaris, Sophia [195] *see* *Brewington, Seth D.*

Perez, Veronica (Northern Arizona University)

[211] *If Faith Can Move Mountains, So Can Household Labor*

This paper discusses ethnographic and archaeological case studies that illustrate the labor and organizational capabilities of households and communities for transforming the environment and creating complex landscapes. To contribute to this emerging body of knowledge I present new data on Prehispanic and modern terrace use and construction from the Mixteca Alta region, in Oaxaca, Mexico. This article frames this new information and the case studies within a broader discussion about the socio-political implications of landscape transformation. Finally, an ethnoarchaeological model for terrace building and for landscape transformation is proposed.

Perez Arias, Adolfo

[137] *Time and Stimulus in Human Interactions: An Evaluation of the Changing Use of Space at Irohito, Bolivia*

Interaction and competition in the Lake Titicaca Basin resulted from economic, political and strong religious ideological stimulation. The long duration of occupation at Irohito has been crucial to understanding these situations. I suggest that the character of this interaction determined the nature of the settlement. During the Late Formative, Irohito reached its largest extent as a result of competitive interaction with similar groups, such as Khonkho Wankane. During Tiwanaku 1 (AD500 – 800), some residents of Irohito moved to new locations next to elevated areas, replicating the pattern of political integration through symbolic appropriation of landscape found at Tiwanaku itself.

Perez Arias, Maribel

[137] *Late Formative Period Subsistence Economy: A Comparison of Faunal Data from Khonkho Wankane and Irohito, Bolivia*

Crucial to understanding prehistoric social dynamics is the consideration of faunal data. These data provide insights into not only what types of animals were utilized but also into the social context surrounding food preparation and consumption. This paper seeks to compare the use of animals between two sites during the Late Formative Period in the southern Lake Titicaca Basin; Khonkho Wankane and Irohito. I will focus not only on defining the frequency of consumption of different animals, but also on defining the context and spatial distribution of animal use providing a view into Late Formative economic, ritual, and political dynamics.

Perez Ixoneztli, Luis [13] *see Filsinger, Tomas*

Perez Jimenez, Gabina Aurora [46] *see Jansen, Maarten*

Pérez Trujillo, Amelia (INC - Cusco)

[9] *Pinkulluna y Maskabamba, Dos Sectores de Trascendencia en el P.A de Ollantaytambo, Cusco*

El P.A de Ollantaytambo, encierra un sin numero de restos arqueológicos entre los que destacan los sectores de Pinkulluna y Maskabamba, el primero conformado por andenes asociados al histórico puente inka y el segundo por un conjunto de recintos conocidos como Qollqas, emplazados sobre una cumbre. Ambos sectores han sido considerados como agrícolas y de fortificación en la última etapa inka, pero nuevas investigaciones nos demuestran una función diferente con una connotación religiosa y de control de ingreso a la población, con un cambio de función en diferentes etapas de la misma época Inka.

Pérez-Bias, Delfino (IIA-FFYL- UNAM) and Rincón Mautner, Carlos (University of Nevada)

[108] *On the Trail of the Shaman: Cueva de los Músicos and the Puente Colosal, Mixteca of Oaxaca and Puebla*

This paper compares pictographic representations found in two caves located in the Northern Mixteca Alta and discusses the changing themes depicted and the apparent ritual use of these caves by religious specialists. The Cave of the Musicians has been partially excavated and seems to have been used as a place of habitation. In contrast, the Colossal Bridge is an enormous wind tunnel that does not appear to have been inhabited on a permanent basis, yet its rich pictographic assemblage documents cultural developments over a broader span of time. Both caves offer new insights on changing worldviews, social organization and ritual cave use.

Perkins, Stephen [208] *see Drass, Richard*

Perry, Elizabeth (SWCA), Mowrer, Kathy (SWCA) and Salisbury, Erin (SWCA)

[196] *Bioarchaeological Investigations of Early Pueblo Communities: Demographic and Mortuary Trends in Ridges Basin*

This paper will present the preliminary results of bioarchaeological investigations of a substantial collection of human remains excavated from early Pueblo habitation sites during the course of the Animas-La Plata Project. The demographic profile of these village communities is described, with particular attention to issues of biological and cultural diversity that are reflected in aspects of the human skeleton and mortuary patterns. The concept of the cultural landscape is explored through reference to the physical bodies of those women and men who labored to literally and metaphorically construct their social universe and survive within its constraints.

Perry, Jennifer (Pomona College)

[183] *Middle Holocene Resource Use in Interior and Coastal Contexts on Santa Cruz Island, California*

As the most freshwater abundant and terrestrially diverse of the Channel Islands, Santa Cruz Island is well-suited to investigating the changing significance of local terrestrial resources through time. In particular, increased attention to interior sites on Santa Cruz Island has led to enhanced insights into Middle Holocene settlement and subsistence. Highlighted in this paper are current investigations into Middle Holocene deposits in the central valley and on the east end, both in interior and coastal contexts. Such deposits are indicative of seasonal foraging, with interior sites yielding evidence for shellfish and plant gathering, including portable and bedrock mortars.

Perry, Lauren [204] *see DuBarton, Anne; [33]* *see Slaughter, Mark*

Perry, Linda (Smithsonian Institution)

[36] *Manioc Agriculture in Lowland South America: Reevaluating the Paradigm*

Manioc agriculture is believed to have supported pre-contact populations throughout the lowlands of northern South America. This dietary model relies in large part upon the

assumption that ancient tools analogous to modern manioc processing implements were used for identical purposes. This paper will present residue data derived from the type specimens of manioc grater flakes and griddles excavated in Guyana and Venezuela in the mid-twentieth century. Evidence from starch grains and phytoliths will be examined and discussed in the context of the association of these tools with ancient food processing practices.

Perry, Sara (University of Victoria)

[110] *Picturing Peopling: De-Constructing Scientific Images of the First Colonizations of North America, Australia and Oceania*

The unfortunate archaeological tradition of saturating scholarly and popular literature with supposedly objective pictures (maps, photographs, tables, etc.) has yet to be disrupted. Taking the peopling of North America as its basis, and using the peoplings of Australia and Oceania as points of comparison, this paper demonstrates that even our most scientific renderings of the past are often nothing but dubious reflections of the status quo. Indeed, I propose that images of peopling have slipped into not-so-subtle validations of the present, obscuring landmark events like the first colonization of America behind academically-sanctioned representations of Euro-Americans at the heart of prehistory.

Persons, Brooke (University of Alabama) and LeCount, Lisa (University of Alabama)

[160] *A Preliminary Analysis of Ceramics from El Mango, Cuba*

This paper presents the preliminary analysis of ceramics from El Mango, an important site in eastern Cuba that was part of the Maniabon Hills survey conducted by Irving Rouse in 1941. Ceramic sequences for the Banes region in eastern Cuba were initially created in the 1940's, but the original sequence requires clarification in light of recent investigations. Since the well-stratified El Mango site figured prominently in the original sequence, reclassification of ceramics from the site presents an opportunity to reconsider the original sequence in concert with more recent interpretations of Ceramic Age sites in eastern Cuba.

Perttula, Tim (Archaeological and Environmental Consultants, LLC) [148] Discussant

Perttula, Timothy K. (Archeological & Environmental Consultants, LLC), Cast, Robert (Caddo Nation of Oklahoma) and Gonzalez, Bobby (Caddo Nation of Oklahoma)

[1] *Caddo Archaeology in Texas and the Caddo Nation of Oklahoma: Prospects and Challenges*

The ancestors of the Caddo Nation of Oklahoma lived in Texas from at least as early as 2500 years ago. The Caddo Indian people were forcibly removed from Texas in 1859 and were settled in Oklahoma, then Indian Territory. The Caddo left behind an extensive archaeological record of their life in Texas from thousands of farmsteads, hamlets, villages, family and community cemeteries, and small and large mound centers. Great challenges exist today for the Caddo Nation of Oklahoma in insuring that they are involved in framing the direction and conduct of Caddo archaeological work in Texas. Present and future prospects range from bleak to exciting.

Peter, Duane (Geo-Marine, Inc.) and Wurtz, Michelle (Geo-Marine, Inc.)

[164] *The Fort Hood 3D Database: An Experiment in Data Sharing and Public Outreach*

Fort Hood, Texas and ERDC-CERL sponsored this project to determine if three-dimensional laser scanning has the potential to alleviate a persistent problem in archaeology—the unavailability of artifacts to both researchers and the public. Artifacts that must be curated, stored, or repatriated can be recorded and used for digital comparative collections or educational material. Such data availability opens the door to better comparative analysis and public awareness. The Fort Hood 3D Database provides a digital database that improves the business process of curation so that research, Native American consultation efforts, and public education objectives are facilitated.

Peter, Duane [34] see Wilder, Michael

Peters, Ann (Dumbarton Oaks)

[43] *Theorizing Absent Textiles: Differential Preservation and Archaeological Interpretation on the Andean Coast*

The importance of fiber perishables in archaeological method and theory has been limited by their scarcity in the record. Here we compare contexts with excellent preservation on the

Paracas Peninsula on the south coast of Peru to other sites in the region where preservation of textiles is absent or incomplete. We seek to build a methodology for using what we have theorized about the importance of textiles for analysis of social identity and practice for the interpretation of contexts scarce in textile evidence.

Petersen, Shane (North Carolina Department of Transportation)

[42] *Defining Cultural Landscapes Through Human Ecology: A Case Study from the 1819 Citizen Cherokee Reservations in North Carolina*

The linear facilities typically associated with transportation projects provide opportunities to examine the living landscapes through which they pass. These landscapes may be seen as palimpsests of evolving cultural activities and the interactions associated with human ecology. Typically, these cultural landscapes are viewed through the lens of design intent in the built environment. But a survey conducted by the NCDOT in western North Carolina has provided an opportunity to examine the definition and evolution of rural historic landscapes through the interactions between human communities as influenced by the environment. Here, Cherokee and Anglo-American communities serve as examples of such interaction.

Peterson, Christian E. [152] see Drennan, Robert D.

Peterson, Polly A. (Statistical Research, Inc.)

[141] *The Cave/Settlement Survey as an Emerging Investigative Approach*

Cave/settlement surveys came into their own as an investigative strategy during the past decade. The integration of cave data into the larger settlement system was critical to mainstream acceptance of cave archaeology by situating both caves and settlements into a larger landscape perspective. Additionally, regional surveys contextualized individual caves within hierarchies of sacred landmarks while underscoring differences between cave assemblages and forms of utilization. The growing number of regional surveys now make it possible to detect interregional differences in utilization leading to a more comprehensive understanding of the role of caves in Mesoamerican cosmology.

Peterson, Ryan (AMEC Earth & Environmental) and Simpson, Duane (AMEC Earth & Environmental)

[164] *Geophysical Investigation of Rockshelters and Historic Cemeteries at Fort Hood, Texas*

From 2004-2006, geophysical investigations have been completed at numerous rockshelter sites and two historic cemeteries at Fort Hood, Texas. In the past, rockshelters have been rarely investigated using the geophysical techniques. Dense geophysical survey techniques were developed and applied to these sites for improved interpretation of resulting data. Geophysical anomalies identified in several rockshelters have subsequently been investigated and interpretations verified. The results obtained at Fort Hood demonstrate the utility of geophysical investigations on rockshelter sites. Additionally, the results of geophysical investigation at two historic cemeteries that resulted in the effective identification of multiple unmarked graves will be presented.

Peterson, Ryan [113] see Day, Grant; [31] see Simpson, Duane

Peterson, Staffan (Indiana University)

[31] *To Tell The Truth: Geophysical and Excavated Evidence of a Mississippian Ceramic Workshop*

A fine scale magnetic survey of a Mississippian culture ceramic production facility followed by a very fine scale broad excavation provides a good comparison between the geophysical 'look' and material culture 'feel' of this structure and its contents. The promise and shortcomings of the two surveys are presented.

Peuramaki-Brown, Meaghan (Department of Archaeology, University of Calgary)

[16] *Naachtun: A History of Discovery*

This paper will provide an introduction to the archaeological setting of the major Maya centre of Naachtun, located in the Department of Peten, Guatemala. The history of archaeological and epigraphic research will be discussed beginning with the first recorded exploration of the site by Sylvanus Morley during the early 20th century and continuing to the current Proyecto Arqueológico Naachtun.

Pevny, Charlotte (Center for the Study of the First Americans, Texas A&M University)

[89] *The Clovis Debitage and Edge-Modified Tool Assemblages from the Gault Site, Texas*
Over 25,000 pieces of debitage and approximately 150 edge-modified tools were recovered from the Clovis strata (Units 3a and 3b) identified within the Lindsey Pit. Debitage was analyzed using aggregate and individual analyses. Usewear analysis of the edge-modified assemblage incorporated low- and high-power magnification in conjunction with experimental replication. Results demonstrate that, while the Lindsey Pit was used primarily in the production of blades and bifaces, secondary activities expected at a quarry/campsite also are represented. The debitage and edge-modified tools from the two Clovis strata are compared to look for changes in these assemblages over time.

Pevny, Charlotte [89] see Bartelink, Eric

Phaneuf, Victoria (University of Arizona)

[127] *Urban Conflict in 21st Century France: Models for Interpreting the Archaeological Record*
Violent social conflict can have catastrophic effects on the lives of groups and individuals, particularly in an urban setting. Archaeological and ethnographic studies suggest that migration and the presence of minorities can increase the occurrence of urban conflict. I examine case studies from the French urban riots of late 2005 to investigate the role of ethnic and class tensions in creating conflict. The resulting model can be used to inform and expand archaeological findings. In addition, I suggest a new methodology for how text analysis can be used to interpret historical sources.

Phillips, Bruce [33] see Woodson, Kyle

Phillips, Donald L. [195] see Culleton, Brendan J.

Phillips, Erin (University of Alabama)

[212] *A Comparison of the Distributions of Artifact Forms Bearing Hemphill Style Representational Art in Moundville Burials*

Building on previous studies of artifact forms bearing Hemphill style representational art and the Moundville mortuary record, this study examines the distribution of Moundville burials possessing such artifact forms. The Hemphill Style is the local Moundville expression of what has been known as SECC iconography. The artifact forms here represented include pottery, stone palettes, stone pendants, and copper gorgets. Burials possessing such artifacts will be compared with other Moundville II and III burials and each other. Age and sex of the individual buried, richness of the burial location at Moundville, and other artifact associations will be examined.

Phillips, Scott [183] see Cregger, Michael

Phillips, Shaun (Geo-Marine, Inc.)

[6] *Which Way to Go? Changing Transportation Networks Near the Roberts Mountains, Eureka County, NV in the Late 19th century*

This poster focuses on the transportation network connecting the Roberts Mountains to Eureka, Nevada during the late 1800s and early 1900s. General Land Office (GLO) survey maps from the late 1800s as well as USGS 15' topographic maps from the 1920s were geo-referenced. The transportation systems on both of these map sets were digitized and visually compared to aid the interpretation of several historic sites recorded adjacent to the study area. Network and cost path analyses suggest which routes were most economical in transporting charcoal from production sites in the mountains to the smelters in Eureka during the gold rush.

Phillips, Stephen (University of Washington) and Taylor, James (University of Washington)

[129] *Archaeological Components of the Kuril Biocomplexity Project, Russian Far East: 2006 Field Season Update*

The Kuril Biocomplexity Project is a five-year, international and interdisciplinary collaboration investigating the 5,000 year history of human-environmental interactions along the Kuril Island chain in the northwest Pacific Ocean. Our primary objective is to create an agent based model to simulate feedbacks among climate, biotic, cultural, and earth systems. We present a

general review of our progress to-date and two components of research which we will undertake in the coming years. Resource distribution (biological and non-biological) will be investigated as the fundamental components of optimizing strategies affecting human migration throughout the island chain.

Picha, Paul (State Historical Society of North Dakota)

[6] *Reconciling Rarity: Wampum Shell in the Middle Missouri Archaeological Record*
Recent excavations at On-A-Slant Village (32MO26) and Double Ditch Village (32BL8) recovered non-local molluscan remains, including exotic tubular shell beads. The specimens are identified as Atlantic Coast wampum shell from the northern quahog or hard clam, *Mercenaria mercenaria*. Review of fur-trade literature suggests an array of trade items, among them exotic shells, were reaching the Middle Missouri Mandan villages, although in low numbers at this time. Explanations of rarity consider the role of existing Native and Euro-American trade networks in exchange. Identification also is ultimately linked to discussions of rarity.

Piehl, Jennifer, Lee, David (Southern Methodist University) and Rich, Michelle (Southern Methodist University)

[103] *The Construction of Identity and Gender in Mortuary Ritual at El Perú-Waka'*
Ancient Maya nobility compounded male and female gender concepts in the construction of identity, and mortuary deposits provide an opportunity to examine this process. This paper considers three interments at Waka' that contain female nobility and denote complex interweavings of gender and power. Analysis of the mortuary contexts and assemblages, the health and history of the interred individuals, and epigraphic information are used to examine the manipulation of gender and identity as an expression of power, both in the performance of mortuary ritual and in the creation of social memory.

Piehl, Jennifer [103] see Lee, David; [103] see Rich, Michelle

Piehl, Jennifer C. [73] see Cloud, William A. (Andy)

Pintar, Elizabeth (Austin Community College)

[79] *Hunter-Gatherers in High Altitude Deserts: Perspectives from the Salt Puna*
Models for hunter-gatherers living in high altitude deserts are discussed in light of the evidence from the Salt Puna of NW Argentina. Here, despite environmental fluctuations, uninterrupted human occupations span the entire Holocene. Although similarities with other desert hunter-gatherers in the Americas are observed, multiple factors contributed to the uniqueness of these societies. The role of scattered oases and the dependence on South American camelids are presented as key issues that highlight the distinctiveness of hunter-gatherers living in these desert environments, and are used as a tool to discuss the advantages and limitations of models applied on a continental scale.

Pinto Ilona, A.C. [134] see Blickstein, Joel

Piperno, Dolores (Smithsonian Tropical Research Institute)

[10] *Identifying New World Crops Through Phytolith and Starch Grain Analysis: Case Studies from Central and South America*
Research carried out during the past 25 years by a number of investigators has demonstrated that phytoliths and starch grains from a number of important domesticated plants native to Central and South America can be identified. They include maize, squashes and gourds of *Cucurbita* spp., yams, arrowroot, and leren. Research also reveals that the microfossils from some of these crops can be distinguished from those of their wild ancestors. This paper reviews these markers and the underlying biological processes that create them, and shows how they are applied to document crop plant presence in human occupations from Mexico, Panama, Ecuador, and southern South America dating to the early and middle Holocene.

Piperno, Dolores [156] see Holst, Irene

Piro, Jennifer (New York University)

[120] *Changes in Herding Strategies at Sos Höyük During the 3rd and 4th Millennium B.C. (NE Turkey)*

This paper integrates the analysis of animal bone remains from the Late Chalcolithic (3500/3300-3000 cal. B.C.) and Early Bronze Age I (3000-2800 cal. B.C.) phases at Sos Höyük with previously published faunal data from the Early Bronze Age II/III levels (2800-2200 cal. B.C.) at the site. Research findings suggest changes in pastoral production strategies - particularly in sheep/goat husbandry - toward a greater emphasis on secondary product exploitation in the 3rd millennium B.C. Zooarchaeological data from contemporaneous sites elsewhere in Transcaucasia are also used to compare herding economies across the region.

Piscitelli, Matthew (Boston University) and Storey, Rebecca (University of Houston)

[3] *Deciphering the Dead: Mortuary Analysis of Burials from Classic Period K'axob*

Mortuary analysis allows archaeologists to establish intentionality in burial contexts through a carefully crafted discussion of the life history of a buried individual. The purpose of this study is to investigate Classic Period (AD 250-900) remains from the ancient Maya site of K'axob, Belize. Here, a contextual analysis of burial placement allows consideration of the creation of different types of ancestors. Investigation of the relationship among burial elaboration, social identity, and paleopathologies provides a pathway into knowing something of the myriad social roles and living conditions experienced by ancient inhabitants of K'axob.

Pitezel, Todd (University of Arizona)

[182] *Beyond Practicality in the Casas Grandes Medio Period, Chihuahua, Mexico: Cerro de Moctezuma Architecture*

A visual monument in the natural topography and a unique focal point in Casas Grandes Medio Period organization, Cerro de Moctezuma is a hill site with adobe and masonry architecture. Adobe, a pedestrian material for Medio Period architecture takes monumental shape at Cerro de Moctezuma, recalling forms and over-engineering at the regional, preeminent site, Paquimé. Unknown among contemporary sites in the near valleys, full-height rubble core masonry acquires equally impressive standards at Cerro de Moctezuma. Transregional comparison facilitates discussion of architectural investment on hills during the late prehistoric era in Northwest Mexico and the Southwest United States.

Plane, Mark (UNC-Chapel Hill)

[148] *Cultural Hybridity, Colonial Ambivalence, and Catawba Identity, 1770-1820*

In postcolonial studies, hybridization describes the process through which new cultural forms arise from interaction between colonizers and indigenous peoples. Hybridization produces ambivalence in colonial societies that enables the subversion of colonial power. During the late eighteenth and early nineteenth-centuries (ca. 1770-1820), Catawbas in South Carolina leased reservation land to Anglo settlers and worked as itinerant potters, mercenaries, and slave catchers. Using archaeological and archival evidence, this paper examines how ambivalence produced by these hybridization practices allowed the Catawba to maintain considerable autonomy and construct a distinctive, non-western identity amid a society that was increasingly hostile toward people of color.

Plank, Shannon [147] see Maca, Allan**Plaza, Victor**

[137] *Khonkho Wankane un Monticulo Pre-Tiwanaku: Una Vision Cronologica a Partir de Excavaciones Realizadas en el Sector 6 del Monticulo*

Las excavaciones en el sector 6 del sitio Khonkho Wankane permiten entender su innegable filiación pre-Tiwanaku y las características intrínsecas de sus componentes. Esta fase denominada Formativo Tardío, manifiesta disímiles eventos de desarrollo arquitectónico que permiten concebir su función como sus implicancias organizativas, económicas y políticas. La construcción de extensos patios que albergan pequeños recintos y sus respectivos contextos específicos sepultados por desmedidos volúmenes de relleno rigurosamente dispuesto sobre cimientos de piedra y barro de otrora patios intensamente transitados. Al declinar este periodo, Tiwanaku concurre limitadamente, superpuesto sobre toda estructura precedente.

Plis, Laura [6] see Kuijt, Ian

Plog, Stephen (University of Virginia) [8] *Discussant*; [172] see Watson, Adam; [104] see Martin, W.N.

Plourde, Aimee (Centre for the Evolution of Cultural Diversity, UCL)

[158] *Contributions to the Study of Sociopolitical Hierarchy from a Theory of the Evolved Capacity for Prestige*

The work presented here draws on insights from evolutionary psychology and cultural transmission theory to deepen understanding of the role prestige goods played in the development of sociopolitical hierarchy. Drawing on costly signaling theory, I hypothesize that prestige goods originally came into existence to signal personal levels of skill and knowledge. The emergence of formalized leadership led to the subsequent expansion of signal content to include social power and coercive abilities. The model's predictions for the first appearance of prestige goods in the archaeological record are evaluated using published data sets from independent cultural scenarios.

Pluciennik, Mark (University of Leicester)

[197] *History Matters*

Approaches to the spread of agriculture have been very different in the USA and Europe. For many Europeans, reliance on generalized models of hunter-gatherers has meant that often the arrival of farming still signifies the beginning of meaningful pan-European or national archaeological narratives. Europe is still within a social evolutionary cage. In north America the possibility of direct historical analogy seems to have maintained a sense of variability and history, even when generalizing approaches have been most valorized. This paper explores the implications of these historical differences.

Pluckhahn, Thomas (University of South Florida)

[132] *The Pitfalls and Promises of Using Ethnographic Analogy to Characterize Complexity: A Case Study from the Woodland Period Southeast*

The Woodland period societies of the southeastern U.S. have long confounded categorization. This is especially true of Kolomoki and related sites of the Gulf Coast region, where mound building and mortuary ceremonialism became particularly elaborate, and where researchers have employed categories ranging from "proto-chieftdom" to chieftdom to "priest-state" to "religious hegemony." These interpretations rely on gradualist assumptions of cultural change and ethnographic upstreaming from the Mississippian and later periods. I argue that the societies in this area are best understood not as pale versions of their Mississippian counterparts, but instead as the product of distinct historical processes.

Plummer, Thomas [4] see Delaney-Rivera, Colleen

Plunket, Patricia (Universidad de las Américas) and Uruñuela, Gabriela (Universidad de las Américas, Puebla)

[168] *The End of an Era: Village and City during the Terminal Formative in the Puebla Valley*

Twelve seasons of work at the village of Tetimpa have documented prehispanic houses and agricultural fields under a 2000-year old airfall deposit of pumiceous ash on the northeastern flank of Volcán Popocatepetl in Puebla, Mexico. In this paper we first consider the structure of village life prior to this eruption and then briefly comment on how the disaster may have led to major population shifts that accelerated the development of urbanism at nearby Cholula.

Plunket, Patricia [63] see Mauricio, Natalia

Poe, William (Sonoma State University)

[106] *Light, Fast, Accurate, Precise: Balancing Constraints in Settlement Mapping*

The mapping component of the Columned Courtyard Complexes of Camaná, Peru Project, during thirty-two field days on three sites, established thirty-seven control points with single-frequency GPS receivers to survey precision and, using the GPS control points, gathered 8,005 data points with a laser rangefinder and electronic compass. From these data, during approximately twelve lab days, maps were produced in ArcView of approximately seventy-five courtyard complexes on the three sites. This paper describes the equipment and methods used to achieve a degree of precision permitting rapid and confident mapping down to a scale of 1:50.

Pohl, John [13] *Discussant*

Poinar, Hendrik (McMaster University), Bos, Kirsti (McMaster University), Kuch, Melanie (McMaster University), Sobolik, Kristin (University of Maine) and Bryant, Vaughn (Texas A&M University)

[36] *Metagenomics in Archaeology: The Paleofecal Record*

DNA analyses have been revolutionizing questions asked and data recovered from archaeological remains. This is particularly seen in the recovery of mtDNA and nuclear DNA of humans, plants, animals, viruses, bacteria, and parasites from human paleofeces. Here we review what has already been accomplished and what the future holds, particularly in the analysis of metagenomics (sequencing everything).

Politis, Gustavo (CONICET)

[38] *The Ethnoarchaeology of Hoti Camps (Venezuelan Guiana)*

This paper presents preliminary results of ethnoarchaeological research conducted among the Hoti, a foraging group which complements its mode of life with small scale horticulture. This society exhibits different types of camps and dwellings, depending on the environment where the camp is placed and the degree of acculturation by the band. The archaeological implications of both the residential camp and the transitory camp are analyzed and compared with other tropical forest foragers of South America. This paper explores the different dimensions of mobility and settlement patterns among hunter-gatherers and their archaeological visibility.

Polk, Michael [110] see Mattoon-Bowden, Sheri

Pollack, David (Kentucky Heritage Council), Henderson, Gwynn (Kentucky Archaeological Survey) and Raymer, Martin (University of Kentucky)

[60] *Intervillage/interregional Variation in Fort Ancient Rates of Shell Temper Adoption in Northern and Central Kentucky*

In central and northern Kentucky, the earliest use of shell temper occurred during the Late Woodland (ca. A.D. 900). From A.D. 1000 to 1400, the use of shell as temper increased at the expense of limestone, with Fort Ancient households in northern Kentucky adopting shell temper more quickly than those in central Kentucky. By A.D. 1400, shell was the preferred temper in both regions. While ease of access to shell may explain pre-A.D. 1400 variation in its use as temper, post-A.D. 1400 use of shell may be related to the introduction of new vessel forms.

Pollack, David [192] see Pappas, Christina

Pollack, Linda [123] see Gorden, Mary A.

Pollard, Helen (Michigan State University) and Fisher, Christopher (Colorado State University)

[206] *Wetlands in Human Adaptation and Social Evolution in the Purépecha Heartland*

The purépecha or Tarascan heartland is a land of lakes and marshes in the volcanic highlands of central-west Mexico. Archaeological, ethnohistoric and ethnographic research in the last 20 years has documented the critical role these wetlands have played in the political economies of the region, the timing and nature of state emergence, and the maintenance of modern ethnic identities and economic stability. This paper will focus on the major debates these data address and the 'piece of the human puzzle' that wetlands occupy.

Pollard, Helen [63] see Hirshman, Amy

Pollock, Stephen [160] see Hamilton, Nathan

Pollock, Susan (Department of Anthropology, Binghamton University)

[193] *An Archaeology of Perpetrators*

Archaeologists and their organizations have been forced to ponder their politicized roles when war breaks out in regions where they work. We ask how archaeologists can use their professional skills not to mitigate effects of war, but to prevent it in the first place. An

archaeology of perpetrators spotlights groups and individuals whose actions were directly responsible for inflicting violence on others, as well as the acclamatory role of broader publics. Archaeology's potential to render visible, durable and thereby unforgettable past, present and future acts of aggression offers a way in which archaeologists can take a proactive stance against violence.

Pollock, Susan [133] Discussant

Pomfret, James (Georgia DOT)

[31] *Ground-Penetrating Radar Profile Spacing and Orientation for Subsurface Resolution of Linear Features*

As time is often an important factor in Ground Penetrating Radar (GPR) surveys, a test was conducted that examined the benefits received from increasing data collection density. At Ceylon Plantation GPR grids were collected in both the X and Y direction at 50 cm intervals and in the Y direction at 25 cm intervals. The composite X-Y amplitude map and the 25 cm interval map both produced high resolution images. The X-Y composite collection method was determined to produce the highest quality amplitude map due to the increase resolution and detection of thin, linear features.

Pool, Christopher (University of Kentucky)

[107] *Residential Pottery Production in Mesoamerica*

Archaeological research conducted over several decades supports the conclusion that pottery production overwhelmingly was conducted in residential settings in ancient Mesoamerica. However, the evidence also points to great diversity in the intensity of production in these residential settings as well as the social status of producing households. This paper examines factors that contributed to these dimensions of diversity as well as general prevalence of residential production, through a comparison of pottery production in Mesoamerica, incorporating the author's current and previous investigations of pottery production in Tres Zapotes and the Sierra de los Tuxtlas, Veracruz.

Pool, Christopher [140] see Stoner, Wesley; [156] see VanDerwarker, Amber; [168] see Loughlin, Michael

Pool, Michael (Austin Community College)

[15] *The Agro-Ecology of the Mimbres Mogollon: Estimating Prehistoric Agricultural Production During the Mimbres Classic Period*

Some researchers have suggested that decreasing precipitation adversely affected agricultural production during the A.D. 1100s, leading to the abandonment of much of the Mimbres River valley and a redistribution of population. Crop production data (DDSAT 3.5 model) and dendroclimatological data are used to estimate prehistoric maize production during the Mimbres Classic period. When compared to population estimates for a study area in the middle Mimbres valley, these prehistoric crop production estimates indicate that production was adequate to support exponential population growth, much less the estimated population. This suggests that decline in precipitation alone was not responsible for the Mimbres Collapse.

Poor, Joan (St. Mary's College of Maryland) [118] Discussant

Popelka-Filcoff, Rachel S. (University of Missouri-Columbia), Glascock, Michael D. (University of Missouri-Columbia) and Robertson, J. David (University of Missouri-Columbia)

[30] *Developments in Instrumental Multi-Elemental Analysis for Ochre Geochemistry*

Iron oxides and associated minerals (ochre) were widely used during ancient times. However, geochemical data and archaeological provenance information for ochre are not well documented. This poster presents data from instrumental neutron activation analysis (INAA) and x-ray fluorescence spectrometry (XRF) that indicate geochemical trends in ochre. Ochre was sampled thoroughly from both geological sources and artifacts in order to understand the elemental variation and associations in ochre. This poster presents a compositional ochre database from several sites, sources and locations and a multivariate statistical analysis. Conclusions about trends in ochre geochemistry, statistical methods for ochre and ochre composition are presented.

Poplin, Eric (Brockington and Associates, Inc.), Agha, Andrew (Brockington and Associates, Inc.) and Brooker, Colin (Brooker Architectural Design Consultants)

[71] *Recent Investigation of the Clifton Great House, New Providence*

Excavations inside the great house at Clifton Plantation on New Providence in 2006 allow examination of the nature of construction of this late eighteenth century structure and some activities and pursuits of its last occupants. Portions of the north room and central hall were excavated revealing the lower portions of the ruined walls and artifacts associated with the terminal occupation. Deposits within the building permit reconstruction of its collapse following a catastrophic fire. Artifacts recovered from within the house permit comparisons with other portions of this extensive Loyalist period plantation and contemporary plantations on New Providence and other Bahamian islands.

Popper, Virginia [206] *see Frederick, Charles*

Porobil, Jonathan [147] *see Johnson, Erlend*

Portillo, Marta [207] *see Albert, Rosa Maria*

Possehl, Gregory (University of Pennsylvania)

[52] *Water and the Indus Civilization: The Sacred and Profane*

The water resources of the Indus Civilization were varied. The Indus River is a significant resource, without which Mohenjo-daro would be in desert. The Indus peoples were also concerned with personal and settlement hygiene. Houses had bathing facilities, wells and drains. Mohenjo-daro also has the Great Bath—a ritual facility involving ablutions. We can thus think upon the symbolic, sacred nature of cleanliness, as one which complimented personal hygiene. The term “wasserluxus” has been used to capture the Indus peoples personal use of water, be it sacred or profane.

Possehl, Gregory (University of Pennsylvania) [117] *Discussant*

Potter, Ben (University of Alaska Fairbanks)

[106] *Site Location Model and Survey Strategies in Central Alaska*

A GIS-based site location model was developed for a recent railroad project, encompassing an 80-mile long corridor along the Tanana River in central Alaska. The model was used primarily to identify appropriate survey strategies across a heterogeneous environment. Over forty prehistoric sites were discovered, ranging in age from over 10,000 to 1,000 radiocarbon years BP. Almost all of the sites were found through subsurface testing, a relatively rare occurrence in the Subarctic. Model performance is assessed through various measures, and site data are discussed relative to important archaeological problems in the region.

Potter, Ben A. [30] *see Reuther, Joshua D.*

Potter, Daniel (Texas Historical Commission)

[50] *Bedrock Mortars of the Edwards Plateau*

Bedrock Mortars occur in a variety of forms in central and north Texas, likely due to differences in foods being processed, bedrock type, and/or distinct cultural traditions. Analysis reveals consistent regional differences in form, surprising densities of mortars in some parts of the state, and the presence of organic residues that will prove valuable in future functional and chronological assessment.

Potter, James (SWCA)

[196] *History of a Landscape: An Overview of Ridges Basin*

Ridges Basin, the heart of the Animas-La Plata reservoir project, was the homeland for various groups in the past and as a landscape provided economic and ritual resources for these groups. This paper summarizes the history of occupation and use of the Ridges Basin area from Paleoindian times to the historic period with particular focus on the changing character of the cultural landscape and issues of cultural diversity and identity construction on those landscapes.

Potter, James [196] *see Yoder, Thomas; [196]* *see Knight, Terry*

Pottier, Christophe [52] *see Fletcher, Roland*

Pouley, Cheryl K. [50] *see Ferris, Jennifer M.*

Poulos, Brenda (Arizona Archaeological Society)

[123] *The Bond between Avocational and Professional Archaeologists: Celebrating 43 years of the Arizona Archaeological Society's Contributions to Archaeology*

For forty-three years the Arizona Archaeology Society has served as a bond between professional and avocational archaeology in the state of Arizona. Professional archaeologists serve as advisors to all AAS chapters and supervise all AAS projects. Professionals also provide educational programs in various aspects of archaeology, providing members with the skills to assist in the research, protection and preservation of archaeological remains. The research results are published by the AAS both at the state and chapter level. AAS membership dues assist the research, preservation, curation and publication efforts of the professional community. An overview of AAS projects will be presented in this poster.

Powell, Christopher [143] *see Barnhart, Edwin L.*

Powers, Bob (National Park Service), Larralde, Signa (Bureau of Land Management) and Schlinger, Sarah (Bureau of Land Management)

[125] *Transformation in the Galisteo: Preserving a Storied Place*

From the 13th through the 17th centuries, the Galisteo Basin was home to one of the largest populations of Puebloan people in the Southwest. In the catastrophic aftermath of the Pueblo Revolt, the Basin's large pueblos were depopulated, and left to time, weather, and happenstance. Until recently, the Basin's colonial-era landscape remained untouched. Now widespread development threatens the Galisteo's isolated pueblos. Our poster describes current efforts by a consortium of public and private partners to preserve and protect 24 Galisteo sites under the mandate of the Galisteo Basin Archaeological Sites Protection Act.

Powis, Terry (Kennesaw State University) and Hurst, W. Jeffrey (Hershey Company Technical Center)

[39] *An Archaeological Investigation of the Origins of Cacao Drinking: Ceramic Evidence from the Gulf Coast and Pacific Coast of Mexico*

Research has revealed that the Maya Lowlands was one of the first areas in which beverages made from chocolate were prepared and consumed. It has been postulated, however, that the Gulf Coast and Pacific Coast of Mexico may also have been areas of early cacao use. Dry residues collected from ceramic vessels at Olmec and Mokaya sites were chemically tested for traces of chocolate. In addition to reporting our findings we also tested the hypothesis that the first ceramic vessels in the Soconusco region, dating to the Barra Phase, were special containers used for serving ritual drinks made from chocolate.

Pozorski, Shelia (Univ of Texas-Pan American) and Pozorski, Thomas (Univ of Texas-Pan American)

[182] *The Square-Room-Unit Architectural form as an Emblem of Authority in the Casma Valley, Peru*

Fieldwork in the Casma Valley has explored the complex Sechin Alto Initial Period (2150-1000 cal B.C.) polity that built the largest mounds in the New World at that time. A key architectural element of these mounds is the square-room unit, a modular architectural form with wall niches, rounded corners and bar closures to restrict access. This modular unit is not limited to monumental architecture, but also consistently defines administrative presence in varying contexts within and between sites where it likely also functioned more abstractly as an emblem of administrative authority.

Pozorski, Thomas [182] *see Pozorski, Shelia*

Pozuelos, Adelzo, Guenter, Stanley P. (Southern Methodist University)

[35] *Discovering the Snake Kingdom: The Epigraphy of the Mirador Basin*

Epigraphic research has revealed that the Mirador Basin of northern Guatemala was anciently known as the Snake (Kan) Kingdom, ruled by more than twenty kings during the Preclassic period, making this the earliest known Maya kingdom. This paper will present epigraphic and archaeological evidence for this ancient Maya dynasty and its impact on later Maya rulers of the Classic period.

Prentiss, Anna [50] *see* OBoyle, Robert

Preston, Tim (Maya Research Program)

[78] *Excavations of a Terminal Classic Residential Complex in the Rosita Group, Blue Creek, Belize*

Rosita is a large, elite residential group in Northwestern Belize near the larger center of Blue Creek. The relationship between the sites has been in debate with opinions ranging from Rosita being politically independent to being an outlying integrative group. It is necessary to understand the various components of the Rosita Group before examining the larger question of political allegiance. Excavations in 2006 focused on a single hilltop residential complex first occupied in the Middle to Late Preclassic and significantly expanded in the Terminal Classic. Future excavations will expand upon this theme.

Pretola, John P. (Bay Path College)

[61] *Ceramic Petrography for the Masses: Ethnicity, Interaction Models, and "Iroquoian" Pottery*

Ceramic petrography is the examination of pottery in thin section using polarized light. Although not a new method, when combined with new realizations that stylistic behavior can also be found in technological attributes, ceramic petrography becomes useful to study trade, migration, ethnicity, and other forms of group behavior. Here, I apply ceramic petrography to the problem of "Iroquoian" pottery in the non-Iroquois regions of eastern New York and southern New England. My findings show there are clear distinctions between Iroquois and Algonquian pottery, and that it is imperative that archaeologists develop new interaction models for these two peoples.

Preucel, Robert (University of Pennsylvania)

[19] *Hybrid Identities and Invented Traditions: Indigenous Southwestern Responses to the Spanish Colony*

The Spanish colonization of New Mexico marked a period of unprecedented ethnic interaction and transformation among Indian communities. In response to the Spanish programs of missionization, encomienda, repartimento, and reduccion, some Pueblo people fled their home villages and took refuge with Indian peoples living at the edges of the Spanish empire. In my presentation, I focus on Pueblo-Navajo relations as a case study of colonial induced ethnogenesis. The long standing strategy of "taking refuge" generated new and distinctive cultural practices that are central to what we think of as Pueblo and Navajo identities today.

Prewitt, Elton (Shumla School)

[190] *The Forgotten Years: Post-Paleoindian Artifacts from the Gault Site*

Excavations at the Gault Site during the past 15 years have focused on intact deposits, primarily of Paleoindian age (especially Clovis) but also including limited Archaic midden. Most Archaic and Late Prehistoric deposits are disturbed from looting that began in the early 20th century. This paper reports about four thousand lithic artifacts dug from one of the site's burned rock middens by The University of Texas in 1929-1930. Relative densities of artifacts through time, when compared to the regional Archaic record, provide an intriguing look at variability within large habitation sites.

Prewitt, Elton [41] *see* Boyd, Carolyn

Price, Heather and Jackson, Thomas

[50] *Preliminary Investigations at an Early Upper Paleolithic Open Air Site in North Central Mongolia*

Controlled test excavations at an open air site in the valley of Egiin Gol in north central Mongolia have revealed an intact early Upper Paleolithic cultural assemblage including large blades and blade cores made from locally available toolstone. These were found in association with preserved faunal remains and an intact feature dating to ca. 30,000 BP. This occupation falls temporally and geographically between early Upper Paleolithic occupations to the north in Siberia, and those to the south in China.

Price, T. Douglas (University of Wisconsin-Madison)

[152] *Revisiting the Origins of Agriculture*

The emergence of hierarchy and social inequality in human society is of major importance and

the timing of these phenomena is critical to understanding a large part of human history. Various pieces of evidence suggest that the beginnings of social inequality are largely co-terminus with the spread of agriculture. This presentation will examine the evidence for social differentiation in several early farming contexts in an attempt to discern the relationship between these developments. Evidence from the Near East, China, and Europe is the focus of discussion.

Price, T. Douglas (University of Wisconsin-Madison) [24] *Discussant*

Primeau, Kristy (SUNY-Albany) and Rieth, Christina B. (New York State Museum)

[170] *Teaching our Teachers: A Case Study in Public Archaeology*

Today, a wealth of archaeologists are realizing the need for dialogue with members of local communities, as well as the citizens of areas where archaeology may occur less frequently. One way to reach an extensive audience is through various community educators. This paper concentrates on the role that K-12 education plays in the process of archaeological understanding and discusses recent efforts to educate teachers about the importance of archaeology and the need for archaeological education in parochial curriculum. It describes the importance of these activities and uses a case study from a recent teacher workshop as evidence for the need for such educational outreach.

Prince, Paul (MacEwan College)

[50] *Variability in Lithics and Site Types on a Northwest Coast Frontier*

Variability in lithic tool types, raw material selection and reduction strategies between planked house villages, defensive refuges and pithouses at Kitwancool Lake, on the inland margins of the Northwest Coast, is presented. I argue the differences are more likely a function of ethnicity and concomitant technological traditions and networks of exchange, than of seasonality or site function. These data are used to support a broader argument for two ethnic groups in the study area, engaged in complex interactions as part of a Late Prehistoric process of political consolidation in northern British Columbia.

Prince, Steve [171] *see* Harmon, James

Procter, Rebecca (Red Vine Consultants) and Dean, Glenna (Historic Preservation Division, NM Dept. of Cultural Affairs)

[136] *Getting from Here to There*

Taking the Camino Real to schools in New Mexico was one thing; taking it to schools in Chihuahua, Mexico was another thing altogether. Aside from translations of curriculum materials from English to Spanish, there was the translation of concepts, themselves embedded in historical contexts and principles of government. What seemed straightforward from this side of the border raised unexpected opportunities for inter-cultural conversations before, during, and after the workshop up and down the Camino Real.

Proulx, Donald (University of Massachusetts)

[17] *Reading Nasca Culture through Its Iconography*

Although archaeology has revealed a great deal of information about the nature of the Nasca culture of southern Peru, ceramic iconography, when used judiciously, can greatly expand that knowledge. This paper, based on a sample of almost 10,000 vessels, will attempt to illustrate some of the non-archaeological insights about the Nasca obtained from their art.

Prufer, Keith M. (Wichita State University)

[141] *Contributions of Cave Archaeology to a Generalized and Comparative Understanding of Mesoamerican Societies*

As the number of archaeological cave projects has grown the sophistication of anthropological research questions has increased, and concomitantly the contributions to interpretations of the Mesoamerican past. Central has been linking cave use to concepts of a sacred Earth as a primary and enduring orientation of Mesoamerican worldview. This orientation is linked to a range of social behaviors including settlement choices, legitimating political power and hereditary rulership, specialized economies, cultural boundaries, conflict, illness, healing, mortuary treatments, and cultural responses to environmental change. This paper examines the development of theoretical contributions of cave archaeology to generalized understandings of Mesoamerican societies.

Prufer, Keith [108] see Moyes, Holley; [188] see Kindon, Andrew

Pugh, Daniel (University of Michigan)

[75] *Not Quite White Rock: The Swantek Site Ceramic Assemblage*

Excavations at the Swantek Site (25PT111) in central Nebraska have revealed a large Oneota settlement far outside traditional Oneota territory. The recovered ceramic sherds share characteristics with Oneota pots found in both the Midwest and the Central Plains White Rock area. However, the Swantek assemblage is striking in its uniqueness. Swantek's ceramics suggest a 14th century migration of Oneota people that displaced indigenous Central Plains tradition people and established a unique social network on the eastern prairies.

Pugh, Timothy (Queens College and CUNY Graduate Center), Rice, Prudence (Southern Illinois University at Carbondale) and Rice, Don (Southern Illinois University at Carbondale)

[14] *The Archaeology of Contact and Colonialism in Petén, Guatemala*

Recent research by the Proyecto Itza has shed light upon interactions between the Maya and Spaniards both before and after the conquest of Petén, Guatemala in 1697. While preliminary, these data suggest that two of the Maya groups in Petén before conquest, the Itza and Kowoj, had different ways of dealing with Spanish material culture. Both groups enjoyed a longer period of independence from the Spaniards than Yucatan or Belize. In the case of the Kowoj, it is possible to observe how they utilized Spanish artifacts before they were dominated by the Spaniards.

Pullen, Daniel (Florida State University)

[188] *Competitive State Formation in the Aegean: Heterarchy and Hierarchy*

This paper examines regional patterning within two Late Bronze Age Mycenaean states in the Aegean and raises general questions about the development of first generation secondary states. Although the Corinthia was a geo-political periphery contested by the island state of Kolonna, with its early dominance in sea transport, and Mycenae, with its extensive land resources, it was the heterarchical nature of the Corinthian socio-economic landscape which precluded the development of a hierarchical network-based state such as at Mycenae.

Punzo Diaz, Jose Luis [7] see Zavala, Bridget

Purser, Magaret (Sonoma State University)

[111] *Mapping the Cultural Landscape of Levuka, Fiji: Public Engagement in Heritage Planning Through GIS*

Levuka, Fiji is a 19th century Pacific port town being nominated by the Fijian government to the World Heritage List. Levuka's rich archaeological, architectural, and cultural landscape heritage needed to be documented for the project, but at the same time, some mechanism needed to be developed for making the ongoing processes of consultation and decision-making more inclusive among the town's extremely ethnically and culturally diverse community. This presentation discusses the experimental collaboration of a community-based GIS project designed to meet these two goals, the results produced over the last four years of work, and the directions planned for the future.

Puseman, Kathryn (Paleo Research Institute)

[6] *Macroflora Remains from a Late-Nineteenth Century Chinese Vegetable Farm in San Francisco, California*

Water-screened samples from a historic Chinese habitation site were examined for macrofloral remains. This site was discovered during the Valencia Gardens Housing Project in San Francisco's Mission District, California. The macrofloral samples were recovered in the architectural remnants of a structure occupied by Chinese vegetable farmers before the Great Earthquake of 1906. Macrofloral analysis suggests that the Chinese farmers were growing and/or eating a variety of legumes and cucurbits, including peanuts, beans, soy beans, mung beans, Chinese winter melon, watermelon, cantaloupe or related melons, cucumbers, winter or Japanese squash, cushaw, bitter melon, and other species of squash/pumpkin/gourd.

Pyburn, K. Anne (Indiana University) [153] *Discussant*; [179] *Discussant*

Pye, Mary E [211] see Gutierrez, Gerardo

Pyne, Lydia (Arizona State University) and Riel-Salvatore, Julien (Arizona State University)

[56] *Niche Construction: Implications for Archaeology*

Niche construction is a relatively new theoretical idea in evolutionary biology, arguably "extending" traditional evolutionary theory. Essentially, it emphasizes the role of the organism in shaping the environment – in turn, generating novel evolutionary dynamics. Niche construction is defined in a highly inclusive way from population-genetic models to cultural niche construction in human evolution. We explore the concept of niche construction and its logical place within archaeology to examine theoretical underpinnings and assumptions about human evolution. We argue that niche construction is a useful concept bridging theoretical disconnects between physical and cultural evolution in contemporary archaeological theory.

Pyne, Lydia [110] see Riel-Salvatore, Julien

Quezada Ramírez, Osiris (ENAH)

[74] *Utensilios de Piedra verde Procedentes del Valle de Chilapa-Zitlala, Guerrero*

Durante las temporadas de campo 2003, 2004 y 2005 del proyecto "Arqueología de superficie Chilapa-Zitlala, Guerrero" dirigido por Paul Schmidt, fueron recuperados algunos elementos elaborados en piedra verde. Aquí presenta el análisis de los objetos de piedra verde recuperados en superficie y procedentes de distintos sitios registrados en campo. Los objetivos principales son: establecer la morfología de las piezas y conocer el tipo de roca sobre la cual fueron elaborados los utensilios a través de análisis petrográfico y de difracción de rayos-x, información que mas adelante permitirá aproximarnos a posibles yacimientos.

Quigg, J. Michael [37] see Matchen, Paul M.

Quigg, Michael (TRC Environmental Corp.) and Dering, Phil (Shumla Archeobotanical Services)

[99] *Late Prehistoric Subsistence Economy on the Periphery of the Southern Plains*

We examine subsistence remains from Late Prehistoric period components along the southern Plains periphery. Archaeologists argue that a shift from generalized hunting and gathering to big game hunting occurred during Toyah interval, the latter part of this period. Assessment of subsistence remains using the diet-breadth model does not support the argument that diet-breadth narrowed due to a focus on big game hunting. Instead, Late Prehistoric components exhibit wide variation in subsistence remains, from very low-ranked plant foods to high-ranked big game. The data are better explained by changes in mobility strategies in response to a variable and risky environment.

Quilter, Jeffrey (Peabody Museum, Harvard), Franco, Regulo (Proyecto El Brujo), Doonan, William (Sacramento City College) and Starratt, Hal (W. Nevada Community College)

[19] *Resisting Resistance at Magdalena de Cao Viejo (1578 - ca. 1652)*

We present information regarding on-going research at Magdalena de Cao Viejo, a reduccion in the lower Chicama Valley. We offer views on how "resistance" was or was not in operation at this site, how we might consider other social forces in action, and the possibilities of identifying such forces through the limitations of both written sources and archaeology.

Quilter, Jeffrey (Peabody Museum, Harvard) [180] Discussant

Quinlan, Angus [123] see Woody, Alanah

Quinn, Colin (Washington State University) and Kuijt, Ian (University of Notre Dame)

[101] *Follow the Signs: Signaling Theory and Shifting Systems of Natufian Mortuary Adornment*

Signaling theory provides an avenue by which archaeologists can explore past social information exchange by focusing on the use of highly visible material culture and personal adornment items. We examine the production, use, and distribution of personal adornment items in Near Eastern Early and Late Natufian period mortuary systems just before the forager-farmer transition. By understanding how the signaling potential of personal adornment

items changed through time it is possible to gain insight into other shifting attributes of prehistoric life, such as social, economic, and technological organization.

Quintanilla, Claudia [26] *see Barrios, Edy*

Quist, Juliana [65] *see Fariss, Barker*

Quitmyer, Irvy R. (Florida Museum of Natural History)

[195] *A Trophic Level Model of Pre-Columbian Overexploitation of Marine Resources:*

Zooarcheology of Cinnamon Bay, St. John, Virgin Islands

Ninety-nine animal species (443 individuals) were identified from a classic Taíno Chief's offering site. A trophic level model was applied to Monserrate (ca. A.D. 950), Santa Elena (ca. A.D. 570) and Chicán (ca. A.D. 460) ceramic period fauna from the Cinnamon Bay site. I confirm previous Caribbean studies that show that increased exposure to humans results in declines in the size and numbers of reef piscivores and an increase in reef herbivores of a lower trophic level. Principles of island biogeography applied to the zooarchaeological record allow identification of human impact on island biotas.

Raab, Ann (University of Kansas)

[104] *Historical Archaeology for the 21st Century - Revisiting Stanley South*

A fresh look is taken at research methods in historical archaeology. In the 1970's, Stanley South's "Method and Theory in Historical Archeology," was a call to revitalize historical archaeology. In this book, he called upon historical archaeologists to move beyond the goals of preservation and restoration, and look at answering broader anthropological questions. Decades have passed, and a review of archaeological literature shows that this is a perfect time to revisit South's ideas. Proposed archaeological work in Missouri and Kansas, focusing on slave economies, can provide an example of the type of truly anthropological historical archaeology proposed by Stanley South.

Raab, Mark (University of Missouri-Kansas City) and Davis, Loren (Oregon State University)

[184] *Paleo-Coastal Archaeology and Peopling of the New World: The Problem of Clovis-First and Land-Locked Models of Prehistory*

Traditional archaeological thinking identifies Ice Age terrestrial hunters of the continental interior, Paleo-Indians, as the root of prehistoric North America's cultural diversity, including Late Holocene maritime societies. Advances in Paleo-Coastal archaeology reveals the land-locked flaws of this model, suggesting that endless debate about whether Clovis was the first culture in North America obscures the colonization of coastal North America during the Late Pleistocene by non-terrestrial hunters; namely, seaborne Paleo-Coastal groups. Increasingly, it appears that two distinctive techno-economic traditions were responsible for the peopling of the New World: Paleo-Coastal and Paleo-Indian.

Rabinovich, Rivka [217] *see Weiss, Ehud*

Raczek, Teresa (University of Pennsylvania)

[117] *Putting the "Lithic" Back in the Chalcolithic: South Asian Technology in Transition*

Lithics as an artifact class have been somewhat undervalued in South Asian archaeology, especially at sites inhabited after the advent of copper. Throughout the subcontinent, lithics were an important part of the technological repertoire up through the first millennium BC and in some cases, even later. This paper will explore variation in lithic procurement and production in the second and third millennium BC in South Asia. Variation in lithic technology will be considered within broader economic and social contexts. Issues to be considered include access to copper and good stone, economic networks, non-lithic craft production, subsistence strategies, and mobility.

Rademaker, Kurt (University of Maine), Bromley, Gordon (University of Maine), Todd, Claire (University of Washington), Reid, David (University of Maine) and Fortin, Louis (University of Maine)

[5] *Terminal Pleistocene Landscapes and Early Foragers in Southern Peru: A GIS Model*

Ongoing interdisciplinary research in southern Peru provides an increasingly clear picture of how local Andean climate, ecology, and human settlement patterns changed at the end of the

last ice age. We integrate data from previous studies, our recent glacial geologic field work at the Firura and Coropuna ice caps, and continuing archaeological survey of a ~100 mile-long coast-highland corridor within a Geographic Information Systems (GIS) model. Our model highlights important connections between early Andean foragers and their paleoenvironments and in turn is used to refine the search for additional early human settlements in this and other coast-highland corridors.

Radovanovic, Ivana (University of Kansas)

[197] *Early and Middle Holocene Small-Scale Societies Research in the Balkans: The Case of Lepenski Vir*

The mid-Holocene Meso/Neolithic transition remains to be one of the central topics of the European archaeological enquiry. Its early occurrence in the Balkans is extensively studied in contrast to the Early Holocene hunter-gatherer settlement in this region. The causes for this research bias are explored following the case of the Danube Gorges Mesolithic (Lepenski Vir), in the light of local scholarly traditions, the impact of changing research agendas coming from both sides of the Atlantic during the past four decades, and the place of the Balkan Mesolithic in the current Holocene hunter-gatherer research.

Rafferty, Janet (Mississippi State University) [42] Discussant

Rafferty, Janet (Mississippi State University) and Peacock, Evan

[60] *The Spread of Shell-Tempering in the Mississippi Black Prairie*

The earliest shell-tempered pottery in the Black Belt physiographic province of Mississippi dates from ca. A.D. 1050- 1100. Later, sites producing shell-tempered pottery are common, with assemblages dominated by sherds with plain surfaces, making dating based on diagnostic artifacts difficult. Shell tempering rapidly superseded grog tempering, suggesting to some researchers that abrupt population replacement had occurred. We argue that the spread of Mississippian farmsteads over the province was gradual, accompanied by the spread of shell tempering. Absolute and relative dating, combined with functional and environmental analyses, help explain this pattern from an evolutionary perspective.

Rafferty, Sean (University at Albany, SUNY)

[101] *The Potential for Archaeometric Source Area Analysis in Eastern Turkey*

Archaeometric trace element analysis has been used extensively in identifying source areas of raw materials used in artifact manufacture. Two important techniques are X-Ray Fluorescence (XRF) and Proton-Induced X-Ray Emission (PIXE). There has not been significant use of such techniques in Turkey, despite the rich archaeological history and presence of numerous raw material source areas in the country. The University at Albany's Anthropology Department and Ion Beam Laboratory, in collaboration with Ataturk University, has begun a program to apply these techniques to archaeological research in Eastern Turkey. In this paper I present the project's research design, and discuss preliminary results.

Rager, Hal (Desert Research Institute/Nevada Archaeological Association), Underwood, Sali (Nevada State Historic Preservation Office/Nevada Archaeological Association) and Jensen, Eva (Lost City Museum/Nevada Archaeological Association)

[123] *Works Well With Others: Nevada's Site Steward Program Success the Result of Cooperation at Many Levels*

The present success of the Nevada Site Steward Program stems from the cooperation between five federal, several state agencies, the non-profit Nevada Archaeological Association and the vibrant avocational community of affiliated groups. As with any project with multiple stakeholders, conflicts can arise concerning ownership, leadership and project direction. Nevada's success has been predicated on the involvement of the non-partisan NAA as the home of the Site Steward Steering Committee. NAA membership is open to both avocationalists and professional archaeologists. About 500 Site Stewards have completed training and have been monitoring sites from the Black Rock Desert to Searchlight since 2003.

Railey, Jim (SWCA - Albuquerque)

[155] *The Sandy Rise Site: A New Look at Basketmaker II in the San Juan Basin of New Mexico*

Large-scale excavations at the Sandy Rise site, along US 491 in northwestern New Mexico,

uncovered the remains of a Basketmaker II (Late Archaic) pit-house settlement, dating ca. 400-200 B.C. The Basketmaker II component was buried by up to 1 m of eolian sand, within a stabilized dune. The protected, stratigraphic context and narrow time horizon of this component provided a rare opportunity to investigate the layout and structure of a Basketmaker II settlement. The site contained seven pit houses, the largest of which was 5 m in diameter – exceptionally large for the Late Archaic period in the northern Southwest.

Rainey, Katharine

[156] *Archaeobotanical Materials From Seip Earthworks, Ohio*

The 2005 excavations of non-mound structures at the Seip Earthworks in Ohio yielded a variety of seed and charcoal materials from the Hopewell period. In this report I use archaeobotanical materials to examine questions of prehistoric food and fuel use. Additionally, I examine the spatial distributions of plant remains as they suggest the activities that took place in the structures.

Rains, Michael (York Archaeological Trust)

[172] *The Integrated Archaeological Database: Archaeological Data Management from Cradle to Grave*

The Integrated Archaeological Database (IADB) began over ten years ago as a simple computerised recording system for excavation Context records. Since then it has developed into a truly integrated archaeological research framework which manages all aspects of data management from excavation, through post-excavation research to eventual publication/dissemination and archiving. This paper will outline the key features of the IADB with reference to the underlying archaeological rationale which has guided and driven its development. Particular emphasis will be placed on the recent development of the IADB into a prototype virtual research environment for archaeology.

Rains Clauss, Lee (Rio Hondo and San Bernardino Valley Colleges)

[201] *Identity Crisis: The Archaeology of Indigeness and Ethnicity in 21st Century America*

Since its inception, North American archaeology, a self-appointed caretaker of culture, has continually, yet inconsistently, recast, reconstituted, and re-invented indigenous identity. Such an approach has left archaeologists and Native Americans with fundamental incompatibilities regarding interpretations of the past. Unfortunately, this incongruity has been conveyed and emphasized in recent, imprudent statutory and regulatory language, interpretation, and application, as well. In my paper, I will discuss this troublesome legacy of the “archaeology of identity” and make the case that archaeology’s role as arbiter of indigeness and ethnicity should be abandoned due to its inherent methodological improbability, cultural inappropriateness, and ultimate inconsequentiality.

Rakita, Gordon F.M. (University of North Florida), VanPool, Christine S. (University of Missouri), VanPool, Todd. L. (University of Missouri) and Wilson, David (University of North Florida)

[32] *Introduction to the 2006 Janos Archaeological Project*

The 2006 Janos Archaeological Project located and surface surveyed over two dozen sites in northwestern Chihuahua, Mexico. This poster provides an overview of the project results including summaries of site types and surface artifacts observed. The sites and their associated materials are placed within their temporal and cultural context. This poster also presents a brief discussion of contemporary issues and questions regarding the origins and development of the Casas Grandes culture and its relationships with surrounding areas.

Rakita, Gordon F.M. [32] see Jones, Teresa M; [32] see VanPool, Christine S.

Ramenofsky, Ann [5] see Angel, Jules

Ramirez, Roberto [147] see Compton, John; [147] see Escobar Morales, Santiago

Ramirez-Aliaga, Jose Miguel [167] see Jones, Terry L.

Ramos, Jorge (Instituto Hondureño de Antropología e Historia), and Agurcia, Ricardo
[151] *La Arqueología en Honduras: Encrucijada de un País en Desarrollo*

A pesar de la riqueza arqueológica de Honduras y su potencial a través del turismo cultural sostenible, la capacidad de manejo del patrimonio cultural es débil. La situación refleja dependencia en investigadores extranjeros con escasa supervisión. Los saqueadores y el desarrollo de infraestructura básica, complican el cuadro. En el 2006, el Gobierno establece un nuevo marco legal para la investigación en el país. Hay cambios novedosos para mejorar oportunidades incluyendo participación de la sociedad civil y municipal. Esta ponencia resume esta encrucijada y su potencial para el futuro de Honduras.

Randall, Asa (University of Florida) and Sassaman, Kenneth (University of Florida)

[132] *(E)mergent Complexities During the Archaic in Northeast Florida*

Middle Holocene foragers in Northeast Florida engaged in practices and reproduced institutions unanticipated by evolutionary models. Because of their early occurrence and foraging subsistence economies, however, such configurations would traditionally be reduced to a liminal evolutionary status and described as "emergently complex." Drawing on recent research in the Middle St. Johns River Valley, we explore histories of monumental shell mound construction, exchange alliances, and culture contact situations. What we find are not prior simplicity and inevitable complexity, but ongoing and non-directional transformations in structure and practice that register merging social complexities through time and space.

Randall, Asa [58] see Sassaman, Kenneth

Ranere, Anthony [79] see Lopez, Carlos

Rangel, Martin (Universidad de San Carlos) and Alonso, Alejandra (University of Calgary)

[16] *Excavación y Documentación de la Estela 26*

La Estela 26 fue descubierta a finales de la temporada 2004 del Proyecto Naachtun, en uno de los saqueos de la Estructura I d del Grupo C. Para 2005 la prioridad fue exponer y documentar la estela. Las excavaciones revelaron un monumento en buen estado de conservación, con tres partes borradas intencionalmente de las cuatro que componen la superficie tallada, con el fin aparente de suprimir su registro de la historia de Naachtun. La Estela 26 ha sido fechada para 450-510 d.C., y el personaje tallado podría referirse a un individuo histórico, o retratar y nombrar a una deidad.

Rangel, Martin [16] see Reese-Taylor, Kathryn

Rankin, Adrienne [106] see Doyel, David

Ransom, Jeff [71] see Carr, Bob

Ranzi, Alceu [100] see Schaan, Denise

Rao, Yamini [186] see Tesar, Louis

Rapson, David J. [165] see Hill, Matthew G.

Rapu, Sergio [92] see Safi, Kristin

Ravesloot, John [33] see Woodson, Kyle

Ravesloot, John C. (William Self Associates, Inc.) and Woodson, M. Kyle (Cultural Resource Management Program/Gila River Indian Community)

[33] *Canal Irrigation Systems on the Gila River Indian Reservation: Findings from the SFPP East Line Expansion Project*

Recent archaeological excavations conducted for the SFPP East Line Expansion Project (ELXP) on the Gila River Indian Community in south-central Arizona resulted in the discovery of a series of 37 prehistoric Hohokam canals. This previously unknown canal complex has been named the Riverbend canal system. Segments of two historic Akimel O'odham canals, known as the Santa Cruz Ditch and the Hoover Ditch, also were excavated during the project.

This poster provides an overview of these canals and their importance to our understanding of canal irrigation technology in the middle Gila River Valley in Arizona.

Ray, Melissa (University of Montana-Missoula)

[204] *Ceremonial Rock Art and Warrior Identity*

Is there an association of images and symbols present in the Plains Ceremonial Rock Art Tradition? I am seeking the possibility of a predictable structured relationship between shield bearing warriors and their appendages through analysis of Bear Gulch Pictographs, located in central Montana. Association of symbols in this tradition holds the potential to reveal information about warrior identity and cultural practices of personal empowerment. Ceremony and religion were integrated into many aspects of Plains Native American life and certainly influenced the production of rock art. What will statistical analysis reveal about the cultures that left this rock art tradition?

Raymer, Martin [60] *see Pollack, David*

Raymond, J. Scott [166] *see Oyuela-Caycedo, Augusto*

Redding, Richard (University of Michigan, Museum of Anthropology), Wetterstrom, Wilma (Ancient Egypt Research Associates) and Murray, Mary Anne (Institute of Archaeology, University of London)

[217] *Provisioning and Feeding a "Company Town" That Was Established to Build the Giza Pyramids of Egypt During the 4th Dynasty*

Plant and animal remains recovered from the "city of the pyramid builders" complement each other and the architectural evidence in shedding light on the functioning and organization of this specialized town. The limited range and nature of both plant and animal taxa indicate that the town was provisioned. The least desirable faunal taxa (goat and small bony fish) come predominantly from barracks-like structures that probably housed rotating labor crews. The most desirable animal foods (cattle and perch), as well as the greatest range of plant foods, come from large house compounds and possible overseers homes.

Redmond, Brian (Cleveland Museum of Natural History)

[3] *New Evidence of Ohio Hopewell Mortuary Ceremonialism in Northcentral Ohio*

Northcentral Ohio has traditionally been placed at the "Periphery" of Ohio Hopewell interaction. The recent discovery of an inundated mortuary site in Sandusky Bay with characteristic Hopewell artifacts has stimulated a reexamination of the relationship between northern Ohio Middle Woodland societies and the Ohio Hopewell "Core." From this locality, amateur archaeologists salvaged the remains of four adults and one child; Flint Ridge "cache" blades, Snyder's points, and lamellar blades; copper beads; and other distinctive Hopewell funerary objects. Information from this unique site indicate that local Middle Woodland ties to the Hopewell heartland were more substantial than previously perceived.

Reed, Alan D. (Alpine Archaeological Consultants)

[203] *Patterns of Faunal Exploitation Evident at Horticultural Sites in West-Central Colorado*

Analysis of the faunal remains from the Weimer Ranch sites indicates that large game hunting was an important component of subsistence systems for west-central Colorado horticulturalists. When project faunal data are compared to those from Anasazi and Fremont habitation sites on the Colorado Plateau, it is clear that the Weimer Ranch inhabitants more intensively exploited large game than did other contemporaneous horticultural groups. Whether the subsistence focus on large game simply reflected colonization of a game-rich area by horticulturalists or had broader implications for exchange is examined.

Reed, Karen (SWCA Environmental Consultants) and Baer, Sarah (SWCA Environmental Consultants)

[155] *Underutilized Data: Museum Collections Enhancing Field Inventory Analysis at Columbine Springs on the Colorado Plateau*

When examined and re-assessed for the Columbine Springs Seismic project, previous collections produced a more refined synopsis of the prehistoric use of the region, better directing data collection and research results. Museum collections can provide a wider understanding of regional cultural resources, especially when evaluated across individual site collections, and can be synthesized with newly collected field data to provide for more robust

interpretation of patterned cultural behavior or site distribution within a limited surface survey project area. Material collections assist in filling research gaps and bolster sample sizes, which typically must rely on breadth rather than depth of data.

Reed, Kelly [145] *see Moore, Andrew*

Reed, Lori [61] *see Speakman, Robert J.*

Reed, Lori S. (Animas Ceramic Consulting & University of Colorado, Boulder)

[203] *Exploring Ceramic Production at the Weimer Ranch Sites: Northern San Juan or Fremont Technological Signatures*

Under current debate is the cultural affiliation of sites in west-central Colorado representing the Gateway Tradition dating between A.D. 900 and 1200. Ceramic artifacts from the Weimer Ranch sites were analyzed to address the issues of local production and cultural affiliation. Technological style and instrumental neutron activation analyses were undertaken to determine local versus nonlocal production and to identify Northern San Juan or Fremont technologies in the assemblage. Results of the study and the implications at a regional scale will be presented.

Reeder, Trent (SWCA Environmental Consultants) and Horton, Kristina (SWCA Environmental Consultants)

[5] *Two Digital Worlds Meet: Digital Data Management of the Animas-La Plata Archaeological Project*

Lab and GIS personnel from SWCA Environmental Consultants in Durango, Colorado work closely together to produce and catalog archaeological data while implementing quality control procedures. Information produced by excavation and lab analysis is stored and managed as tabular datasets in an extensive project-wide database. Additional datasets generated by GIS are then integrated with the database to assist data management and the project research objectives; further effort is made to refine data and streamline the data delivering process. These digital data management practices disseminate accurate information to lead analysts, authors of the project volumes, and other future researchers.

Reeder, Trent [196] *see Anderson, Kirk; [33]* *see Horton, Kristina*

Reents-Budet, Dorie (Smithsonian Institution), Bishop, Ronald (Smithsonian Institution), Blackman, James (Smithsonian Institution), Fialko, Vilma (IDAEH, Guatemala) and Estrada-Belli, Francisco (Vanderbilt)

[189] *Late Classic Maya Exchange and Interaction in the Eastern Petén, Guatemala*

Chemical analysis of more than 1100 ceramic fragments and whole vessels from Holmul, Naranjo and neighboring sites allows for a focused investigation of both local and regional networks of exchange among the ruling elite. This inter-project investigation provides specific indications of both face-to-face and more panoptic sociopolitical and economic enterprises that together comprise prime driving forces of ancient Maya society. This paper synthesizes recent analytical results that seek to augment the limited data available to Mayanists concerning key economic systems and their interworkings during the Late Classic Period.

Reents-Budet, Dorie [35] *see Bishop, Ronald L.*

Rees, Mark (University of Louisiana at Lafayette)

[173] *Complexity as Identity: Rethinking Plaquemine – Mississippian Variation in the Lower Mississippi Valley*

Critiques of sociopolitical types over the past two decades have pointed out shortcomings in neoevolutionary and ecofunctionalist explanations of complexity. Typologies have subsequently focused on the sources of power and inequality in hierarchically centralized polities. Yet a taxonomic perspective continues to undervalue historical context and disregard human agency and historical process in favor of assumed structural homogeneity. Re-envisioning complexity in terms of identity and social heterogeneity entails surmounting the methodological difficulties and theoretical misrepresentations of prehistory. Regional political culture associated with Plaquemine – Mississippian variation in the Lower Mississippi Valley illustrates the limitations of conventional approaches to complexity.

Reese-Taylor, Kathryn (University of Calgary) and Rangel, Martin (Universidad de San Carlos)

[16] *Results of the First Three Years of Investigations by the Proyecto Arqueológico Naachtun*

This paper summarizes the results of three seasons of investigations at the Classic Maya centre of Naachtun. The first season of study involved an extensive survey of the monuments at Naachtun, while the second season focused on establishing a chronology for the site and recording and excavating the central reservoir, the Late Classic palace complex, and defensive fortifications found throughout the site. Finally, the third season concentrated on documenting the earliest period of exponential growth at the site, the Preclassic to Early Classic transition. In sum, our investigations point to Naachtun as the dominant centre in the region as early as 150 CE.

Reese-Taylor, Kathryn [16] see Guernsey, Julia

Reid, David [5] see Rademaker, Kurt

Reid, Elizabeth (University of Texas at Austin) and Valdez, Fred (University of Texas at Austin)

[149] *Postclassic Maya Ceramics at Colha: Petrographic and Type:variety Analyses*

Petrographic and Type:variety analyses of Colha ceramics are used to investigate changes in ceramic production technology and organization during the Postclassic. Postclassic sherds from Colha are grouped by petrofabric, surface treatment, and modes. The groupings are then compared to locally available raw materials. Changes in technological homogeneity, production specialization, and origin will be examined and related to the general economy of Postclassic Colha.

Reindel, Dr. Markus (German Archaeological Institute)

[17] *Settlement Patterns under Changing Paleoenvironmental Conditions in Palpa on the South Coast of Peru*

In the valleys of Palpa we recently recorded more than 800 archaeological sites dating from the Initial to the Inka period (1100 BC - AD 1532). Important shifts in population density and settlement location occurred throughout this time period. Paleoecological investigations undertaken in the framework of our interdisciplinary project revealed that climatic conditions changed from a humid environment in the Formative Period to extreme aridity in the Late Nasca Period, followed again by a humid period in the Late Intermediate Period. We suggest that variable paleoenvironmental conditions were an important factor for cultural change on the south coast of Peru.

Reinhard, Karl (University of Nebraska), Buikstra, Jane (Arizona State University) and Bruwelheide, Karin (National Museum of Natural History, Smithsonian Institution)

[36] *Coprolite Analysis in Mummy Studies*

Coprolite data from mummies can be compared to corporal and artifact dietary data. Artifacts buried within tombs show the variety of foods available to the culture. Stable isotopic data and trace element data provides a general picture of what classes of foods were eaten. Such data can show weaning age and diet difference between population subcomponents. Coprolite data detail dietary reconstruction because residues can be identified to the genus and species level. Coprolites also show details of food and drink preparation. This article summarizes data sets from excavated Chiribaya mummies from the Osmore drainage of southern Peru.

Reiser, Marcy (Colorado State University) and Todd, Lawrence (Colorado State University)

[129] *Reading the Trees: Dendrochronology in Northwestern Wyoming*

Dendrochronology plays a vital role in the reconstruction of past regional climates, ecological disturbance, and most importantly for archaeology, connecting tree-rings to past human behavior. In 2006, CSU students collected samples for dendrochronological analysis from living trees, anthropogenically modified wood, and four historic cabins. A few weeks later, the study area, already devastated by beetle kill, burned and at least one of four cabins was destroyed. Thus, the samples collected represent more than just a paleoecological proxy they became the serendipitous yet, in retrospect, predictable final vestige of archaeological features sampled in a montane landscape shaped by fire.

Reitze, William (University of Arizona), Sinkovec, Christina (Department of Anthropology, University of New Mexico) and Huckell, Bruce (Maxwell Museum of Anthropology, University of New Mexico)

[165] *Folsom Tool-Stone Use at the Martin Site, Estancia Basin, New Mexico*

The Martin Folsom Site collections, recovered in the 1950s by William Roosa, were reinvestigated to study the distribution of raw materials and technology used in the production of stone tools. The analysis indicates very high rates of fluting and secondary fluting of projectile points. Additional debitage analyses of flake morphology indicate that the Folsom knapping was dominated by biface reduction. The majority of Martin Site raw material was identified as Edwards Chert from central Texas, the nearest outcrop of which is over 500 km from the site. Implications for land use and possible trade networks are explored.

Rempel, Sidney (Arizona State University), Soto-Berelov, Mariela (Arizona State University), Fall, Patricia (Arizona State University) and Falconer, Steven (Arizona State University)

[27] *Tell Identification in the Northern Jordan Valley: Comparing Methods Using Multiple Remotely-Sensed Data Sets*

This study will examine the potential of two image analysis techniques used in site identification in the northern Jordan Valley. CORONA imagery serves to identify tell locations using tell dimension parameters. These are then used to identify additional sites using image analysis algorithms. Using Landsat and ASTER, the spectral signature of a sample of known sites is extracted to perform supervised classification and identify additional sites. The results are then compared and validated using a database of known site locations. The degree of spatial agreement between these two analyses will demonstrate the benefits and drawbacks of each technique.

Reneau, Steven [105] see Drakos, Paul

Retter, Michael (SWCA, Inc)

[94] *Wyoming: New Archaeology Available!*

The Overland Pass Pipeline project extends across southern Wyoming through an area of aeolian dune deposition, southwest of Red Desert, Wyoming. Although numerous previous surveys have been conducted in the area, significant new archaeological sites are being discovered. The purpose of this presentation is to report the initial field results from a localized site complex consisting of multiple open camps and an extensive raw lithic material procurement area. The inter-relationship of these sites and resources, and the repeated and continued prehistoric use of the area will be discussed.

Reuther, Joshua D. (Department of Anthropology, University of Arizona), Speakman, Robert J. (Archaeometry Laboratory, University of Missouri Research Reactor Center), Bowers, Peter M. (Northern Land Use Research, Inc.), Glascock, Michael D. (Archaeomet Archaeometry Laboratory, University of Missouri Research Reactor Center), Potter, Ben A. (Department of Anthropology, University of Alaska, Fairbanks)

[30] *Recent Obsidian Analyses in Alaska*

Obsidian sourcing analyses on Alaskan archaeological materials have been conducted since the late 1960s. This research presents new data from obsidian analyses carried out on artifacts recovered from a variety of archaeological contexts throughout the state of Alaska. In addition, we synthesize information regarding our current knowledge on the location and trace element variation of selected Alaskan obsidian sources. We explore patterns between source usage and site type as well as potential relationships between sites including differential access to sources or long distance movement of raw material via exchange or mobility.

Reycraft, Richard M. (Jemez State Monument)

[185] *Ruins Stabilization at Jemez State Monument*

Jemez State Monument contains the stone and earthen mortar ruins of an ancestral Towa Pueblo and 17th Century Spanish Mission Church. In 1933, the first stabilization project at Jemez utilized Portland and soil cements to reconstruct specific wall sections and stabilize the upper regions of the Mission church. Subsequent work in the 1960's through the 1990's employed various combinations of natural earth and amended earth mortars. This paper will

discuss the effectiveness of these prior approaches, their impact on current stabilization practices, and the role of proper documentation in understanding the history of the site.

Reynolds, Andrew [134] see *Smith, Kevin P.*

Reynolds, Cerisa (University of Iowa)

[4] *Time Changes Everything: What the Darkmold Site Tells Us about Basketmaker Subsistence in the Durango Area and Beyond*

Faunal analysis can contribute to a better understanding of a fundamental issue that archaeology can address: the shift from mobile hunter-gatherers to sedentary agriculturalists. This zooarchaeological analysis focuses on the faunal remains from Pit Structure 2, a prominent feature of the Darkmold Site, a Basketmaker II site near Durango, Colorado. Pit Structure 2's multiple cultural layers were very distinct, and the faunal remains can thus be segregated into chronological groups. This will enhance our understanding of the varying importance that hunting played as a society became more aggregated and turned to other, domesticated sources of calories and protein.

Rhode, David (Desert Research Institute)

[64] *Late Prehistoric Subsistence Change at High Elevations in the White Mountains, Eastern California: The Archaeobotanical Record*

The existence of substantial late prehistoric residential occupation sites in the alpine zone of the White Mountains, eastern California, is generally thought to represent a significant intensification of regional subsistence strategies. The extent to which these 'villages' represent a novel residential mode of alpine settlement and resource use, or alternatively is an extension of earlier alpine land use practices, has been subject to question. The record of dietary plant remains from a 'village' and 'pre-village' occupations provides insights into the nature and pace of late prehistoric subsistence change in the White Mountains alpine zone.

Rhode, David [64] see *Louderback, Lisbeth*

Rhode, Matthew (University of Missouri-Columbia) and Delgado, Mercedes (Centro de Investigacion para la Preservacion y Promocion del Patrimonio Cultural)

[3] *Villa El Salvador: An Early Intermediate Period Cemetery Used by Multiple Population Groups, Evidence from Skeletal Indicators*

In studying cemetery populations questions often remain concerning the number of groups represented. Individual population variation is commonly based on the quantity and/or quality of offerings. Such differences may be inappropriate if multiple populations used a cemetery. Here skeletal indicators are used to examine the makeup of the Villa El Salvador (VES) cemetery. Analysis of muscle markers from 60 individuals suggests VES was composed of fishers and farmers. These results are supported by a study of cranial deformation, which reveal distinct patterns for the fishers and farmers. These results create an interpretable picture that broadens our understanding of VES populations.

Rice, Don [14] see *Pugh, Timothy*

Rice, Prudence [14] see *Pugh, Timothy*

Rich, Michelle (Southern Methodist University), Matute, Varinia (Universidad de San Carlos) and Piehl, Jennifer

[103] *The Mirador Complex at El Perú-Waka': History and Power Cached in Pyramids*

The pyramids of the Mirador Complex memorialized Waka's dynasty and were a space for the deliberate presentation of the past to reinforce ruling power. Extremely public and visible commemorative monuments, this locale was also privileged and physically inaccessible. Material expressions of the distinguished pedigree and cosmopolitan connections of Waka' royalty include an Olmec heirloom statuette in a royal tomb and a male stucco head possessing Teotihuacano elements. This paper examines the association of interments, artifacts and sculpture discovered to date in this sacred built environment, and how the power of the past is purposefully manipulated in the reproduction of legitimate authority.

Rich, Michelle [103] see *Piehl, Jennifer*

Richard, Francois (Rice University)

[144] *"The Very Embodiment of the Black Peasant"? Archaeology, History, and the Making of the Serer of Siin (Senegal)*

The Serer of Siin hold a special place in the ethnic imagination of Senegal – occupying one of the 'savage slots' in narratives of national identification. Beginning in the colonial period, the Serer have been constructed as the quintessential peasant population, culturally conservative and rooted in immutable tradition. These ethnographic clichés have in turn been projected onto the precolonial past, producing largely static portrayals of historical and cultural experiences in the region. Recent archaeological and ethnohistorical research, however, paint a more ambiguous picture, shedding nuanced light on the depth and nature of processes of social construction in Siin.

Richards, Heather M. (University of New Mexico)

[106] *Manipulating Movement: A Geographic Information System (GIS) Study of Social Dynamics at Late Classic Copán, Honduras (AD 750-820)*

This paper examines changing social dynamics across two dynastic regimes at Late Classic (AD750-820) Copán, Honduras, just prior to the Maya "collapse". A Geographic Information System was employed to measure changes in access and visibility in order to investigate how the built environment was used to reinforce or actively shift social relationships among Copán's inhabitants. The results indicate that the built environment was used to control access, manipulate the flow of movement, and influence visual perception and as such, formed part of an indigenous Maya strategy to shape social dynamics in an attempt to curb sociopolitical pressures and avoid "collapse".

Richards, Patricia (University of Wisconsin-Milwaukee)

[104] *The "Old Catholic Cemetery" of Milwaukee, Wisconsin*

During water main installation in the City of Milwaukee, construction crews encountered human remains. Research suggests the water main project disturbed an "Old Cemetery," created in 1844. By 1856, the cemetery had outgrown its space and Calvary Cemetery was purchased by the Catholic Church and consecrated November 2, 1857. The first interments at Calvary were the remains of persons removed from the "Old Cemetery." Recovery of 26 individuals reveals that not all burials were removed to the new location. This paper provides preliminary results of excavation and analysis of the excavated burials.

Richbow, Linsey [6] see Baker, Kristin

Richman, Rebecca [154] see Erlandson, Jon

Richter, Kim N. (University of California, Los Angeles)

[18] *Huastec Sculpture and the Cult of the Feathered Serpent*

Following Teotihuacan's collapse, new ceremonial centers dedicated to the cult of the Feathered Serpent emerged and united to fill the power vacuum during the Epiclassic and Early Postclassic periods. While previous scholars do not include the Huasteca in this federation, I suggest that prominent Huastec sites participated in the cult network and produced sculptures inscribed with a complex of symbols related to the Feathered Serpent cult to demonstrate their membership. This study has implications for research on artistic interaction within Mesoamerica and beyond, positing the Huasteca as another possible venue through which cosmological concepts involving the Feathered Serpent wind god were distributed.

Rick, John (Stanford University) [179] *Discussant*

Rick, Torben C. (Southern Methodist University), Willis, Lauren (Southern Methodist University), Noah, Anna (Cotsen Institute of Archaeology), Erlandson, Jon (University of Oregon) and Vellanoweth, Rene (Humboldt State University)

[195] *Dogs, Humans, and Islands: The Antiquity and Impacts of Domestic Dogs on California's Channel Islands*

Zooarchaeologists have made significant contributions to our understanding of ancient island environments, including the timing and implications of the introduction of non-native animals (pigs, chickens, rats, etc.) by humans. Here, we focus on the antiquity and impacts of

domestic dogs on California's Channel Islands. Dogs were present on the islands for much of the Holocene and are the only animals unequivocally introduced by humans prehistorically. Our analysis suggests that dogs would have significantly impacted native animals, especially breeding birds, sea mammals, and foxes, and demonstrates the indirect impacts that people had on island ecosystems.

Rick, Torben C. [4] see Willis, Lauren M.

Riel-Salvatore, Julien (Arizona State University) and Pyne, Lydia (Arizona State University)

[110] *Archaeological Evidence of Niche Construction from the Middle-Upper Paleolithic Transition and the Paleoindian Settlement of the Americas*

Niche construction refers to the evolutionary process whereby an organism modifies its environment to make it more suitable for its subsequent success. Recently, niche construction has stimulated debate in anthropological theory, but it has yet to impact archaeological theory. Using the Middle-Upper Paleolithic transition in Europe and the Paleoindian settlement of the Americas as case studies, we show that archaeological data are uniquely suited to document incidences of prehistoric human niche construction. We conclude that niche construction is a process germane to the human career and therefore needs to be given due consideration in contemporary archaeological research.

Riel-Salvatore, Julien [56] see Pyne, Lydia

Rieth, Christina B. (New York State Museum)

[170] *Public Archaeology and Education in Northeast Research and Compliance Projects: An Introduction*

Public education and outreach are important components of Northeast research and compliance projects. The integration of diverse constituencies, including amateur archaeologists, educators, students, and Native Americans in public outreach and education is however not without its drawbacks. This paper provides an introduction to recent public archaeology and education projects in the Northeast and discusses how various constituencies have been incorporated into these projects. This paper focuses on the importance of these efforts and need to involve the public in archaeological projects.

Rieth, Christina B. [170] see Primeau, Kristy

Riley, Timothy (Texas A&M University)

[138] *A Statistical Analysis of Coprolites from the Lower Pecos*

This study presents an exploratory statistical analysis of coprolites constituents recovered from Hinds Cave (41VV456). Examination of the resultant patterning reveals information on the seasonality of site occupation, the differential exploitation of the local ecological communities, and the impact of harvesting strategies on long-term resource availability in the vicinity of the rockshelter. Previous studies have been successful in elucidating patterns of seasonality with implications for competing subsistence models (Sutton 1998; Sutton and Reinhard 1995). It is anticipated that this study will provide some testable predictions regarding the role of Hinds Cave in the prehistoric occupation of the Lower Pecos.

Rincón Mautner, Carlos (University of Nevada)

[46] *Multi-Ethnic Coixtlahuaca's "Longue Durée"*

The Colonial "lienzos" from the Coixtlahuaca Basin of Oaxaca refer to archaeological sites providing clues as to how local inhabitants, at the time of the Spanish Conquest, conceptualized their past and appropriated the ancient cultural landscape for purposes of promoting claims to land in territorial disputes. Although conceived to bolster 16th century territorial claims, most of accounts begin ca. A.D. 800, a time period that is still virtually unknown archaeologically, both locally and regionally. This paper addresses questions about cultural continuity between periods, migration, religion, statecraft, Coixtlahuaca's interactions with other regions of Mesoamerica, and intra and inter-regional warfare and conquest.

Rincón Mautner, Carlos [108] see Pérez-Blas, Delfino

Ringberg, Jennifer [205] see Billman, Brian

Ringle, William (Davidson College), Hill, Rebecca (Tulane University), Carrillo S., Ramon (UADY) and Gunn, Christopher (Univ. of Kentucky)

[55] *Politics and Settlement at Huntichmul, Yucatan, Mexico*

Understanding political hierarchy and settlement rank is particularly acute in the Bolonchen District of the Puuc Hills, where standard criteria often seem contradictory. This paper examines Huntichmul, Yucatan, with respect to settlement size and density, household composition, monuments, public architecture, and artifact assemblages. During 2006 three new stelae were recovered, test excavations were conducted at several loci, and the densely populated northern half of the site was partially mapped. These data suggest communities varied significantly within the area, and that standard measures such as palace size may be misleading. Data also show a late occupation horizon not yet encountered elsewhere in the region.

Rissetto, John D (University of New Mexico)

[134] *Expanding Late Pleistocene Hunter-Gatherer Social Networks Through Lithic Sourcing in Cantabria, Spain*

This paper presents new lithic sourcing data that expands the geographic radii of Late Pleistocene hunter-gatherer social networks in the Asón Valley of eastern Cantabria, Spain. Geology and archaeology-based analytical techniques were used to investigate where and how far hunter-gatherers traveled to procure chert raw materials, and to identify the formation, maintenance and abandonment of social networks. Based on these results, a reexamination of the existing hypothesis explaining the geographic radii of Late Pleistocene hunter-gatherer social networks will be proposed.

Rissolo, Dominique (Waitt Institute for Discovery)

[141] *Heart of Earth: An Assessment of a Decade of Publications on Mesoamerican Cave Archaeology*

The decade since the seminal cave session in Nashville witnessed an unprecedented quantity of publications on the significance of caves in Mesoamerican cultures, past and present. Due in large part to the tireless efforts of a group of scholars, Mesoamerican cave studies emerged from relative obscurity to be integrated into the world of archaeological and ethnographic method and theory. A review of the literature published since 1997 highlights the substantive and far-reaching nature of those contributions made by cave scholars and reminds us that new realms of research lie in wait just beneath the surface.

Ristvet, Lauren (Georgia State University)

[11] *Ancestral Landscapes and Political Legitimacy in Northern Mesopotamia*

From 2700-2300 BC, the emergence of cities and states transformed the political landscape of Northern Mesopotamia. These nascent states integrated their urban, rural and pastoral populations and established their political legitimacy through the elaboration of individual and communal ancestral traditions. This paper will analyze three funerary monuments—Tell Banat, Jebel al-Beda and Tell Khazna—that served as pilgrimage sites for three contemporary polities, as well as ARET XI, three cuneiform texts from Ebla that describe pilgrimages to funerary monuments as part of coronation ceremonies and illustrate the dynamic relationship between the formation of ancestral traditions and the practice of political power in Mesopotamia.

Rivera, Ivan (INAH)

[211] *Una Estela con Iconografía Teotihuacana en la Costa de Oaxaca*

La presencia teotihuacana en Oaxaca ha sido motivo de polémica en recientes fechas. La dinámica de las relaciones entre ambas regiones ha sido vista por medio de intercambios económicos, intelectuales y por el saludo de dignatarios embajadores. En este trabajo se presenta el análisis epigráfico e iconográfico de una estela descubierta recientemente en la Costa de Oaxaca, que muestra glifos de estilo teotihuacano, y que pueden ayudarnos a comprender el ambiente social y político ocurrido en la región durante el periodo Clásico.

Rivera, Mario (Andes Archaeological Consultants), Palacios-Feat, Manuel (Tetra Nostra Earth sciences Research, Tucson, AZ), Shea, Daniel (Beloit College, Wisconsin), Canarte, Pablo (Corporacion Estudios y Desarrollo Norte Grande, Chile), Moya, Jorge (Universidad Austral, Chile)

[65] *Availability of Water for Sustaining Pre-Hispanic Human Populations in the Atacama Desert*

Water! The need of this precious fluid is undeniable. Civilization flourished around it and only around it will survive. Previous studies in Guatacondo and Tarapaca, northern Atacama Desert, demonstrate that people developed complex agricultural systems incorporating irrigation canals, artesian wells, and over 600 hectares of fields to crop a variety of plants 2500 years ago. This poster presents an overview of our current knowledge and goals of a multidisciplinary project to address questions like: What was the role of water in the selective utilization of domestic and wild plants? What was its availability in a frequently and dramatically changing environment?

Rizvi, Uzma (University of Pennsylvania)

[117] *Crafting Capital: Third Millennium BC Copper Arrowheads from Ganeshwar, Rajasthan*

Over 400 arrowheads are documented from the Chalcolithic site of Ganeshwar, in Northeastern Rajasthan. Signifying a craft industry, these arrowheads also suggest production of cultural value. Moving beyond traditional ideas of use-value, this paper will examine the potential of these copper arrowheads to have assigned, attributed, and arguably transferable value. In addition to traditional analysis based on dichotomies of various forms of function versus style, or utility versus ceremonial/symbolic, this paper will reconstruct socio-cultural contexts of crafting, and explore how material value is prescribed, ascribed, and described.

Robb, John (Cambridge University)

[25] *Re-Inventing Tradition: Units of Culture in Long-Term Change*

In areas without a direct historical approach to the past, the concept of tradition has been neglected in archaeological theory. One effect of this has been to dichotomise the past, splitting short term cultural action from long term change. This paper discusses the concept of tradition as a unit of culture in narratives of long-term change. When tradition is theorised within a model of historical practice, traditions have cumulative emergent properties distinct from the individual actions making them up which structure their long-term development. As an illustration, traditions of representing the human body through later European prehistory Europe are discussed.

Robb, Matthew (Yale University)

[198] *The Ritual Logic of Zacuala, Teotihuacan*

Since Laurette Sejourné's 1959 excavations, the apartment compound of Zacuala has not been systematically re-examined. By combining an iconographic analysis of extant mural fragments and burials with a space syntax analysis of its rooms, corridors, and patios, this paper will present a holistic interpretation that assesses the compound's role in building Teotihuacan ritual space, and how this space served to bind the identity of the compound with the identity of the city.

Robbins, Helen (The Field Museum) and Breslauer, Lori (The Field Museum)

[48] *Moving Beyond NAGPRA -Repatriation under NAGPRA's Savings Provisions*

NAGPRA anticipates that repatriations will be made outside its statutory confines. Its savings provisions preserve parties' rights to consent to other agreements for cultural items covered by the statute. In addition to any obligations required by NAGPRA, in managing its collections museums are subject to significant fiduciary obligations under state law. In order to conduct repatriations, museums sometimes must go beyond NAGPRA. An examination of the Field Museum's policies, procedures, and practices will demonstrate the intersections between its obligations under NAGPRA, fiduciary duties under State law, and policy and mission placed obligations to maintain the highest ethical standards.

Roberts, Alexa (National Park Service)

[116] *Public, Tribal and Congressional Interest in the Archaeology of the Sand Creek Massacre Site*

In 1998 Congress directed the National Park Service to work with the Cheyenne and Arapaho Tribes and the State of Colorado to locate the site of the 1864 Sand Creek Massacre. The

multi-disciplinary effort included the use of archaeology and tribal oral histories. The project generated intense public, tribal and Congressional interest, as well as controversy. Based on the study results, Congress authorized establishment of the Sand Creek Massacre National Historic Site. The project is illustrative of Linda Cordell's efforts throughout her career to make archaeology relevant to the public; especially to people whose history is the subject of study.

Roberts, Andrew (Texas A&M University)

[93] *The First Mountain Ceramic Site found in American Samoa*

Excavation on a ridge top site on Tutuila, American Samoa, produced the first ceramic evidence found in a highland context in Samoa. Previously, all ceramic sites excavated on American Samoa were restricted to lowland areas and the general belief was that mountain settlements did not occur until the a-ceramic period. This poster is a presentation and preliminary analysis of the ceramics from Pot Drop Knob. Petrographic analysis of the sherds will determine the production and distribution patterns of these highland ceramics in relation to those from lowland sites.

Roberts, C Neil (University of Plymouth UK), Rosen, Arlene (University College London), Eastwood, Warren (University of Birmingham), Turner, Rebecca (University of Plymouth) and Jones, Matthew (Nottingham University)

[86] *Space and Sensitivity: Detecting Cultural Landscape Impacts in the Transition to Neolithic Agriculture in Southwest Asia*

On-site archaeological evidence has shown how people transformed selected plants and animals from "wild" to domestic during the Epipalaeolithic and Neolithic in Southwest Asia. But while agriculture led to the modification of natural environments, off-site evidence for early agricultural impacts on the East Mediterranean landscape has remained elusive. Here we describe how multiple proxy data (pollen, stable isotopes, charcoal, phytoliths) from parallel lake sediment and archaeological sequences can be used to fingerprint different human and natural agencies. In central Anatolia, this suggests that the impact of Neolithic farming societies was spatially extensive as well as locally intensive.

Roberts, Christopher (Arizona State University)

[12] *Archaeology Illustrated: Some Problems with Archaeological Expectations for Images*

Images are everywhere in archaeology. Most often they are employed to illustrate the points of a textual narrative. Such a pattern, though useful for modern research, tends to create the impression that images are simple to interpret and understand by means of our visual experience of the natural world. This pattern of seeing can be problematic to the study of ancient images that appear naturalistic but are actually foreign symbolic conventions. By exploring the visual culture of archaeology this paper will show how modern assumptions may be affecting our interpretation of past images.

Roberts, Erika (University of Florida), Davidson, James (University of Florida) and Rooney, Clete (University of Florida)

[104] *A Return to the Beginning: The 2006 University of Florida Archaeological Field School Investigation of Kingsley Plantation, Duvall County, Florida*

The birthplace of plantation archaeology can be traced to Kingsley Plantation, Florida, where in 1968 Dr. Charles Fairbanks was the first to archaeologically examine slave life. What began there has expanded beyond antebellum plantation contexts and is now more appropriately termed the Archaeology of the African Diaspora. In 2006, University of Florida researchers began a much-needed multi-year reassessment of Kingsley Plantation, with excavations focused primarily within two slave cabins dating between circa 1814-1840. Issues of architecture, chronology, firearm-availability and antebellum landscapes will be discussed. Finally, important new evidence of African religiosity—Fairbanks's much sought-after "Africanisms"—will be revealed.

Roberts, Tim (Texas Parks and Wildlife Department)

[41] *Prehistoric Ritual Destruction of Some Lower Pecos River Style Pictographs: Making Meaning Out of What We Do Not See*

While the pictographs of the Lower Pecos have received considerable attention since at least the mid-19th century, the removal of pigment from some figures, apparently as a result of prehistoric ritual destruction, has drawn less attention. Within the region, such impact appears

to be limited almost entirely to Lower Pecos River style pictographs, and falls into one of two general types—the abrading, scratching, or flaking of individual figures, and the widespread scratching or abrading of significant portions of pictograph panels or perhaps entire pictograph panels in at least one instance. This paper explores the possible meanings behind this practice.

Robertson, Ian (Stanford University) and Gorenflo, Larry (Conservation International)

[194] *Connecting City and Hinterland: Demographic Flow and Ancient Teotihuacan*
Two recently-compiled datasets based on fieldwork carried out mostly in the 1960s and 1970s are used to characterize diachronic patterns of settlement change both within the center of Teotihuacan and more broadly within the Basin of Mexico. By combining spatially-referenced settlement data from the urban core with similar data from much of its encompassing hinterland, we are able to describe regional demographic change at a greater level of detail than has previously been possible.

Robertson, J. David [30] see *Popelka-Filcoff, Rachel S.*

Robinson, Alan [26] see *Suasnavar, Jose*

Robinson, Brian [94] see *Ort, Jennifer*

Robinson, Eugenia [100] see *Freidel, Dorothy*

Robinson, Mark [178] see *McKillop, Heather*

Robinson, Tucker (Colorado College) and Van Dyke, Ruth (Colorado College)

[90] *Intervisibility, High Places, and Chacoan Shrines: A GIS-Based Viewshed*
Chaco Canyon was a central gathering place for Ancestral Puebloans in northwest New Mexico during the A.D. eleventh century. The Chacoan world was interconnected by lines of sight linking great houses, iconic landforms, and other features. Chacoans may have enhanced intervisibility between the canyon and outliers by constructing a shrine network. Shrines on high places may have facilitated practical communication, and they may have marked landforms that held special significance. We are investigating this phenomenon using GIS-based viewshed analyses. Preliminary results indicate Chacoans carefully positioned some outlier shrines to create line-of-sight connections with iconic high places such as Hosta Butte.

Robison, Mary (Westfield State College)

[81] *Who Wants to be a Millionaire? TV Game Shows, Graduate School, and the Quest for the "American Dream"*

Graduate school is expensive even without dependants. Juggling teaching, work, and family obligations limits the time available for writing one's dissertation. Believing I had saved enough money to concentrate on writing without teaching, I found myself with unexpected expenses and insufficient cash. Coincidentally, I heard that "Who Wants to Be a Millionaire" was conducting contestant searches nearby. I funded my final year in graduate school as a contestant on the program. I also discovered a novel subculture - people who seek to fulfill their version of the "American Dream" by repeatedly auditioning to be contestants on knowledge-based shows.

Robles, Amparo [63] see *Mauricio, Natalia*

Robles, Nelly [211] see *Spores, Ronald*

Robles, Nelly M. (INAH – Monte Alban) [136] *Discussant*

Robles, Nelly M. (INAH – Monte Alban) and Spores, Ronald (Fundacion Alfredo Harp Helu)

[211] *The Yucundaa (Pueblo Viejo de Teposcolula) Project: A Review of Findings and Achievements*

This paper presents the results of a three-year archaeological and ethnohistorical research of the Postclassic Señorío and early Spanish Colonial Mixtec City of Yucundaa, Pueblo Viejo de

Teposcolula, Oaxaca. Among the objectives of the project was the definition of the major urban components of the settlement, and the interpretation of its structure and function, during the Postclassic, and those changes generated during early Colonial periods.

Robles-Camacho, Jasinto (Instituto Nacional de Antropología e Historia, Mexico), Koehler, Hermann (Department for Earth and Environmental Sciences, Ludwig-Maximilians-Universität-München, Germany), Schaaf, Peter (3 Instituto de Geofísica, UNAM, Mexico), Sánchez, Ricardo (Instituto Nacional de Antropología e Historia, Mexico)

[74] *Raw Material Provenance of Olmec Serpentinities from La Merced: Isotopic and Geochemical Constraints*

Serpentinities (SAO) a common Olmec material. At La Merced site (1200-900 B.C.) found more than one ton of SAO and their geological provenance was determined with use of petrography, X-ray diffraction, X-ray fluorescence, inductively coupled plasma mass, electron microprobe, and thermal ionization mass spectrometry (Rb-Sr and Sm-Nd isotopic systems) on 17 SAO and 15 geological serpentinites (GS) from Tehuiztzingo-Acatlán, Sierra de Juárez-SJ and Motagua Valley. The results indicate that only SJ samples have affinities to SAO from La Merced; specially samples from outcrops between Vista Hermosa-Valle Nacional and El Llanún, Oaxaca.

Rocek, Thomas (University of Delaware)

[183] *Early Villages or Palimpsest Farmsteads? Chronological Analysis of the Dunlap-Salazar Pithouse Site, Lincoln County, New Mexico*

The development of village communities in the archaeological record is generally identified through the appearance of clusters of dwellings within relatively compact areas. However, without precise intrasite chronological data, it is difficult to distinguish repeated multi-year reoccupation of a location by small social groups from an occupation by a larger true "village" community. As a case study, I examine stratigraphic and high precision radiocarbon data from a portion of the Dunlap-Salazar site, a 6th-9th century pithouse "village" site in southeastern New Mexico. I find that the "village" site might be accounted for by repeated reoccupation by small (less-than-village) social groups.

Rochette, Erick (Penn State University)

[107] *Jade in Full: Domestic, Attached, and Elite Prestige Goods Production in the Middle Motagua Valley, Guatemala*

Objects crafted from jadeite were highly valued prestige goods and played a vital part in the political economies of all prehispanic Mesoamerican civilizations. Despite their importance, we know little about how their production was organized. Recent excavation and surface survey data from the Middle Motagua Valley, Guatemala are used to address the role of domestic craftspersons in the production and distribution of jadeite prestige goods. This paper demonstrates that simple typological models are insufficient to describe (and may hinder) our ability to understand the role of domestic craft production in the prehispanic political economies.

Rockman, Marcy (PCR Services Corporation)

[213] *Coming of Age in Stone: the Geo-History of a Ritual Landscape in Southern California*

A "yoni" is a rock feature found in several locations in southern California that resembles human female genitalia. Ethnographic information and archaeological associations link use of and respect for these features to the Luiseno Girls' Ceremony. A cluster of more than 30 yoni features has recently been identified in western Riverside County in outcroppings of the Cretaceous-aged Arroyo el Toro graniodiorite. This paper reviews the weathering properties of the host rock, distribution of rocks of this type in relation to the distribution of known yonis, and the settlement patterns and migration history of the Luiseno people.

Rockmore, Matthew (Penn State)

[188] *Status Distinctions in a Rural Hamlet: From Classic to Postclassic at San Jerónimo II, Petén, Guatemala*

Recent research at the Late Classic through Early Postclassic site of San Jerónimo II on the western shore of Lake Petén-Itzá has identified several effects of the larger regional collapse on status distinctions among the component household groups. I postulate a small but

significant stratification of household groups even in this rural hamlet during the Terminal Classic. Markers of status disappear from, or are evenly distributed across, the site during the Early Postclassic, coinciding with the decay of long-distance trade, regional demographic decline, and a leveling of hierarchical social structures.

Rodning, Christopher (Tulane University) and Sullivan, Lynne (University of Tennessee)

[212] *Gender Ideology and Differential Development of Mississippian Societies*

Archaeological evidence of mortuary practices demonstrates very different gender ideologies in South Appalachian Mississippian societies than in late prehistoric societies elsewhere in the southeastern United States. We consider the possibility that tension between kin-group and village-level leadership, on the one hand, and attempts to assert regional hegemony, on the other, affected the social and political organization of these societies. We conclude that this tension, and the different ways in which it was resolved in different places, and at different times, contributed to significant variation in the nature of Mississippian societies.

Rodning, Christopher [19] see Moore, David; [68] see Sullivan, Lynne

Rodriguez-Alegria, Enrique (University of Texas at Austin)

[104] *New and Improved Blades and Knives: Narratives of Colonialism and Technological Change*

When the Spanish conquered Mexico in 1521, they brought with them tools and technologies that were unknown in Mesoamerica, including steel blades and knives, among others. Given our assumptions of technological progress and practicality, we would think that indigenous people would begin using steel blades soon after the conquest. However, archaeological patterns in Xaltocan, Mexico, show exactly the opposite trend: chipped stone tool production was re-taken and intensified after the Spanish conquest, while steel knives were largely ignored. I argue that this trend was related to control over the means of production rather than by European notions of practicality.

Roler Durand, Kathy [157] see Snow, Meradeth

Roney, John [38] see MacWilliams, Arthur

Rooney, Clete [104] see Roberts, Erika

Roop, Tobin W. (Salinas Pueblo Missions National Monument), Lefrancois, Marc (Salinas Pueblo Missions National Monument) and Wilson, Philip (Salinas Pueblo Missions National Monument)

[185] *Symptom and Syndrome: Diagnosing and Interpreting the Cause and Effect of Deterioration*

Identifying the true causes of deterioration while simultaneously enhancing a site's educational and interpretive value is often overlooked in ruins preservation. This session will focus on the broad parameters of methodology used to identify specific causal factors of deterioration. The speakers will outline how a project evolves into an interdisciplinary team to resolve specific problems by illustrating how to recognize the need for specific fields, resolving interpretation issues, and how the team integrates into a cohesive unit that often includes Conservation Science, Geology, Remote Sensing and Mapping, Education, and other vocations, to work alongside the project Archaeologist.

Roos, Christopher (University of Arizona)

[127] *Fire and Socioecological Systems in East-Central Arizona*

Fire is a keystone ecological process that has been transformed into a mechanism for ecological and social catastrophe in the modern American West. Prior to fire suppression, however, fire was a critical interface between social and ecological systems. Six stratigraphic sequences from alluvial channel fans disclose variability in particle size, soil phosphorous, carbon isotopes, sedimentary charcoal, and pollen assemblages that indicate variability in fire regimes since AD 1100. Over this period, human behavior and natural communities interacted as genuine socioecological systems that were resilient to climatic perturbations, such as multiyear droughts that instigate catastrophic fire events in the contemporary Southwest.

Roosevelt, Christopher H. [176] see Wolff, Nicholas

Roper, Donna (Kansas State University)

[163] *Mobile Farmers of the Western Central Plains: Upper Republican Ceramic Variability and Its Implications*

The people of the Upper Republican of the western Central Plains have long been known as village-dwelling farmers, while contemporaneous High Plains sites with stylistically comparable assemblages have been regarded as representing seasonal hunting by these "villagers." New work in both areas is suggesting instead that a single population appeared at various times as settled farmers and as mobile hunters. The ceramics are a key line of evidence. The pottery is broadly similar across the region, but a detailed microstyle analysis shows considerable heterogeneity within localities. This contrasts markedly with style distributions in contemporaneous sedentary communities to the east.

Rose, Courtney (Old Pueblo Archaeology Center)

[38] *Hohokam Household and Village Organization at the Yuma Wash Site*

Studies of Hohokam Classic period (A.D. 1100-1450) villages in south-central Arizona have documented shifts in social organization. A multi-year research project at the Yuma Wash site, a Classic period agricultural village located in the northern Tucson Basin, explores the nature of changes in residential, economic, and social organization. The Yuma Wash site was occupied throughout the Classic period, allowing for a unique perspective on household change. Although intensive occupation at the site has made identifying chronological sequences challenging, preliminary results of analyses reveal distinct forms of household organization and village settlement patterns through time.

Rosen, Arlene (University College London) and Jenkins, Emma (University of Reading)

[86] *The Ecological Footprint of Early Levantine Cereal Exploitation*

Investigations of plant-use economies associated with early Levantine agriculture usually seek evidence from on-site archaeobotanical remains. However, there is a natural bias to these records. The cultural filter does not allow either a picture of what plants were available in the site vicinity, or how plant exploitation in Natufian and Neolithic societies impacted the natural environment during the Late Pleistocene-Early Holocene transition. Analyses of phytoliths from a Hula Lake core in comparison with the Natufian site of Ein Mallaha on the nearby shore give a fuller picture of how plant-use economies impacted the environment among cereal-exploiting hunter-gatherers.

Rosen, Arlene [86] see Roberts, C Neil

Rosen, Steven (Ben-Gurion University) and Shugar, Aaron (SUNY Buffalo)

[94] *Assays in Understanding Sickle Gloss*

Three types of analytic assays – micro-topographic survey of the ventral surface of glossy blades, x-ray photoelectron spectroscopy, and ESEM photography of blade faces and cross-sections – on large geometric sickle segments from 2 nd millennium BC contexts at Tell Jemmeh suggest that: 1. Sickle gloss is NOT the result of material added to the edge of the blade, but the result of abrasion, and 2. Microscopic polish/striation features which have been claimed to be diagnostic of cereal threshing, as opposed to reaping, appear on artifacts which can only be interpreted as sickle segments, suggesting that these features are less diagnostic than supposed.

Rosenfeld, Silvana (Stanford University)

[186] *Animal Remains in Wari Funerary Contexts*

Why sacrifice animals? Are the dedications performed only for the supernatural forces or are they also for the living? The display of sacrificed wealth can be a venue for showing and negotiating power. Therefore, offerings or votive dedications are also significant in socio-economic and political spheres. This paper will present the results of the analysis of a sample of camelid bones found in a Wari cemetery at Cotocotuyoc. Comparisons with other faunal analysis from the central Wari area will be discussed in order to contribute to the general understanding of community and leadership reproduction during Wari times.

Rosenstein, Dana Drake (University of Arizona) and Hall, Simon L. (University of Cape Town)

[127] *Conflict, Climate, and Culture during the Late Moloko in South Africa*

One of the most striking developments of the Late Iron Age in northwestern South Africa during the late Moloko phase (ca. 1700-1830 CE) was a significant shift in the settlement patterns of BaTswana agropastoralists, from small, dispersed village homesteads into large towns with populations in the thousands. This was a result of a complex interplay between catastrophic historical and environmental events including colonial encroachment and drought. Oral-historical records describe an intensification of inter-lineage conflict and competition over scarce natural resources. These records contextualize the archaeological evidence for changes in spatial organization, labor specialization, ceramic and metal production, and gender relations.

Rosenswig, Robert (University at Albany - SUNY), Doering, Travis (University of South Florida), Neff, Hector (University of California, Long Beach) and Tejada, Ana (Northwestern University)

[7] *Regional Perspective on the Earliest Olmec: Cherla Phase (1350-1200 BC) Interaction Documented at Cuauhtémoc, Soconusco, Mexico*

We offer no new polemic on the Olmec. Instead, new evidence is presented from the small site of Cuauhtémoc. Changes in color and size of ceramics during the Cherla phase indicate that black and white vessels formed the largest class of serving dishes. Sourcing results indicate that the majority of these dishes were local, but a finely made variety was imported. Obsidian was more reduced during the Cherla phase and there was an increased use of high quality obsidian. Together these data indicates a significant reorganization at Cuauhtémoc during the very beginning of the late Early Formative circa 1350 BC.

Rossen, Jack (Ithaca College) and Dillehay, Tom (Vanderbilt University)

[43] *The Saga of Preceramic Plants from Nanchoc, Northern Peru: Ancient After All*

Plant materials from Middle and Late Preceramic sites near Nanchoc in the Zaña Valley of northern Peru have long been difficult to confirm as ancient. The plants from these sites exhibit ancient morphologies from great contexts but produced modern A.M.S. dates in the 1980s and 1990s. New AMS technologies have been developed, and new dates on the same materials have now produced ancient dates that at last confirm the Nanchoc materials as early cultigens. The story of the long controversy surrounding these plant materials is instructive of how archaeological information is constructed, critiqued, and transferred to textbooks.

Rossen, Jack [10] see Dillehay, Tom

Roth, Barbara (UNLV), Toney, Elizabeth (UNLV) and Lorentzen, Leon

[138] *The Advent of Bow and Arrow Technology in the Mimbres Mogollon Region*

Recent studies have suggested that bow and arrow technology entered the Southwest earlier than previously thought, perhaps by A.D. 200. Our investigations at two upland Pithouse period sites in the Mimbres Mogollon region point to a later introduction of this technology into this area. Our data also document a period of co-occurrence of arrow and dart points, indicating a gradual rather than abrupt transition to the exclusive use of the bow and arrow. In this paper, we present the results of our study and discuss its implications for evaluating Pithouse period subsistence and technological change.

Roth, Barbara (UNLV) [81] Discussant; [205] see Dykstra, Christina

Rowe, Marvin (Texas A&M University-Qatar)

[41] *Radiocarbon Dates on Texas Pictographs*

Lower Pecos River style pictographs (PRS) were first dated in 1990, the first non-charcoal paintings to be dated. Most dates on Texas pictographs are from the Lower Pecos River region. This paper will summarize all dates for Texas pictographs so far. Even though there are more dates on Texas pictographs than for any other state or country, except France, the situation is not ideal. All Texas dates are from only one laboratory. Far too few independent analyses on a single pictograph have been done to verify methods worldwide. In those comparisons, agreement was less than satisfactory.

Rowe, Robert (EPG, Inc)[75] *A Road Runs Through It, The Escalon and El Llano Communities*

Archaeologically, the Chaco West District is the least explored region in the Chacoan Province. Reconnaissance of the district has revealed isolated Chacoan communities in areas favorable for aboriginal agriculture. The focus of this report is on the El Llaño Community, BMIII-PI site cluster and the related Escalon complex, a PII outlier located in the lower Indian Creek drainage. Evidence suggests a reorganization of the sites during the PI period caused by a change from subsistence level agriculture production to an orientation centered on interaction and exchange of corn and ceramics into the heart of the Chaco territory.

Rowles, Ryan (IUP Archaeological Services) and Neusius, Phillip (IUP Anthropology Department)[126] *Stone Tales From Two Pennsylvania Watersheds*

As part of the Indiana University of Pennsylvania's ongoing research into post AD 1000 adaptations to the Upper Ohio drainage, detailed analyses of chipped stone assemblages are being utilized to explore aspects of reduction behavior and raw material choices in these communities. The lithic collections from the Mary Rinn and Brant sites were selected for comparison from two separate watersheds within the research area. Although of a similar time frame, each site displays a somewhat distinct adaptation through the inhabitants manufacture and use of stone tools.

Royall, Travis J. (University of Missouri - Columbia)[32] *Built to Order: Reconstructing Measurement Systems Using Extant Architecture from Paquimé, Chihuahua*

Standards of measure are typically associated with state-level societies, but the planned architectural construction of Paquimé and Chaco in the North American Southwest certainly hints at the existence of standard measurement systems. This possibility hasn't been evaluated in large part because archaeologists have no established method for reproducing such measurement systems. Such a method is presented and then applied to the architectural remains of Paquimé to determine if a standard unit of measure was used. The presence or absence of such a system will tell archaeologists about the interaction between standardization, specialization and architecture in middle-range societies.

Royall, Travis J. [32] see Heldermon, Laura**Royce, Karen L. (The Ohio State University)**[129] *A Geophysical Investigation of the Early Late Woodland Water Plant Site (33FR155) in the Middle Ohio River Valley*

The Water Plant Site (33FR155) is an Early Late Woodland time period community (ca. AD 550) located in Central Ohio. Using geophysical methods this site is under investigation to better understand the intra-community patterning of structures and activity areas. This site is nearly 8 acres in size and is unique in that the majority of the site is still in tact. Magnetic and electrical resistivity methods are being used to better define structures and use areas at the site and are being correlated to pedestrian surface surveys conducted 25 years ago.

Rozo, Jennifer (University of Chicago) and Morrison, Kathleen (University of Chicago)[64] *Colonial Transformations and Spatial Practice: Micro-Scale Spatial Analysis of Pollen from a Seventeenth-Century Plaza Surface*

Intensively occupied during the fourteenth and fifteenth centuries, the large Pueblo village of Paa-ko (San Pedro, LA 162), was briefly abandoned and then re-occupied during the seventeenth century. A visita only partially incorporated into the Spanish mission system of colonial New Mexico, the latter occupation of LA 162 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 changing spatial practices through a micro-spatial analysis of pollen collected from features, exterior and interior spaces across a historic occupation surface.

Rubín de Rubín, Julio [176] see Theodoro da Silva, Rosicler

Rubinson, Samantha (University Of Bradford), McDonnell, J.G. (University of Bradford) and Blakelock, Eleanor (University of Bradford)

[134] *A Metallurgical Comparison of Early Medieval Utilitarian Iron Artefacts with Specialized Craft Tools*

This paper assesses the extent of use of specialized alloys, in particular phosphoric iron alloys (0.2-1.5wt.%P), in utilitarian artefacts and specialized craft artefacts in early Medieval Britain. This research specifically addresses the intentional or unintentional use of the iron alloy within different types of artefacts based on the usefulness of the alloy within the construction of the artefacts. The investigation also takes into account the differences in alloy use between artefacts of classified as utilitarian and those considered specialized and how this varies between sites in different parts of Britain.

Ruddell, Michael (Yavapai College)

[114] *Late Pleistocene Environments and the Clovis Occupation of Yavapai County, Arizona*

Several Pleistocene mega-mammal remains have been recovered from the greater Prescott region. Mammoth, mastodon, bison and camel bones have been recovered from several drainages (Lynx Creek, Coyote Wash and Granite Creek) and a mastodon from Black Mountain. These Late Pleistocene finds have become more significant due to the recent excavations of the Stoneridge development. The recent excavation at Stoneridge has resulted in the first archaeologically documented Clovis point found in Yavapai County, Arizona. Geoarchaeological comparisons of Yavapai County Pleistocene deposits to those of the San Pedro River Valley in Southern Arizona indicate the potential for Paleoindian occupation in North-Central, Arizona.

Ruiz, Joaquin [39] see Fenn, Thomas

Rush, Laurie (US Army, Fort Drum) and Winchell-Sweeney, Susan (Bard College)

[215] *Examining Obsidian Sourcing in the Great Basin from a Paleo Maritime Perspective*

Evidence for the presence of maritime technology during the Late Pleistocene/Early Holocene in North America is increasing. When water levels are mapped to reflect viable waterways chronologically, it is possible to test whether the most efficient route from an obsidian source to a site is via a waterway. Preliminary analysis for waterways from Brown's Bench and Topaz Mountain sources to sites where tools are found in the Old River Bed of Glacial Lake Bonneville supports the idea of testing additional sources and sites. This process offers a new perspective for analysis of site distribution and pathways across the Great Basin.

Russell, Bradley (SUNY Albany)

[182] *The Economic Organization of Peripheral Mayapán, Yucatan, Mexico*

To fully understand the economic organization of an ancient urban settlement it is crucial to examine the activities taking place around the periphery of the settlement. Recent survey of the periphery encircling the Postclassic Maya center of Mayapán provides new insights into how the urban population was utilizing the rural land surrounding the site itself to meet the many needs of its newly estimated population of 17,000 residents. The study suggests that the city was surrounded by a number of unique zones of economic production, each specializing in a distinct local product and linked together through an integrated market system.

Russell, Bronwen [210] see Milner, Ehren

Russell, Nerissa [217] see Twiss, Katheryn

Ruvalcaba, Jose Luis (Instituto de Fisica, UNAM) [139] Discussant

Ruvalcaba Mercado, Jesús (CIESAS)

[18] *Linguistic Diversity and Cultural Unit Maize, History and Religion in the Huasteca*

This paper explores one paradox in the Huasteca: that of linguistic diversity that superposes cultural unity. I propose that this deceptive paradox can be resolved and is the result of the invention, production, circulation, transformation and consumption of maize, process where Teenek people have played a central role. Now maize is only a small part of its economy, but still as important as migration, for example. An approach about the practices, myths and the changes about maize and its representation, Thipak, the Sacred boy, is the central subject of these lines.

Ryan, Susan (Crow Canyon Archaeological Center), Adams, Karen (Crow Canyon Archaeological Center) and Duff, Andrew (Washington State University)

[181] *Long Term Plant Use and Human Impact to the Environment at Shields Pueblo*
Archaeobotanical data from Shields Pueblo (5MT3807) provided a number of insights into long-term plant use and environmental change within one of the largest and longest-lived communities in the Mesa Verde region. Crow Canyon Archaeological Center's research at Shields Pueblo documents plants used for food, fuels, and construction elements, allowing us to assess resource availability and long-term human impacts to the local environment. The archaeobotanical data, analyzed under the direction of and reported by Adams, includes larger plant parts and pollen from five subperiods of occupation spanning A.D. 725–1280, with particular attention given to the subperiod preceding regional depopulation.

Ryberg, Erika [39] *see Lundin, Richard*

Saar, Erin (SWCA Environmental Consultants Inc.) and Hanes, Phil (SWCA Environmental Consultants Inc.)

[5] *Digital Mapping as Means to Connect Architectural Design with Creation Stories at San Lazaro*

Digital mapping can add valuable information to the interpretation of a site. For example, digital mapping has revealed that the San Lazaro Pueblo in the Galisteo Basin of New Mexico was not built according to the creation story as told by the Tewa of the San Juan Basin. However, a neighboring protohistoric pueblo was built abiding the construction layout provided in the creation story. These results indicate that perhaps the San Lazaro Pueblo was built before the origin of the creation story. Digital mapping provided information about architectural construction methods; radiocarbon data confirmed these hypotheses.

Saar, Erin [5] *see Hanes, Phil*

Sabo, George (Arkansas Archeological Survey), Hilliard, Jerry (Arkansas Archeological Survey) and Mainfort, Robert (Arkansas Archeological Survey)

[60] *Woodland Period Shell-Tempered Pottery in the Arkansas Ozarks*

Excavations at the Dirst Site (3MR80) identified a stratified Woodland component radiocarbon-dated to A.D. 400–650. Trash pit assemblages from this component include eastern agricultural complex species, a small amount of corn, and shell-tempered pottery sherds. These data suggest that shell-tempering was an adaptive response to increasing use of grain crops. The Spradley Cemetery (3NW101) produced a collection of whole and reconstructed shell-tempered vessels also radiocarbon dated to A.D. 600. This collection provides crucial evidence concerning continuities and changes in vessel shapes along with social contexts accompanying the advent of shell-tempered pottery in the Arkansas Ozarks.

Sabo III, George [154] *see Lockhart, Jami*

Sadler, Tonie [41] *see Stelle, Lenville*

Safi, Kristin (California State University Long Beach), Lipo, Carl (California State University Long Beach), Hunt, Terry (University of Hawaii) and Rapu, Sergio (University of Hawaii)

[92] *Geophysical Explorations and Sequences of Monumental Architecture at the Anakena Dune of Easter Island*

In addition to large statues (moai) of Easter Island, prehistoric populations constructed massive stone platforms (ahu). The dune site of Anakena is the location of Ahu Nau Nau. Due to aeolian deposition at Anakena, this ahu location has preserved a sequence of earlier platforms that potentially date to the earliest occupation of the island. The use of near surface remote sensing techniques including ground-penetrating radar, conductivity, and magnetometry provide information that is useful for determining the phases of ahu construction and a chronological sequence of monumental architecture at one of the most important archaeological locations on Easter Island.

Sahagun, Jeffrey [107] *see Berdan, Frances*

Saint Charles Zetina, Juan Carlos [194] *see Enriquez, Roxana*

Sakai, Sachiko (UC Santa Barbara)

[62] *Explaining Change in Production and Distribution Pattern of Olivine Ceramics in the Arizona Strip of Northern Arizona*

Olivine ceramics are widely distributed in the Arizona Strip between A.D. 300 and 1300. The ultimate goal of this study is to understand how and why resource procurement pattern of olivine ceramics changed over time. For this objective, I will investigate the source of olivine ceramics using chemical compositional analyses; INAA bulk analysis and Laser ICP-MS point analysis. I will also examine how this pattern changed over time, dating all sherds using Thermoluminescence Dating. I expect that applying direct dating technique on all sherds with compositional information will provide a very unique opportunity to examine temporal patterning of compositional diversity.

Salazar, Lucy [174] *see Turner, Bethany*

Salisbury, Erin [196] *see Perry, Elizabeth*

Salisbury, Roderick (University at Buffalo) and Morris, Margaret (University at Wyoming, Laramie)

[21] *A Tale of Two Sites (and How GIS Helps Interpret and Provide Meaning)*

Deciphering and providing explanations for inter-site patterning is one of many goals for archaeologists utilizing GIS. The Koros Regional Archaeological Project has been using geographic information systems for the last 5 years to map and propose explanations for the archaeological remains of two Early Copper Age sites: Veszto-Bikeri and Korosladany 14. This presentation summarizes GIS-related work associated with the project, discusses these results and how they can be used to further investigate intra-site activities and site formation, and examines the role that GIS can play in understanding how these two sites are related to their Late Neolithic predecessors.

Sall, Candace A. (University of Missouri) and VanPool, Christine S. (University of Missouri)

[32] *Mogollon Ceramics from the Janos area, Chihuahua, Mexico*

Preliminary results of surface collected sherds from sites recorded during the summer of 2006 by the Janos Archaeological Project are presented. They demonstrate that the area's past inhabitants were Mogollon and had close affiliations with the Viejo period Casas Grandes, Medio period Casas Grandes, and Mimbres Classic period peoples, but not the Salado. Surprisingly few Salado Polychromes were found. One notable site, Janos 14, contains both Classic Mimbres and Medio period components. This site also possesses previously untyped Chihuahuan polychromes dominated by black-on-white designs on a slipped surface.

Salomón, Maria Teresa (Universidad de las Américas, Puebla)

[182] *Was the Cerro Zapotecas a Defendable Refuge in the Epiclassic Period?*

The archaeological work at the beginning of the 1970's in the Cerro Zapotecas site, near Cholula, Puebla, México, concluded that it may have been a defensible refuge for the Cholulan people following the disruption of the Classic period. Our recent investigations propose a reevaluation of the hill's defensible characteristics and the possible strategies that the Epiclassic population developed. This work will evaluate the function of each architectural element, and then discuss some ideas about the Epiclassic fortifications in the Puebla-Tlaxcala Valley.

Samford, Patricia [96] *see McReynolds, Theresa*

Sampeck, Kathryn (Tulane University)

[183] *Ancient Altepetl and Modern Municipios: Late Postclassic and Early Colonial Political Boundaries of the Izalco Pipil*

The Late Postclassic Pipil of western El Salvador appear to conform to Lockhart's model of Nahua cellular organization, evinced by the limited occurrence of nucleated, primate settlements. Settlement patterning underscores the problem of equating size and density with political importance. Settlement clustering around municipio borders reflects separate political

entities; thus, after conquest Nahua principles persist through colonial municipios that followed altepetl boundaries. Spanish ideology was replicated in the sociopolitical, and economic order of colonial nucleated settlements. Integration into the world-system in the Late Postclassic was more even and formed a far-reaching network, but post-colonial integration was discontinuous.

Sampson, Garth (Southern Methodist University)

[166] *Fiber Temper First: Hunter-Forager Pottery in South Africa and the Case for Local Origins*

Conventional wisdom holds that Late Stone Age (LSA) ceramics in South Africa coincide with the arrival of Iron Age agropastoralism from the north. But direct radiocarbon dates on fiber temper in LSA sherds (ca 200 BC cal) show that undecorated bowls were being made centuries before the first Iron Age arrivals. Reliably dated Iron Age ceramics of comparable age occur over 1500 kilometers to the north. This scenario has striking parallels with the much earlier emergence of hunter-gatherer ceramics around the Sea of Japan, and in the American Southeast. Such striking convergence across continents and time suggests common trigger(s) for hunter-forager:pot-making.

Sampson, Garth [182] see *Bond-Freeman, Tara*

Sanchez, Fernando [206] see *Frederick, Charles*

Sanchez, Guadalupe (Museo El Fuerte), Vicente, Julio (Centro INAH Sinaloa) and Carpenter, John (Centro INAH Sinaloa)

[70] *Investigations at Cerro de la Máscara Site, El Fuerte, Sinaloa*

Rock art sites are ubiquitous throughout the state of Sinaloa, and unquestionably represent the prevalent archaeological component recognized within the region. Among these, the Cerro de la M-scara site, containing estimated 700-800 individual glyphs, is perhaps the most widely known site. The Proyecto Cerro de la M-scara was initiated in anticipation of opening this site to the public, and constitutes the first systematic investigation of a rock art within Sinaloa. This project involves systematic survey and location of all the features, controlled surface collections, excavation of select features and test units, and the creation of a catalogue of the petroglyphs.

Sanchez, Guadalupe [70] see *Carpenter, John*

Sánchez, Ricardo [74] see *Robles-Camacho, Jasinto*

Sanders, William [140] *Discussant*; [15] *Discussant*

Sandor, Gregory

[13] *The Sixth Sun: On Digital Reconstruction and Exploration of Archaeological Sites*

A three-dimensional computer graphic exploration of selected sites in Mesoamerica, this paper and accompanying multimedia presentation visualizes elements of the Aztec natural and cultural environment. Modeled from codex art, archaeological evidence and real-world satellite imagery, the included virtual environments show ancient sites in a new light.

Sands, Ashley (University of Southern California), Dodd, Lynn Swartz (University of Southern California) and Abraham, Meg (Oxford University (UK))

[77] *Middle Bronze Age Pottery Production in the Upper Tigris River Valley: A view from Kenan Tepe*

In 2002, UTARP members discovered a melted mud brick pyrotechnic facility in the Middle Bronze Age levels. Research indicates it burned to 1100 degrees Celsius. This paper argues that the remains excavated were the firebox of a two stage kiln, and that the remains constitute an in-situ production facility for figurines and vessels of the Middle Bronze Age assemblage, known as Red Brown Wash Ware. This paper presents a current picture of this pottery's production in the Upper Tigris region, situates Kenan Tepe's pottery corpus in that regional frame, and addresses the anomalous high temperatures achieved in this kiln's firebox.

Sandweiss, Dan (University of Maine)[184] *Terminal Pleistocene Settlement of the West Coast of South America*

The last decade has seen a major reassessment of the initial occupation of the Pacific Coast of South America. We now know that maritime-adapted peoples were present in the region by at least 13,000 cal yr BP, employing a variety of technologies to target specific taxa of marine organisms, constructing dwellings, and establishing logistical and base camps. Despite enthusiasm over these finds, however, there is much that we do not yet know, beginning with migration route(s). This paper briefly synthesizes current knowledge, discusses gaps in our understanding of early coastal settlement, and suggests strategies for addressing these gaps.

Sandweiss, Dan (University of Maine) [130] Discussant**Sanger, Matthew (American Museum of Natural History), Semon, Anna (American Museum of Natural History) and Blair, Elliot (American Museum of Natural History)**[208] *Digital Modeling for Archaeological Sites -- Recreating the St. Catherines Island Shell Ring*

This paper presents a digital recreation of the St. Catherines Island Shell Ring, a Late Archaic site in coastal Georgia. Using GIS technology and 3D modeling, questions regarding site formation processes, impact on the environment, and the visual and physical imprint of the site are addressed. Data sources include topography, ground penetrating radar, magnetic and resistivity findings. Beyond generating a model of the St. Catherines Island Ring, digital recreation incorporates disparate data sets from the site (e.g. artifact analysis, field notes, profile illustrations) and organizes and presents them in a dynamic and multi-layered manner using GIS and user-friendly database platforms.

Sanger, Matthew [104] see Blair, Elliot**Sano, Katsuhiro (Institut für Ur- und Frühgeschichte)**[209] *Lithic Raw Material Utilisation in Central Honshu during the Terminal Pleistocene*

This study focuses on the analysis of acquisition practices and reduction sequences of lithic raw materials during the terminal Pleistocene in Central Honshu. During this time, which coincided temporally with the emergence of pottery, the size of the raw material acquisition territories was reduced and rational and economical reduction sequences were changed into expedient and wasteful reduction sequences. The association of this transformed lithic raw material utilisation with the use of pottery provides an opportunity to explore strategies based on reduced mobility.

Santini, Lauren[5] *Ancient Roadways and Modern Technology: Mapping Maya Causeway Systems Through Satellite Imagery Manipulation*

In the past, archaeological analyses of Maya causeways were limited to those in direct proximity to site centers; little attention was paid to inter-site roads, or the system as a whole. It is important to realize that roads should be examined as a system rather than in isolation as they are tangible evidence of types of interactions between sites. To comprehensively understand the interactions across the Maya region, all roads must be identified. This project discusses the process and results of roadway mapping in Peten, Guatemala, and surrounding regions by means of advancing techniques in satellite imagery manipulation.

Santoro, Calogero (Universidad de Tarapaca, Chile)[79] *South by North: North American Views of South American Peopling*

When studying the first cultures and peoples of South America, archeologists have focused mainly on the similarities rather than the differences between them. We also have viewed the first South Americans much as we do the first North Americans—as unchanging migratory people. Only recently have archeologists become more interested in explaining the cultural and physical differences between different regional cultures in South America and between those in both North America and South America. This paper addresses the polemics and understandings of these issues, particularly with reference to the misunderstanding that most North Americanists have of the early South American record.

Santos Estévez, Manuel (Institut for Galician Studies (CSIC-Xuga))[214] *Rock Art and Structural Analysis of the Landscape in Late Prehistory*

From the structuralist point of view, the distribution of several zones with rock art of Atlantic

Style in Galicia, NW of the Iberian Peninsula, is analyzed. Same constants in the distribution in the landscape of some designs have been detected. This distribution is observed in several sites and on diverse scales. The detection of similar structures in several sites occupied in Late Prehistory by communities belonging to the same ethnic group, can be explained by the existence of a same mythological system that gives sense to the territory.

Sappington, Robert (University of Idaho)

[39] *A 10,000-Year Cultural Sequence From Three Sites in the Clearwater River, Region, North Central Idaho*

University of Idaho and Nez Perce Tribe archaeologists conducted data recovery excavations at three sites along the Clearwater River in 2004. These sites contained cultural features that provided 27 radiocarbon dates. Protein residues from flaked and ground stone tools indicate that both plants and mammals, including bison, deer, mountain sheep, and rodents were processed. Timber Butte obsidian from southwestern Idaho was identified at all sites and one site also had material from Oregon sources. These sites were used intermittently for hunting, processing, lithic tool manufacture, and other activities throughout five cultural phases dating from ca. 10,000 to 200 years ago.

Sarro, Patricia J. (Youngstown State University)

[198] *Marking Time: The Processional Murals of Teotihuacan, Mexico*

Elaborate mural painting compositions once adorned the walls of Teotihuacan's apartment complexes. Among the fragments that remain are lower-wall images of nearly identical figures in elaborate costume, engaged in ritual activities. Sometimes mythical composite creatures, sometimes fully human, they surround the walls of rooms and porticoes, and frame entranceways in ritual procession. This paper will consider these figures as markers of cyclical time, and investigate the relationship between them and the rituals performed in the spaces where they appear.

Sassaman, Kenneth (University of Florida) and Randall, Asa (University of Florida)

[58] *The Alterity of Complexity and the Illusion of Change*

Self-aware organisms have other-awareness and with it the cognitive basis for social differentiation. The cosmologies of peoples worldwide evoke the root metaphors of alterity, while origins myths supply the temporality for ranking difference. As institutionalized forms of inequality, so-called "complex" societies are arguably the consolidation, spatially and socially, of regionally dispersed but historically intertwined social formations. Thus, complexity, as usually conceived, does not "emerge" or "evolve" as a unique human condition, but rather is a particularly familiar manifestation of the process of imposing structure through practices of inclusion and exclusion. Case material from the American Southeast illustrates these concepts.

Sassaman, Kenneth (University of Florida) [166] Discussant; [132] see Randall, Asa

Sauk, William [167] see Pearl, Frederic

Sauders, Rob (American University)

[193] *Between Paralysis and Practice: Theorizing the Political Liminality of Palestinian Archaeological Heritage Management*

With the signing of the Oslo Agreements, the Palestinian National Authority assumed responsibility for archaeological management within limited regions; thus ushering in a new era of archaeological heritage managed and administered by the Palestinians. Yet after a decade of continued political and military conflict, Palestinian archaeological management remains bound in a liminal space – neither completely restricted nor entirely free to preserve, protect and promote its archaeological heritage. This paper will explore the theoretical dimensions of this political liminality and assess its impact on the construction of Palestinian heritage narratives as well as the preservation and management of Palestinian archaeological resources.

Sayre, Matthew (UC Berkeley)

[65] *New Data on Interregional Exchange at Chavin de Huantar*

This poster will present new data from the 2005 excavation season at Chavin de Huantar. In

particular data from the La Banda region will be highlighted. Paleoethnobotanical data, malacological analysis, ceramic analysis, and other forms of material culture all provide lines of evidence that enable us to trace the extent and importance of interregional exchange in a Chavin period domestic settlement.

Scarborough, Vernon (University of Cincinnati)

[52] *Water Scarcity and Abundance: The Rate and Process of Cultural Pathways*

The UNESCO water book project will cover all aspect of water management. Volume seven is the capstone to the series and emphasizes archaeology, history and anthropological views of this most precious of controllable resources crossculturally. Both its scarcity and (over)abundance have affected societal structures. The rate and process by which cultures develop is fundamentally conditioned by the artificially altered availability of this resource. Through the study of past and present water systems, a unique window into current issues of sustainability and quality of life are addressed. Water is the same basic and quantifiable medium within and between groups globally.

Scarlett, Timothy James (Michigan Technological University)

[191] *What if the Local is Exotic and the Imported Mundane? Measuring Ceramic Exchanges in Mormon Utah*

Globalization made locally produced goods rare in western North America in the nineteenth century. Archaeometric and historical analyses are revealing the true complexity of the ceramic exchange system in Utah, where ceramics served key roles in social performance of social and religious identity. This paper reviews the progress of the Utah Pottery Project, established in 1999 to map the colonization of immigrant potters into the Mormon Domain. Crocks, pots, and jars represent connections between people in space through time, yet connections were more complex than readily reduced by GIS analysis. Project scholars work toward an integrative approach centered upon exchange.

Scarry, John (University of North Carolina-Chapel Hill)

[112] *Agency and Practice in Colonial Apalachee Province*

The Apalachee were among the first Native North Americans to come into sustained contact with Europeans, enduring roughly 75 years of sustained contact with Spanish religious and secular forces during the 17th century, after their initial encounters in the 16th century. Archaeological and ethnohistorical evidence from pre- and post-contact contexts reflect patterns that resulted from the actions of partially knowledgeable, constrained actors as the Apalachee, both elite and commoners, acted in ways that reflected traditional practices, culturally-based personal motivations, and growing understandings of Spanish goals and practices. These differentially reveal public and hidden transcripts of accommodation and resistance.

Schaaf, Jeanne (National Park Service)

[34] *The Window Is Small, the View Exquisite: A Report of Radiocarbon Dates and Occupation Surfaces from the Mink Island Site, 7,600–4,100 Years BP*

The National Park Service completed four seasons of excavation at the Mink Island site, located in Katmai National Park on the Pacific coast of the Alaska Peninsula. The site is within the Amalik Bay Archaeological District National Historic Landmark. Exquisite preservation of several occupation floors dating between 7,600 and 4,100 years BP (65 calibrated radiocarbon dates) and micro-stratigraphic excavation provide a high-resolution snapshot of prehistoric site-use patterns. Information recovered has refined understanding of the region's culture history. The well-preserved vertebrate and invertebrate assemblages provide a record of the paleoclimatic history of the area for much of the Holocene.

Schaaf, Peter [74] see Robles-Camacho, Jasinto

Schaafsma, Polly (MIAC\Laboratory of Anthropology)

[82] *U-Bar Cave, Hidalgo County, New Mexico and Its Regional Significance as a Landscape Shrine*

Intermittent investigations at U-Bar Cave in the twentieth century have established its significance as an Animas Phase (AD 1200–1400) ritual use site. This paper evaluates the site as a whole, including those physical features that would have held particular meaning for the users. Published as well as unpublished material remains from the cave are reviewed, and a

new synthesis is presented. Consideration is given to offerings seemingly peculiar to this site. The ritual use of U-Bar cave has implications for identifying a Mesoamerican-like cosmology that was pervasive among southern Mogollon and Pueblo cultural groups.

Schaan, Denise (Universidade Federal do Pará) and Ranzi, Alceu (Universidade Federal do Acre)

[100] *Acrean Geoglyphs: Monumental Earthworks of Western Amazonia*

Ground and aerial survey has revealed about a hundred geoglyph type sites in western Amazonia. They are perfect circles, rectangles and composite figures sculpted in the clayed soils of Amazonia, and appear to be defensive structures: excavated ditches and earthen walls. Located on a 200 meter-high plateau, clusters of the gigantic marks indicate a quite substantial population living in what scholars once believed to be an inadequate environment for sedentary societies. This paper presents updated information on the configuration and regional distribution of such earthworks, and discusses the importance of this study for understanding tropical forest paleoenvironment.

Schablitsky, Julie (University of Oregon) and Dixon, Kelly (University of Montana)

[215] *The Donner Party: Re-Opening a Cold Case*

The Donner Party was stranded in the Sierra Nevada Mountains of California in the winter of 1846–1847 and will forevermore be remembered for their alleged cannibalism. Besides sensationalized newspaper accounts and faded childhood memories, little was known about how the emigrants survived for four months on emaciated livestock. Although the Donner family camp site was discovered over 15 years ago, limited information was gleaned from the fragmentary artifacts. Today, archaeologists have re-examined the site using a multi-disciplinary team and cutting edge technology. These collaborative efforts, along with creative applications, have allowed a humanistic survival story to emerge from this tragic event.

Schachner, Gregson (Arizona State University)

[62] *Thirteenth Century Pottery Circulation in the Cibola Region of the American Southwest*

Recent archaeological studies of pottery circulation have successfully used compositional analyses to track the exchange of vessels and the movement of people. This poster presents results from an instrumental neutron activation analysis of Cibola Corrugated and St. Johns Polychrome vessels recovered from Cibola region sites occupied during the A.D. 1200s. Analyses of these complementary datasets suggest that pottery was frequently circulated among villages located in the eastern part of the region. These patterns of circulation reflect sub-regional networks of population movement that were implicated in a number of important settlement and social changes during the late Pueblo III period.

Schaffer, Jennifer [101] see Ghazal, Royal

Schaffer, William [71] see Carr, Bob

Scham, Sandra (American Schools of Oriental Research, Catholic University of America)

[193] *Apology in Defense of Archaeology*

"It worketh...to bestow a Cyrus upon the world to make many Cyruses." (Sidney, *Apology in Defense of Poesy*) Apologetic rhetoric for historical injustices abounds in the heritage field. Why then do archaeologists often focus on sites before people when confronted with current conflicts? It is not true that we live in the past but it is true that we visualize everyone else as living there. Our figure/ground discernment of people against places is skewed. Our well-publicized pleas to today's "Cyruses" to save archaeological sites require another form of apologia disputation on the nature of our perception.

Scharf, Elizabeth (University of North Dakota)

[34] *Modeling Pre-Contact Vegetation Composition and Human Action Along the Yazoo River, Mississippi*

Modern ecological studies, historic records, and palynological data will be used to create models of floodplain plant communities and community dynamics for reconstructing past vegetation along the Yazoo River. This information, in turn, will be used to investigate the potential role that prehistoric human action may have played in the local ecosystems.

Empirical expectations for several scenarios will be generated, and test implications will be drawn from this study for further research.

Scheiber, Laura (Indiana University) and Finley, Judson (Washington State University)
[112] *Technological Transitions and Craft Traditions across the Great Divide, A.D. 1600–1900*

In this paper, we consider ways that spatiality and materiality intersect at remote Shoshone campsites in the Rocky Mountains during several critical periods that span the protohistoric-historic transition, including the expansion of neighboring Plains Indians into traditional Shoshone homelands, initial contact with Euroamerican explorers and fur traders, and increasing cultural conflicts resulting from the Plains Indian Wars and establishment of reservations in the western U.S. The picture that emerges is that of a people responding strategically to rapidly changing contexts, taking advantage of new items for their material culture repertory while maintaining continuity with past traditions.

Scheiber, Laura [112] see Mitchell, Mark; [191] see Finley, Judson B.

Scheick, Cherie [90] see Huntley, Deborah

Scheinsohn, Vivian (INAPL/CONICET)

[79] *Evolutionary Theory in Archaeology: North and South*

The goal of this paper is to compare how Evolutionary Theory was applied in North and South American hunter-gatherer archaeology with special reference to USA and Argentina. Here, I will assess how regional and ideological contexts, academic debates, competing theoretical frameworks and other factors have influenced its development. When we speak of Evolutionary archaeology in the Americas are we talking about a unique framework? How was the interchange of authors? How they have influenced each other? Are the same concepts utilized? Is this theoretical framework useful to analyze specific South American archaeological problems? This and other questions will be addressed.

Scherer, Andrew (Wagner College) and Wright, Lori (Texas A&M University)

[3] *Ancient Maya Dental Wear?*

Archaeological reports often describe ancient Maya skeletons as exhibiting a significant degree of dental wear. The assumption is that grit in the stone ground maize rapidly eroded the enamel surfaces of Maya teeth. We present data on dental wear from a variety of Maya sites in Guatemala, including Piedras Negras, Tikal, Kaminaljuyu, and the Pasión region and compare our findings to data on dental wear from other archaeological populations from around the world. Contrary to common belief, Maya dental wear was relatively minimal, likely a result of extensive food processing and the use of soft limestone as grinding stones.

Scherer, Andrew [189] see Golden, Charles

Schieppati, Frank [11] see Hayward, Michele; [142] see Smith, Donald

Schlanger, Sarah (Bureau of Land Management)

[6] *Putting Chaco on the Map*

Popular writing characterizes Chaco Canyon as an exotic destination which promises an Ozymandian experience of distance, remove, and ruin. In spite of its remote location, however, thousands of determined tourists find their way to the canyon each year. Far from re-discovering a once-forgotten place, they are carrying on a tradition of coming through Chaco which extends from 19th century military expeditions, through the Spanish entrada and Navajo history, to the origins of the Southwest's Pueblo communities. This poster explores the central place Chaco has occupied on travel routes across the Southwest at least since the earliest years of Western exploration.

Schlanger, Sarah [125] see Powers, Bob

Schleher, Kari (University of New Mexico)

[63] *Thin Sections of Time: Petrographic Analysis of Northern Rio Grande Glaze Paint Wares from San Marcos Pueblo, New Mexico*

Shepard and Warren's pioneering petrographic research set the stage for future studies of ceramic technology by identifying the types of aplastic materials in ceramics from the Northern

Rio Grande. Little research, however, has considered the contribution of petrographic analyses to the study of raw material processing. This poster presents the results of an intensive petrographic analysis of diachronic changes in temper added to Rio Grande Glaze Paint Wares from San Marcos Pueblo, NM. These findings have implications for understanding changes in the organization of production by San Marcos potters during the Pueblo IV Period (A.D. 1300-1700).

Schloen, David (University of Chicago)

[172] *The Online Cultural Heritage Research Environment (OCHRE)*

The "Online Cultural Heritage Research Environment" (OCHRE) is a multi-user, multi-project Internet database system for research on cultural heritage in all its forms. It encompasses various kinds of evidence, both written and unwritten, as an aid to interdisciplinary research. Its underlying data format is defined by the "Archaeological Markup Language" (ArchaeoML), a generalized XML data format that can store data from diverse projects that use different recording strategies. This presentation will focus on the use of OCHRE for field archaeology.

Schmader, Matt [33] see Markussen, Christine

Schmich, Steven (Arizona State University)

[84] *Using Remote Sensing to Understand Human Adaptation Across the Pleistocene-Holocene Transition in Mediterranean Spain*

Mediterranean Spain's archaeological record is well-suited to increase our understanding of human responses to global climate change. However, sea level rises during the Pleistocene-Holocene transition inundated the Mediterranean littoral and submerged its hunter-gatherer record of coastal landuse. Research in southern Scandia, where isostatic rebound kept pace with post-glacial sea levels, suggests that shorelines were components of an overall, annual subsistence pattern exploiting both interior and coastal resources. Applying remote sensing techniques first developed to locate submerged archaeological evidence in the Gulf of Mexico potentially opens an important new area of research in the Western Mediterranean that is otherwise inaccessible.

Schmidt, Kari (LANL/UNM)

[105] *Faunal Remains from Multi-Year Excavations on the Pajarito Plateau, Northern New Mexico*

Since 2002, the Department of Energy (DOE) has returned land in several tracts to the County of Los Alamos, New Mexico, and to the Pueblo of San Ildefonso. These tracts contained archaeological sites in areas suitable for commercial and/or residential development by Los Alamos County. As a result, nearly 50 archaeological sites ranging from Archaic period lithic scatters to Historic period homesteads were excavated. This paper compares and contrasts the faunal assemblages recovered at various sites excavated during the course of this project and uses this information to address changing subsistence strategies on the Pajarito Plateau.

Schmidt, Paul (UNAM)

[75] *The Formative Sequence from Baño Negro, Chilapa, Guerrero*

Early through Late Formative materials were excavated at this site, which may also have Classic and Postclassic occupations. Ceramics and figurines are indicative of the Formative occupation, while green obsidian and some ceramics point to Classic and/or Postclassic occupations. Materials indicate probable contact with the Valley of Mexico, Morelos, Oaxaca, and, possibly, the Gulf Coast. Given the Early and Middle Formative contexts, this and other nearby sites are relevant to the problem of the Highland Olmec.

Schneider, Tsim (UC Berkeley)

[146] *San Francisco Bay Shell Mounds as Places of Colonial Encounters*

This paper will address colonial encounters in the San Francisco Bay area following the establishment of Mission San Francisco Dolores in 1776. Shell mounds located in the hinterlands of the Bay Area are key to understanding how Native Californians negotiated missionization. Historic components of these shell mounds address the occupational history and social context for inhabiting "prehistoric" sites during California's Mission Period. This paper offers preliminary observations on the actions and experiences of Native Californians, archaeological landscapes, and resistance.

Schoeman, Alex (University of Pretoria)

[144] *Painted over Diversity: Exploring Pre-Colonial Complexity in Ndzundza Material Culture, Gendered Identity and Ethnicity*

South Africa's Ndzundza Ndebele are well known for their bright murals and women's paraphernalia and are perceived as an homogenous ethnic group. Archaeological material culture from Steelpoort River sites, dating between the seventeenth and nineteenth centuries, contradict the projected homogeneity: Royal settlement pattern and middens expressed 'Ndebeleness', whilst houses and ceramic style invoke 'Pediness'. These different identities were products of the articulation of specific social and gender relations within the regional context. These disparities emphasise the complex, and sometimes contradictory, identities articulated within African communities, and highlight the perilousness of past southern African Iron Age approaches, which abstracted group identity.

Schoenfelder, John [52] see *Lansing, Steve*

Schoeninger, Margaret [17] see *Kellner, Corina*

Schollmeyer, Karen Gust (Arizona State University)

[33] *Settlement Reorganization and Resource Stress in the Eastern Mimbres Area*

Resource stress is often considered a cause of social and cultural changes, including changes in settlement patterns. I examine the role of food stress in the dramatic depopulation of large, long-occupied villages in the eastern Mimbres area of the U.S. Southwest ca. A.D. 1130. Mathematical models and archaeological data on settlement patterns, plant remains, and faunal assemblages are analyzed to assess the degree to which temporal changes in resource use suggest responses to food stress.

Scholnick, Jonathan (University of Arizona)

[158] *Cultural Transmission and Spatial Patterning in Historic New England Gravestones*

Cultural transmission models can be used to examine the role of evolutionary mechanisms in the spread of stylistic information. The spread of stylistic information among populations of social learners occur via many pathways. A neutral model of cultural transmission is evaluated using a recently compiled geospatial database of historic New England gravestones that builds upon Deetz and Dethlefsen's research. Measures of stylistic diversity and local spatial autocorrelation are used to investigate the role of drift and other evolutionary mechanisms structuring this dataset.

Schon, Robert (Tufts University)

[169] *Attention in the Field: Using Vigilance Theory to Improve the Consistency of Pedestrian Survey Data Collection*

Since the advent of off-site regional survey, the primary function of pedestrian survey teams has been to walk the landscape in search of artifacts. Empirical studies have shown that artifact recovery rates vary from person to person, and can fluctuate over the course of a day, season, and entire project. Such variable recovery compromises the validity of survey results. This paper applies vigilance research (initially undertaken by the military to monitor attention decrements in radar operators) to the question of archaeological survey team performance. Results suggest that while fieldwalker inconsistency cannot be eliminated, certain methodological practices can mitigate its effects.

Schon, Robert [134] see *Galaty, Michael L.*

Schortman, Edward M. (Kenyon College) and Ashmore, Wendy (University of California, Riverside)

[147] *Quirigua Administrative Strategies in the Lower Motagua Valley, Guatemala*

Strategies of integration in the Quirigua region stand in stark contrast to Copan administrative practices seen in the El Paraíso Valley. Where Copan elites appear to have established an enclave settlement or outpost in the El Paraíso Valley, Quirigua elite do not seem to have employed the same strategies in the Lower Motagua Valley. Instead, there is little evidence of architectural emulation in the remarkably uniform closed quadrangle sites that characterize Lower Motagua Valley settlements, with integration occurring through an economy based on portable material culture, particularly ceramics. An examination of the Morja Site illustrates this point.

Schou, Corey [190] *see* Lohse, Skip

Schoville, Benjamin (Arizona State University) and Otarola-Castillo, Erik (Iowa State University)

[5] *A Predictive GIS Model for Site Surface Visibility on the Northwestern Great Plains*

Presented are the results of pedestrian archaeological survey and inspection of western harvester ant mounds (*Pogonomyrmex* sp.) conducted in portions of Nebraska and Wyoming. In contrast to the high artifact densities at nearby deeply buried Paleoindian sites, surface artifact densities are extremely low and the presence of artifacts on nearby ant mounds is negligible. To better understand the variables affecting site visibility and discovery, an attribute-informed landscape GIS model surrounding the sampled area was created. A predictive model is derived from the descriptive template and tested for accuracy against known archaeological site and non-site locations in relevant portions of the Northwest Plains.

Schreg, Rainer [94] *see* Fisher, Lynn

Schreiber, Katharina (UC Santa Barbara)

[52] *Water Control Systems in the Andes*

The manipulation of water was crucial to the development and survival of ancient societies, just as it is to the maintenance of modern societies. This paper summarizes the range of water control strategies employed by ancient civilization of the central Andes, from household-based irrigation to the massive state-controlled canals of the north coast of Peru. Special attention is paid to technologies aimed at sub-surface water resources, including the sunken fields of the coast, the "kochas" of the high altiplano, and the "puquios" of Nasca.

Schreiber, Katharina (UC Santa Barbara) [17] Discussant

Schreiner, Thomas (University of California, Berkeley)

[67] *Traditional Lime Production in the Maya Lowlands and Associated Studies in the Mirador Basin*

Experimental work using Maya lime burning specialists has illuminated a culturally rich and technologically sophisticated New World development of pyrotechnology of ancient origin. The nearly extinct technology employs high moisture fuels arranged in pyres to attain the sustained 900 C temperature necessary to convert limestone to quicklime. Quantitative data from measurement of labor, materials, and products are useful for estimation of the social and environmental costs of massive lime use for monumental architecture in the Mirador Basin during the Late Preclassic period.

Schreiner, Thomas [35] see Wahl, David B.; [35] see Hernandez, Enrique

Schriever, Bernard [163] *see* Gilman, Patricia

Schroeder, Bruce (University of Toronto at Scarborough)

[23] *The Saga of a Misplaced Middle to Upper "Transition": The Lithics from the Syrian Desert Site of Jerf al-Ajla*

In the mid-1960s while studying the lithics from the Syrian desert site of Jerf al-Ajla for my dissertation, the question of a Middle to Upper Paleolithic transition was limited to simple acceptance or rejection. My acceptance rested partly but incorrectly on the presence of Middle and Upper Paleolithic industries found in the same layer. Fortunately, it was preceded by a long series of blade-rich industries upon which this paper is based. Our knowledge of lithic production techniques, regional chronologies plus the publication of additional sites have contributed enormously to our understanding of the issue. This paper offers a reinterpretation of the lithic sequence at Jerf al-Ajla based on these contributions especially those of Tony Marks.

Schroeder, John

[185] *Intensive Documentation of Prehistoric Ruins Using Cutting Edge Technology in Montezuma Castle and Tuzigoot National Monuments*

Throughout the last century, Montezuma Castle and Tuzigoot National Monuments have seen numerous stabilization projects focused on the preservation of prehistoric ruins within the parks. Integral to the Park Service's mission is the maintenance of these structures for public

education and enjoyment. Unintentionally many of these projects have had detrimental effects on prehistoric fabric of the structures. Documentation of work has been sporadic and incomplete. Our park's three ongoing stabilization projects employ computer drafting and mapping software, Total station mapping, high resolution laser scanning and historical research to determine the best possible preservation of our resources in perpetuity.

Schub, Lisa [138] *see Baldwin, Anne*

Schubert, John (Northern Arizona University)

[40] *Sifting Through INFRA: Balancing Forest Service Data Management Goals with Practicality*

Balancing current heritage program needs with future data management goals is a growing responsibility of Forest Service Heritage Specialists (Archaeologists). Although heritage data management practices within the Forest Service are currently decided at the Ranger District and Forest level, a soon to be mandatory national database, INFRA, is becoming established. INFRA has developed into one of several mobile spatial database tools that can enable more efficient methods of data collection, processing, and storage. Every Forest could benefit from a cost benefit analysis to explore the immediate and long-term value of choosing to adopt many of the options associated with INFRA.

Schuldenrein, Joseph (Geoarcheology Research Associates), Wright, Rita (New York University) and Bryson, Reid (University of Wisconsin)

[117] *Modeling Holocene Landscape History and Climate Change in the Indus: Environmental Perspectives on Human Geography*

Landscape models for Harappan emergence, florescence, and decline are based on correlated settlement data and speculative terrain reconstructions. These data are aberrant, structured on surface settlement and inferred landscape relations. The Beas River study produced stratified, dated Holocene sequences linking buried soils, and alluvial histories encompassing the Harappan occupation. An innovative climatic paradigm models structures Holocene circulation trends based on high resolution stream discharge and precipitation data. Time transgressive climate phases coincide with periods of landscape stability and dynamism. A critical break co-incident with Harappan emergence (5500 B.P.) was the initiation of uniform, less seasonal precipitation that invariably affected Harappan settlement geography.

Schuldenrein, Joseph [145] *see Bryson, Reid*

Schulenberg, Janet (Penn State), Kowalczyk, Stefanie (SUNY Potsdam) and Vavrsek, Jessica (SUNY Potsdam)

[215] *Excavating the Storage Closet: The Rediscovery of a St. Lawrence Iroquoian Site*

Like many colleges, SUNY Potsdam houses archaeological collections from excavations conducted decades ago. One of those collections is from Pine Hill, a fifteenth century St. Lawrence Iroquoian village. The site was excavated by several professional and avocational archaeologists during the 1970s, primarily as archaeological field schools. Although the site was not "lost", it has never been fully analyzed or reported. Through student-faculty collaboration, we offer a description and analysis of the Pine Hill site and a preliminary assessment of Pine Hill's place in the chronological and cultural interpretation of the St. Lawrence Iroquois.

Schultz, Clay [208] *see Wilson, Samuel*

Schulz, Margaret and Wood, Amy (Versar, Inc.)

[142] *Upland Testing--A New Sensitivity Model*

Fort Drum uses sensitivity models to target inventory survey. Judgmental testing, based on waterways, has been the sole method used in the upland areas of the Installation. Recently, a new upland model was developed through GIS utilizing multiple physical attributes such as slope and portage and terrace locations. Using these attributes in conjunction with navigable waterways has potentially identified new areas to investigate for prehistoric occupation that were decidedly different from those tested before and included terraces that were not closely associated with waterways. The results of the first set of tests show great potential and have yielded new sites.

Schurr, Mark (University of Notre Dame)

[148] *Interactions Across Multiple Dimensions: Measures of Diversity in the Removal Period Potawatomi*

Dichotomies or bipolar scales often provide the conceptual framework for discussions of historic period Native American cultural change. Archaeological and historical studies of Removal period (A.D. 1795 to 1840) Potawatomi of northern Indiana and southern Michigan provide challenges to common frameworks such as Catholic::Non-Catholic, assimilationist::traditionalist, accommodationist::nonaccommodations, or contact::colonialism because of the great diversity of responses to changing conditions. Case studies of four communities, two which successfully resisted removal and two which did not, illustrate the need for multidimensional scales that facilitate comparisons between diverse communities living in a rapidly changing world.

Schurr, Mark [62] see Ketchum, Sheena

Schurr, Theodore (University of Pennsylvania) [28] *Discussant*

Schwab, David [124] see Yu, Pei-Lin

Schwake, Sonja (UCSD)

[202] *Maya Multiple Burials: A Regional Analysis of West-Central Belize*

This paper examines the occurrence of Ancient Maya multiple burials in the central lowland region of west-central Belize. Only recently have Maya scholars focused their attention on the presence and interpretation of interments that contain numerous individuals. This paper considers the prevalence of multiple-person burials in the western Belize region, and posits an interpretation of these mortuary events related to cyclical periods of increased political and socioeconomic de-stabilization. To withstand these particular times of crisis, it is proposed that specific groups incorporated ritual strategies that served to strengthen group solidarity.

Schwarcz, Henry (McMaster University), Moyes, Holley (University of Arizona) and Awe, Jaime J. (Institute of Archaeology, Belize)

[202] *Identifying the Underworld: Tracing Excavated Speleothems from Maya Sites to their Caves of Origin*

There is little doubt that caves were important ritual venues for the ancient Maya. Despite years of cave research, archaeologists do not know which sites were using particular caves. Speleothems from caves have been excavated at surface sites in western Belize. This suggests a method of linking the surface site to its cave of origin using chemical signatures. To model geographic aspects of ancient Maya cave use, the Belize Valley Speleothem Project collected speleothem samples from caves and surface contexts for analyses. We use ICP/MS and INAA analyses to obtain chemical fingerprints of possible source caves. Here we present preliminary results.

Schwartz, Douglas (School of American Research)

[131] *Migration and Abandonment: The Evolution of Linda's Cordell's Thinking*

From the time she wrote her dissertation in 1972 to the present, two of Linda Cordell's many interests have been the cause of the Mesa Verde abandonment and the assumed migration which followed. The present paper examines how her ideas on these topics evolved over time and evaluates her most recent thinking in light of research by others.

Schwartz, Glenn (Johns Hopkins University)

[101] *New Data from a "Royal" Cemetery of Early Bronze Age Syria*

At Tell Umm el-Marra in western Syria, a complex of monumental elite tombs and associated installations dating to ca. 2500–2200 BC has been under investigation since 2000. In 2006, additional tombs and features involving equid and possibly infant sacrifice were excavated. These results provide new data on the importance of ancestral veneration (and, perhaps, desecration) and the ritual role of equids in the construction of hierarchical authority in the period of early complex societies in Syria.

Schwendler, Rebecca (SWCA Environmental Consultants)

[134] *A Cross-Cultural Comparison of Spearthrower Variation and Ownership*

Variation in spearthrower morphology and decoration within a cultural tradition may provide information on the diversity of people who created those tools. An example comes from the

Magdalenian culture of Western Europe (ca. 17–11,000 BP), whose spearthrowers demonstrate a range of size, quality of construction, and quality of decoration. In this paper, I compare the variation seen in Magdalenian spearthrowers with that present in a sample taken from ethnographically known hunter-gatherer groups. In the end, I interpret some of the variation in the Magdalenian examples as the result of differences in the age, and possibly gender, of the spearthrowers' owners.

Scott, Ann M. (The University of Texas at Austin)

[141] *The Role of the Nashville Cave Session in the Development of a Self-Conscious Subdiscipline*

Mesoamerican cave archaeology emerged as a self-conscious subdiscipline out of a session held at the 1997 SAA annual meeting in Nashville. While not the first Mesoamerican cave session ever held, the Nashville meeting's size and extensive organization gave it a singular historical importance because the majority of cave researchers coalesced as a group at this meeting. This paper traces several features that were developed in the process of organizing the session that are still functioning as integrative mechanisms. The impact of the session on the trajectory of the field's development is assessed in light of events during the last decade.

Scott, Rachel (Arizona State University)

[115] *One Identity in Death: On the Interpretation of Mortuary Similarity*

Mortuary analysis typically investigates past social identities by examining differences among burials. However, in choosing to emphasize mortuary variability, we often fail to consider the significance of similarity. For example, in early medieval Ireland (c. AD 400–1200), adherence to standard Christian mortuary practice resulted in markedly similar burials. I contend that for the early Irish, it is this conformity that was meaningful. All burials are essentially the same because the only aspect of social identity that mattered in death was one's Christianity. Consequently, this case study highlights the importance of aspects of identity (e.g. religion) often neglected in archaeological research.

Seager, Richard (Lamont Doherty Earth Observatory) and Cook, Edward (Lamont Doherty Earth Observatory)

[181] *Character, Global Context and Causes of North American Medieval Megadroughts*

Annual resolution, gridded, tree ring data show that several droughts of Dust Bowl severity, and similar spatial extent, lasted for decades at a time during the Medieval period. The thirteenth century depopulation in the Southwest occurred during one of these great droughts, unremarkable from the perspective of the prior few centuries, but following several relatively wet decades. The megadroughts fitted into a distinct global Medieval hydroclimate regime. Climate models are used to argue that a persistent La Nina-like state in the tropical Pacific and a stronger thermohaline circulation, both induced by strong radiative forcing, are plausible states that best explain Medieval hydroclimate.

Searcy, Michael (University of Oklahoma)

[50] *Mano and Metate Manufacturing Techniques of the Maya: An Ethnoarchaeological Approach to Understanding Standardization and Measurements*

Prehistorically, maize was the bulk of the Mayan diet, which made grinding stones an indispensable tool. Basalt quarries located in Highland Guatemala are still exploited by metateros who produce manos and metates today. This paper reports the recent research among metateros of two quarries in Guatemala and how they can be used to build new analogies that aid in the interpretation of prehistoric production economies of metates. It specifically investigates how systems of measurement are linked to standardization.

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

[26] *Cancuen's External Contacts: A View from the Inside Out*

Maya societies were largely self-sufficient, relying on upon external contacts to supply goods and symbols that reinforced central authority. In this paper we comment briefly upon those cultural materials that apparently were sought from areas outside of Cancuen's immediate social sphere. We emphasize the phenomena of "contact", over the more presumptive terms of "trade" or "exchange" and delimit our discussion largely to the evidence for the determination of manufacturing source through the compositional characterization of jade, pottery and figurines.

Sears, Erin L. [35] *see* Bishop, Ronald L.

Sebastian, Lynne (SRI Foundation)

[215] *Archaeology, Information, Eligibility, and Significance*

Eligibility to the National Register of Historic Places is a central concept in cultural resource management. It determines which historic places get considered in Federal agency planning and which don't. This works out reasonably well for the built environment; it doesn't work well at all for archaeology. The eligibility standard applied to most archaeological sites—that they have to be able to yield “important” information about the past—is incompatible with both the nature of the archaeological record and the temporal dimension of archaeological research. The result is decisions that are both bad archaeology and bad public policy.

Sebastian, Lynne (SRI Foundation) [8] Discussant

Seddon, Matthew (Utah State Historical Society) [118] Discussant

Seebach, John (Center for Big Bend Studies, Sul Ross State University)

[73] *Caches, De Facto Refuse and Plain Old Discard: The Case of Jupiter Rockshelter*

Jupiter, a small rockshelter in western Presidio County, Texas, contained a deposit posing several interpretive questions. A small lithic assemblage including an apparent predominance of scraping tools, all overlain by a possible cache marker, was recovered during recent excavation. Interassemblage and comparative analyses of the deposit, however, show that Jupiter most likely did not contain what could easily have been interpreted as a cache. A consideration of caching and discard behaviors, and the archaeological signatures of each, suggest the label “cache” is often too simply applied to assemblages that may be, in actuality, representative of behaviors other than caching.

Seibert, Jeffrey (Trent University)

[16] *Investigations in Group B, Naachtun, Guatemala: Yucatec Style Architecture in the Central Peten?*

This paper seeks to address some questions that arose following archaeological investigations in Group B of Naachtun, Guatemala in the 2004 field season. These investigations revealed a series of buildings in this group that exhibit architectural attributes that are strongly reminiscent of the Central Yucatan style of architecture, the origins of which are far to the north of Naachtun. This paper describes this architectural assemblage in relation to other architecture from Naachtun, the surrounding region, and the Maya lowlands as a whole and seeks to examine possible explanations for the presence of architecture constructed in this tradition at this centre.

Seinfeld, Daniel (Florida State University) and Markovics, Michelle (Florida State University)

[39] *Investigating Maize Use through Stable Isotopic Analysis at San Andrés, Tabasco, Mexico*

We conducted stable isotope analysis on a variety of materials from a Middle Formative feasting deposit from the La Venta Olmec subsidiary elite center of San Andrés, Tabasco, Mexico. Preliminary results support the hypothesis that maize was used as a feasting food and beverage, possibly as beer, during the Middle Formative period in Mesoamerica.

Sellen, Adam (Universidad Nacional Autónoma de México)

[46] *Expeditionary Fragments: Using Nineteenth Century Archaeological Data in Contemporary Oaxacan Studies*

Inventories, drawings, photographs, and other assorted documents produced by nineteenth century explorers are a rich source of information on Oaxaca's archaeological past. The documents are as diverse as the characters who created them, lending themselves to the genre of the travel narrative. Stitched together these fragments compose a multi-dimensional scrapbook that can be used to reconstruct early excavations, collections and object provenience, and thus contribute to our present archaeological knowledge of Oaxaca's ancient cultures. I will discuss the methods I have used to assemble and process nineteenth century archaeological data, the limitations encountered, and the possibilities for future studies.

Sellet, Frederic (University of Northern Colorado)

[165] *Folsom Retooling Strategies*

This paper offers fresh insights into Folsom retooling strategies. Building on previous work, it reviews a series of models of Folsom adaptations and technological responses to ecological factors. Then, using information extracted from the Main Folsom level at the Agate Basin site, it extrapolates the ratio of manufactured points to discarded points at numerous Folsom assemblages throughout the Plains and Rocky Mountains. The results are filtered along three basic behavioral axes: conservation, replacement and gearing-up. Finally the implication of the results for reconstructing Paleoindian mobility strategies and behavioral responses to ecological factors are outlined.

Semon, Anna (American Museum of Natural History)

[155] *The Paper to Digital Upgrade: Updating Archaeological Records from St. Catherines Island, Georgia*

AMNH has launched a project to conserve and digitize over 30 years of archaeological records related to St. Catherines Island, Georgia. These records represent an invaluable body of knowledge that was difficult to access prior to this project. This paper explores the records conservation efforts and the planning, implementation, and benefits of creating a digital archive of slides, photographs, maps, drawings, forms, and various other documents. The goals of this digitization project consist of making the records more accessible, creating a user friendly database for researchers, and integrating the archaeological data into the St. Catherines Island Archive.

Semon, Anna [208] see *Sanger, Matthew*

Serra Puche, Mari Carmen (Instituto de Investigaciones Antropológicas UNAM) and Lazcano, Carlos

[206] *Pre-Hispanic Artificial Small Barren Islands in the South of the Basin of Mexico*

This paper is on the constructive characteristics that have been found in various pre-Hispanic settlements in the south of the Basin of Mexico. We will make a journey beginning from the Formative Period to the Postclassic, to order to indicate the characteristics of the groups that were settled in the shores of the old Chalco-Xochimilco Lake. and how they created artificial small barren islands that were later used for the construction of "chinampas". We will recognize the importance of the exploitation of lacustrine resources.

Serra Puche, Mari Carmen [97] see *Lazcano, Carlos*

Sewell, Kristin [213] see *Becker, Kenneth*

Seymour, Gregory (Far Western Anthropological Research Group)

[163] *Interaction of the Southern Paiute through Time and Space in Southern Nevada*

Ceramics have long been used to assign cultural affiliation and chronology and as markers of technological change in archaeological cultures. Research in Southern Nevada reveals problems with this approach. Data suggests that Southern Paiutes often curated earlier ceramic wares for use hundreds of years after their manufacture and perhaps integrated materials and manufacturing techniques from surrounding groups. Cultural visibility and viability of current models is discussed.

Shackley, M. Steven [138] see *Arakawa, Fumiyasu*; [174] see *Bello, Charles*; [30] see *Loendorf, Chris*; [39] see *Fertelmes, Craig*; [191] *Discussant*; [155] see *Hall, John*; [90] see *Snyder, Charles*

Shafer, Harry (Texas A&M University), Waters, Michael (Texas A&M University) and Carlson, David (Texas A&M University)

[89] *The Archaeology and Geoarchaeology of the Gault Site, Texas: Texas A&M University Excavations*

Texas A&M University conducted archaeological investigations at the Gault site in 2000 and 2001. Forty-three square meters were excavated in the Lindsey Pit—the central portion of the site. Excavations revealed a stratified sequence of deposits that yielded 80,000 Archaic, Late Paleoindian, and Clovis artifacts. Clovis projectile points, bifaces, blades cores, blades, blade tools, endscrapers, retouched flakes, and debitage were found in two stratigraphically separated units (3a and 3b). Five years of intensive laboratory analyses followed the

excavations. In 2006, excavations began 100 meters downstream of the Gault site at the Buttermilk Creek site, which also has yielded Clovis artifacts.

Shaffer, Brian (State of Hall, Dallas Texas) and Baker, Barry (U.S. National Fish & Wildlife Forensics Laboratory)

[37] *Assumptions in the Interpretation of the Lagomorph Index in Prehistoric Southwestern Horticultural Contexts*

The Lagomorph Index (a faunal abundance measurement based on leporid [rabbit and hare] specimen counts) remains useful after 30 years, instrumental in addressing geographic differences diachronic changes related to hunting and horticulture in the American Southwest. While the index is a valid calculation, its cultural and biological interpretation is problematic. Southwestern archaeologists have typically viewed changes in prehistoric leporid abundance and exploitation as closely tied to horticultural field size and environmental disturbance, based on inaccurate perceptions of leporid behavior. As the Lagomorph Index and notions of leporid behavior are frequently analyzed together, resulting interpretations are problematic.

Shaffer, Gary (USDA/NRCS)

[169] *Quantitative Analyses of Soapstone Vessels from Northeastern Maryland*

Archaeologists from the late 1800s to recent years have reported upon prehistoric soapstone vessels from the Middle Atlantic and have offered important information on the containers' manufacture, function, and source quarries. However, one aspect of these studies that is rare is the basic quantitative analysis of vessel form. This paper describes several quantitative analyses of soapstone vessels based on a sample of circa 800 artifacts from northeastern Maryland. The study enables comparisons of quarries and other sites with respect to morphological attributes of vessels and offers basic data on container form as a foundation for higher-level interpretation.

Sharer, Robert (University of Pennsylvania Museum) [147] *Discussant*; [161] *Discussant*; [168] *see Borgstede, Greg*

Sharp, Zach [62] *see Mullen, Patrick*

Shaw, Justine [162] *see Johnstone, Dave*

Shaw, Leslie (Bowdoin College), King, Eleanor (Howard University) and Davis, Amber (Bowdoin College)

[161] *The Maya Market Place at Maax Na, Belize*

The ceremonial core of Maax Na, Belize, includes two expansive plazas linked by a central causeway. While the northern plaza is surrounded by massive structures and a ballcourt, the western plaza is primarily enclosed by low buildings. Our initial functional interpretation of the west plaza was that of a market place, based on architectural layout, the configuration of rooms, and its proximity to permanent water. Following a field season of excavations and soil chemistry analysis, we are now more confident of this identification. While the archaeological recognition of markets is challenging, we argue that such identifications are, in fact, possible.

Shaw, Leslie [161] *see King, Eleanor*

Shea, Daniel [65] *see Rivera, Mario*

Sheehy, James (Penn State Juniata)

[107] *Technology, Scale and Intensity in the Organization of Ceramic Production in Tlajinga 33, Teotihuacan*

Recent data, analyses and theoretical perspectives have advanced knowledge of the organization of ceramic production in Mesoamerica. This paper adds to this research by focusing on the organization of production in Tlajinga 33, Teotihuacan. Analysis of tools, facilities as well as technological variation in the forming, finishing and firing stages of the utilitarian San Martin Orange ceramics evaluates the scale and intensity of production in Tlajinga 33. In conclusion, comparison of the archaeological data from Tlajinga 33 with ethnographic models of Mesoamerican ceramic production further helps to assess the question of part-time or full-time production in the ancient potting compound.

Sheets, Payson (University of Colorado, Boulder)[200] *Persistent Social Memory in the Face of Disasters in Ancient Costa Rica*

Ancient Costa Ricans exhibited extraordinary persistence in landscape use, in spite of repeated volcanic eruptions. For instance, the Cañales village was struck by five explosive eruptions during Arenal-Silencio phases, and was re-occupied after each. The re-occupiers evidently were the direct descendants of the villagers who had to evacuate, because reoccupants used the same path to their distant cemetery. Without the path-cemetery evidence, one could argue they were merely culturally related and by coincidence re-establishing a village at the same convenient location. These people created and perpetuated their landscape social memory by repeated regional rituals of spiritual maintenance.

Sheets, Payson (University of Colorado, Boulder) [15] *Discussant*; [13] *see Weller, Errin*; [151] *see Fowler, William*

Shepardson, Brett[167] *Rapa Nui (Easter Island) Statuary as Territorial Boundary Markers? A Viewshed Analysis*

Recent archaeological research on Rapa Nui suggests that at one point, megalithic statuary may have delimited territorial boundaries throughout the interior of the island. This paper presents a viewshed analysis of statue locations, using a GIS database and digital terrain model, in order to determine whether or not these statues may have been placed systematically to ensure intervisibility between statues. For those cases in which statues are not intervisible, this analysis may serve as a predictive model of where we would expect to find intermediate markers between statues in order to maintain intervisibility along territorial boundaries.

Sheppard, Paul [100] *see Elson, Mark*

Sheptak, Rus (University of California, Berkeley), Joyce, Rosemary (University of California, Berkeley) and Blaisdell-Sloan, Kira (Louisiana State University)[19] *Pragmatic Choices, Colonial lives: Resistance, Ambivalence, and Appropriation in Northern Honduras*

From the sixteenth to the nineteenth centuries, settlements in Honduras underwent a transformation from pueblos de indios to colonial towns. Conventionally viewed as the decline of native peoples and their replacement by Spanish colonial society, the material and documentary record demonstrate population continuity in place and innovation in practices creating a hybrid social milieu. We illustrate this with data from four communities with different entanglements in Spanish colonial institutions. In this landscape we need to conceptualize resistance and opposition in ways that allow for pragmatic reformulation of everyday existence that might otherwise be mis-characterized as the loss of indigenous identity.

Sherman, Stephen [34] *see Johnson, William*

Sherratt, The late Andrew [53] *see Evershed, Richard*

Sherwood, Sarah (Univ of Tennessee)[34] *The Geoarchaeology of Mississippian Platform Mounds and the Classification of Mound Stratigraphy*

Variability in Mississippian mound stratigraphy can provide significant data on the investment of time, skill, and labor in mound construction and maintenance. A systematic classification of these deposits is presented that partitions types, focusing on composition and morphology. By summarizing the variability identified in a particular stage, we can begin to determine the difference between and within stages, and if these might indicate shifts in source areas, or changing engineering and/or aesthetic strategies over time. The classification is applied to recent excavations at Shiloh Mound A, near Savannah Tennessee, and detailed documents from early excavations in the Tennessee River Valley.

Shimada, Izumi (Southern Illinois University), Elera, Carlos (Sicán National Museum), Matsumoto, Go (Southern Illinois University) and Farnum, Julie (Monclair State University)[59] *Middle Sicán Sociopolitical Organization and Ideology: New Insights from Excavations at the Dynastic Cemetery at Huaca Loro, Peru*

In 2006, intact Middle Sicán elite tombs were excavated at the west base of the monumental

Huaca Loro temple mound at the site of Sicán on the north coast of Peru as a continuation of our long-term investigation into Middle Sicán sociopolitical organization and ideology through interdisciplinary analysis of mortuary practices. The work not only documented the planned character of the cemetery underlying the mound, but also its nested internal organization with major high status elite shafttombs surrounded by lower elite burials. Additionally, it revealed intermittent post-interment rituals lasting over centuries. Implications of these findings are discussed.

Shimada, Izumi [49] see *Matsumoto, Go*; **[62]** see *Wagner, Ursel*

Shimer, Carol [123] see *Martin, Cheryl*

Shoberg, Marilyn (Gault Project)

[190] *The Clovis Tool Chest at Gault: Blades To Go*

The recovery of more than 700 blades and blade fragments from Clovis deposits at the Gault Site is an indication of the importance of blades as tools. Some blades were modified to specific tool forms such as endscrapers, graters, and serrated cutting tools. Use-wear analysis of a sample of the blade assemblage indicates that generally, blades were used unmodified, and for a short duration on a specific task. Blades were not specialized tools, but were used to cut, scrape, plane, punch, and incise a broad range of materials.

Shoberg, Marilyn [44] see *Boisvert, Richard*

Shooner, Andrew (University of Cincinnati) and McGee, Kevin (University of Cincinnati)

[2] *Digital Processing of Southwestern Rock Art Images*

This poster will present the process and product of several techniques recently developed for the digital processing of rock art photography, including saturation stretch, decorrelation stretch, and color-band manipulation through ENVI computer imaging and other software in order to enhance lost pigment and clarify existing imagery for future interpretation.

Short, Laura (Indiana University of Pennsylvania)

[126] *Can We Use Stable Isotopes to Determine Deer Behavior and Infer Human Hunting?*

This poster describes the results of stable carbon isotopic analysis of deer bone and teeth samples from two post AD 1000 sites. Isotopic signatures are expected to vary depending on whether deer were feeding on maize or on wild browse, which may indicate humans' hunting choices. Although other indicators of hunting tactics can be found in faunal assemblages, white-tailed deer (*Odocoileus virginianus*), a primary resource, might have been hunted in both fields and gardens or pursued in the forest. To the extent that deer behavior can be suggested by isotopic analysis, it will provide greater insight into probable human strategies.

Shugar, Aaron [94] see *Rosen, Steven*

Sichler, Judith (University of Tennessee)

[114] *Zooarchaeological Perspectives on Afro-Caribbean and Planter Diet in the Danish West Indies*

Historic records indicate that during the late 18th and into the 19th century preserved North Atlantic fishes were shipped to the West Indies as a relatively cheap source of protein to feed enslaved persons and also the planter class. However, in historic zooarchaeological analyses of faunal assemblages from the Caribbean, the presence of these food remains are often not identified. Using two sites from the Danish West Indies, a case will be made for the use of fine-screen techniques to ensure adequate recovery of these remains to provide a more complete dietary picture and definitive evidence of provisioning.

Sieg, Lauren (University of Illinois, Urbana-Champaign), Bruning, Susan (Southern Methodist University) and Hollinger, R. Eric (National Museum of Natural History)

[48] *The Long Arm of the Law: NAGPRA in Practice*

The promulgation and implementation of regulations have extended the reach of NAGPRA since its passage in 1990. Key definitions have broadened, the number of entities with standing has increased, and timelines have become more restrictive. Regulations yet to be adopted for certain provisions, such as those addressing unclaimed and culturally

unidentifiable human remains, appear likely to further increase NAGPRA's scope. This paper examines points of congruence and tension between the statute and its implementing regulations. It also evaluates how the similarities and differences between the statute and regulations affect the practice of NAGPRA by museums, federal agencies, and tribes.

Siegel, Peter [160] *Discussant*

Siemens, Alfred (Institute of Ecology, Jalapa, and University of British Columbia)

[206] *Patterning in Pastures: From Raised Fields to Environmental History*

Various propositions regarding prehispanic wetland agriculture in Mesoamerica were generated several decades ago and seem to have held up well. Finding and interpreting raised fields eventually graded into investigations of river and wetland management. Also, since ancient field patterning was most often found in pastures, both could be taken as indicators of whole landscapes, raising questions regarding relationships. Some of these became apparent, for example, in comparisons of ancient and contemporary siting vis-à-vis seasonal flooding. Superimposed cultural landscapes evoked landscape succession, a concept derived from ecology and found useful for the analysis and representation of environmental history.

Sievert, April (Indiana University), Wells, Joshua (Indiana University), Garver, Lydia (Indiana University) and Ebbitt, Alicia (Indiana University)

[81] *Marking the Grade: Graduate Students as Future Professors*

Along with developing research skills most graduate students also face the challenge of learning how to be effective teachers. Furthermore, employment as a teaching assistant or associate instructor in undergraduate courses provides the primary source of funding for graduate students at many universities. We outline several issues facing the graduate student instructor including basic preparation for teaching and classroom dynamics, and explore the extent to which pedagogical training can address these issues. We also look at the availability of pedagogical training across a selection of archaeology graduate programs and outline some best practices.

Sillar, Bill [9] *see Dean, Emily*

Silliman, Stephen (University of Massachusetts Boston) [112] *Discussant*; [148] *see Witt, Thomas*

Sills, Cory [178] *see McKillop, Heather*

Sills, Elizabeth (Louisiana State Univ.)

[57] *Analysis of Ancient Maya Wooden Architecture Located on the Sea Floor at the John Spang Site, Belize*

This paper presents the results from investigations undertaken in 2006 of wooden posts preserved at the John Spang Site, in Paynes Creek National Park, Belize, Central America. Organic artifacts at terrestrial sites in the tropics usually have poor preservation. The wooden posts preserved at the John Spang site are due to the site's location in a peat bog below the sea floor. The mapping and spatial analysis of these wooden posts reveal evidence of structures associated with salt production along the coast of southern Belize produced for the Late Classic Maya.

Silva, Billy (Caltrans)

[42] *Lessons Learned from the Construction of a Statewide Geophysics Program in California*

In an effort to incorporate new efficient means of measuring sub-surface archaeological deposits, the California Department of Transportation (Caltrans) initiated a program for integrating geophysical methods into field studies as part of its mitigation process. This program has led to significant success in its goal but has also encountered a number of unforeseen issues. A series of case studies generated from the history of the program provide a useful outline of the misconceptions and practical solutions that occurred during the program's first six years.

Silverman, Shari (HDR Engineering, Inc)[138] *Transportation Modes and Routes Throughout the Lower Colorado River Basin*

Prehistoric trails, sites along those trails, and ethnographic reports indicate a large diversity in transportation routes, and, in some cases, modes, within the lower Colorado River Drainage Basin. They suggest alterations in trade priorities, destinations, and inter-group relationships over time. With these alterations came influences in travel modes, both on rivers and overland. In turn, these changes altered routes and cultural influences. The combined evidence suggests that travel modes and routes both result from and influence cultures and environment.

Silverstein, Jay (Joint POW/MIA Acct. Com.), Webster, David (Penn State), Martinez, Horacio (Univ. of San Carlos) and Soto, Alvaro (Univ of San Carlos)[14] *The Great Earthwork of Tikal: The Hydraulic Hypothesis*

The Great Earthwork of Tikal has been universally accepted as a manifestation of territorial demarcation and military necessity. Research by the Estudio de Las Fortalezas de Tikal, however, demonstrates that the established concept of the earthworks as parallel walls protecting the hinterland of Tikal is wrong. Here, a model is proposed that interprets the northern earthwork as a karst hydraulic construction used to mitigate seasonal fluctuations in precipitation. This model postulates the primary function of the earthwork as a trench cut into the phreatic zone with the purpose of collecting and distributing water to agricultural areas.

Simek, Jan (University of Tennessee), Blankenship, Sarah (University of Tennessee) and Cressler, Alan (USGS)[154] *Prehistoric Ceremonial Use of Caves in Southeastern North America*

Ever since elaborate cave burials were discovered in a Tennessee cave in 1810, we have recognized the prehistoric use of deep Southeastern caves for ceremonial purposes. Beginning over 4000 years ago, people penetrated into deep karsts in the Appalachian Plateau, exploring the underworld, burying the dead, mining a variety of minerals and raw materials, and decorating cave walls and ceilings with cave art. Evidence suggests that all of these activities were embedded in complex ceremonial processes some of which were specific to the cave environment. Clearly, prehistoric concepts about the underworld and its role in human lives informed these activities.

Simek, Jan [154] *see Blankenship, Sarah***Simmons, Alan (University of Nevada, Las Vegas)**[23] *Making Marks: Expanding the Neolithic*

As a doctoral student of Tony Marks, I worked with the Neolithic of the Negev Desert. These sites, surface lithic scatters, were not impressive, but they gave me an appreciation of the variety of Near Eastern Neolithic adaptations. Since my dissertation, I have had the opportunity to expand my expertise by conducting research on several more substantial Neolithic sites. In addition, I have broadened our view to include the Mediterranean island of Cyprus, where we now know that the Neolithic was as early as it was on the mainland. Much of this I attribute to Tony's influence and guidance.

Simonetti, Antonio [62] *see Buzon, Michele R.***Simpkins, Robert (University of Wisconsin-Madison)**[135] *Site and Structure in the Analysis of Complex Societies: The Case of the Qutb Shahi Dynasty of India*

The Qutb Shahi Dynasty (AD 1518–1687) controlled a territory in the Indian Deccan, within which the elite population, predominantly of Persian and North Indian origin, expressed themselves architecturally through a distinctive monument style. An analysis of such monuments within the settlements of this territory reveals that this style is overwhelmingly abundant in the capital, but extremely rare beyond it. The implications for understanding the organization of the dynasty's administration and general relationship to its territory will be discussed, as well as the implications for the more general study of complex societies through monumental architecture.

Simpson, Duane (AMEC Earth & Environmental) and Peterson, Ryan (AMEC Earth & Environmental)[31] *Rockshelter Geophysics: Lessons Learned and Implications to Sites outside of the Cave*

A series of survey techniques were developed for improving interpretations of geophysical data collected from rockshelters at Fort Hood, Texas. Resistance and magnetometer surveys were completed using a dense vertical and horizontal survey scheme. These denser sampling techniques were incorporated into the investigations of Barkley Plantation in Kentucky, with great affect on final excavation results. The denser sampling techniques proved highly effective in pin-pointing archaeological features, providing the most accurate maps possible on which subsequent archaeological excavations were driven. The methodologies employed, implications and ground-truthed results are presented for these two projects.

Simpson, Duane [164] *see Peterson, Ryan*

Sinkovec, Christina [165] *see Reitze, William*

Sinopoli, Carla (University of Michigan) [135] *Discussant*

Sistrunk, Hannah [9] *see Connell, Samuel*

Siva, Ernest [146] *see Lerch, Michael*

Siveroni, Viviana (University of Pittsburgh)[17] *The Inside of the Compound: Late Prehispanic Domestic Organization at Huayuri*

Little research has been conducted into Prehispanic Andean household and supra-household organization. The tacit equation of any large residential groupings with ayllus has stifled the investigation of larger co-residential units such as compounds or clusters and their broader socioeconomic implications. This paper explores domestic organization inside such a residential cluster at Huayuri, a highly agglutinated, Late Prehispanic settlement in the northern Nasca Drainage. Possible domestic units inside the cluster are delineated through spatial and architectural analysis. From the associated tool assemblages, I infer the range of each household unit's economic activities and the nature of the ties between constituent households.

Six, Janet (University of Pennsylvania)[51] *Sticky Situation: Sugar, Archaeology and the Ahupua'a of Hālea*

Following the abolition of slavery, the locus of sugar production shifted to Hawai'i. The "modern" Hutchinson Sugar Plantation village c. 1870 was built on top of the pre-contact Hawaiian village of Hālea—the boyhood home of Kamehameha I. A contested landscape for over a century, Hālea has been the subject of a ten year power struggle involving several prominent Native Hawaiian families and one of the corporate heavyweights in the archipelago, C. Brewer and Company. Recent finds have cast archaeology center stage in this dramatic legal battle. This paper explores what happens when "public archaeology" gets personal.

Skibo, James (Illinois State University)[163] *Why Pottery? A Perspective from the Upper Great Lakes*

Native peoples of the Upper Great Lakes near Lake Superior were mobile hunter-gatherers throughout prehistory. Maize cultivation did occur in the southern region but horticulture played a small role in their subsistence. Because pottery, the hallmark of the Eastern Woodland Period, does not appear until relatively late, the Woodland chronology of this area is divided into two periods: Initial (A.D. 0–600) and Terminal (600–1600). Using a combination of use-alteration traces and a performance-based approach, the following questions are addressed: Why did pottery arrive so late, and why did people start making pottery at all?

Skiles, Stephanie [191] *see Clark, Bonnie*

Skinner, A.R. [174] *see Blackwell, Bonnie A.B.*

Skipper, Jodi (The University of Texas at Austin) [80] *Discussant*

Slaughter, Mark (Bureau of Reclamation), Perry, Laureen (Bureau of Reclamation) and Hicks, Patricia (Bureau of Reclamation)

[33] *Site Visibility along the Lower Colorado River*

The lower Colorado River has few Native American habitation sites identified within its corridor. Ethnographic and ethnohistoric data suggest a significant prehistoric population was in-place; however, archaeological evidence of these people is often limited to upland settings where habitations were sparse. This poster explores natural and cultural processes to explain the limited site evidence and presents the recent discoveries of buried sites along the river. These data indicate that the lower Colorado River was a paramount area of population and cultural growth whose archaeological importance has been diminished due to the limited resolution of material culture.

Slessman, Scott (SWCA Environmental), Burnett, Paul (SWCA Environmental), Bollong, Chuck (SWCA Environmental) and Thompson, Kevin (SWCA Environmental)

[4] *Got Elk?: New Data from an Elk-Processing Camp in Southern Wyoming (Joe Miller Site - 48AB18)*

The Joe Miller Site (48AB18) is located on a prominent ridge west of Laramie, Wyoming. The primary cultural level at the site is located in a distinct stratigraphic layer that contains a dense concentration of processed elk bone, fire-altered rock, hearths, and lithic tools and debitage. A much smaller component is present below this main layer, and radiocarbon results, artifact frequencies, and soil profiles will be used to examine this much more enigmatic component. The preliminary analysis of these combined data will be presented and compared to other sites in the region that are affiliated with similar time periods.

Slessman, Scott [34] see Eckerle, William; [4] see Burnett, Paul

Sload, Rebecca

[78] *The Cave under the Pyramid of the Sun at Teotihuacan, Mexico: Preliminary Results of Radiocarbon Dating*

Preliminary analysis is presented of a series of radiocarbon/AMS dates from the cave under the Pyramid of the Sun. The focus is on answering questions relating to Teotihuacan use of the cave—its earliest use, duration of usage, dating of blockage construction, and whether there are any temporal differences between the front and rear sections of the cave. The samples were excavated in 1978 by the Teotihuacan Mapping Project, directed by René Millon; they were housed at the Archaeology Center at San Juan Teotihuacan, managed by George Cowgill/ASU; and their dating was funded by a 2006 FAMSI grant.

Slobodina, Natalia (University of Alaska Anchorage)

[199] *The Rosaliya Site (KIR-196): Composite Weapon Retooling Station in Central Brooks Range, AK*

The Rosaliya site is a small, single-component prehistoric site located on a large terrace overlooking the Killik River. 2005 and 2006 excavations yielded flakes, microblades, core shaping and rejuvenation flakes, burin spalls, wedge-shaped microblade cores, an abrader, and large lanceolate projectile points. Site activities included the discard of used microblades and bifacial tools, production of microblades, and the replacement of microblade insets in composite tools. The assemblage has been dated to around 5120+/-40 BP. This small, briefly occupied site clearly demonstrates the co-existence of microblade and bifacial technologies during what is usually referred to as the late Northern Archaic period.

Slovak, Nicole (Stanford University)

[39] *An Investigation into Andean Middle Horizon Mobility using Strontium and Oxygen Isotope Analyses*

At the pre-Colombian site of Ancon, Peru, several non-local individuals have been identified through the use of strontium isotope analysis. New oxygen isotope data from the same individuals provide additional information on migration in the Andean past. The combined application of strontium and oxygen isotope analyses demonstrates the value of integrating multiple isotopic tracers into investigations on residence change in the archaeological record.

Smallwood, Ashley (Texas A&M University)

[89] *Usewear Analysis of the Clovis Projectile Point and Biface Collection from the Gault Site, Texas*

A usewear study was conducted to determine if 61 points and bifaces recovered from the Lindsey Pit were utilized implements or solely products of manufacture. To identify the evidence of use and functions represented on the Gault tools, a series of experiments were performed to create analogues for the Clovis bifacial tools and to serve as a foundation for high-power microscope analysis. Five Clovis points displayed microwear traces that indicated lifecycles of extensive rework and use. While retooling was the primary task at Gault, six discarded bifaces retained traces of wear indicative of campsite expedient tasks.

Smallwood, Ashley [110] see *Goodyear, Albert*

Smit, Douglas [9] see *Connell, Samuel*

Smith, Adam (UCLA)

[109] *What Can Inscriptions from Anyang Tell Us about Regional Interaction?*

Inscriptions from Anyang are dominated by divination records, but also include short dedicatory texts on prestige goods. The appearance of personal and geographic names in both categories of inscription, and a degree of overlap in writings for personal and geographic names, have inspired attempts to match individuals and their activities with specific regions. Methodological difficulties are considerable, however, and geographic precision remains elusive. Inscriptional data are better suited to answering questions about the kinds and quantities of prestige goods that were exchanged between Anyang and regional elites. The new Huayuanzhuang Dongdi corpus provides a particularly rich snapshot of elite gift-giving.

Smith, Alexia (University of Connecticut) and Munro, Natalie (University of Connecticut)

[217] *A Regional Approach to Integrating Plant and Animal Data*

This paper presents a regional analysis of published Bronze and Iron Age archaeobotanical and zooarchaeological data spanning Southwest Asia. Canonical correspondence analysis is used to explore the two data sets simultaneously. The benefits of adopting a regional approach to better understand ancient agricultural production are outlined. Current limitations and constraints of this method are also discussed and ways to minimize these issues in the future are considered.

Smith, Bruce (Smithsonian Institution) [20] *Discussant*; [217] *Discussant*

Smith, Craig S. (TRC Mariah Associates) and Byers, David (TRC Mariah Associates)

[64] *Holocene Human Population Histories, Expanding Diet Breadths and Seed Use in the Wyoming Basin, USA*

Ethnographic data suggest that as hunter-gatherer populations increase, diets often expand to include high handling cost foods. In this poster, we use this knowledge, in combination with the prey model of foraging theory to predict trends in seed use during the Holocene in the Wyoming Basin. We predict that in the marginal environment of the Wyoming Basin, evidence for increasing use of low ranked plant foods such as seeds relative to higher ranked items such as tubers should co-vary with evidence of rising human population densities. Our analysis of over 280 dated components spanning almost 10,000 years supports this prediction.

Smith, Donald (Panamerican Consultants, Inc.) and Schieppati, Frank (Panamerican Consultants, Inc.)

[142] *Woodland Period Stone Tool Use at the Erie Canal Harbor Site on the Buffalo Waterfront*

The paper presents the results of a use-wear analysis of stone tools recovered from the Woodland Period Erie Canal Harbor site on the Buffalo waterfront. The site was primarily composed of several dense concentrations of lithic material, likely representing a combination of resource procurement activities and several stages of lithic reduction. In addition to utilized debitage, moderate numbers of prismatic bladelets were also recovered. The analysis focuses on the artifacts from two of the lithic concentrations and is comprised of a comparison of the use-wear present on the bladelets relative to that on the remainder of the assemblages.

Smith, J Gregory (San Antonio College) and Gunn, Christopher (University of Kentucky)
 [78] *Settlement and Ceramics in the Kulubá Polity, Yucatan, Mexico*

The northern Maya lowland site of Kulubá shares many close stylistic affiliations with the much larger and distant site of Chichén Itzá. In contrast, analyses of settlement and ceramic data collected during a survey within the Kulubá polity indicate that smaller sites in the vicinity do not exhibit strong affinities with Chichén Itzá. It appears that Chichén's connection with the Kulubá polity was limited to the capital of Kulubá itself and not its lower-order settlements. This study supports models that suggest Maya polities were maintained through elite-level interaction between large centers rather than through programs of territorial consolidation.

Smith, Jennifer (Washington University in St. Louis), Fadem, Cynthia (Washington University in St. Louis) and Friedman, Jessica (Washington University in St. Louis)

[145] *Agriculture in the Karst Valleys of Dalmatia: Sustainability throughout the Holocene*
 The spatial heterogeneity of soil characteristics (particularly thickness and permeability) in karst valleys such as those of central Dalmatia would provide challenges for agricultural management which varied with prevailing climate and land-use conditions. The sustainability of any given practice would have varied spatially and temporally. Hill-slope erosion would have been of concern in this region throughout the Holocene, as evidenced by the frequency of coarse-grained sedimentation events. Different orientations of modern and Holocene field-walls may indicate significant changes in the nature of sediment transport in the vicinity of the Pokrovnik site between Neolithic times and the present.

Smith, Jennifer [176] see Adelsberger, Katherine; [39] see Fadem, Cynthia

Smith, Karen [63] see Cooper, Leslie

Smith, Karen Y. (Monticello/University of Missouri)

[158] *Correspondence Analysis: A Method for Monitoring Branching and Convergence in the Archaeological Record*

Frequency seriation has been hailed as the archaeological method for inferring heritable continuity among artifact assemblages. Yet, frequency seriation allows us neither to infer the mode nor measure the tempo of cultural change. For these phenomena of interest we must look to other methods. In this paper, I show that correspondence analysis (CA) offers a means for analyzing other kinds of evolutionary processes, namely cladogenesis and anastomosis, the latter being especially common in cultural evolution. CA also may reveal lineage gaps or episodes of punctuated change. This method is applied to Woodland Period ceramic assemblages from the Deep South.

Smith, Kevin P. (Brown University; Haffenreffer Museum of Anthropology) and Reynolds, Andrew (University College, London; Institute of Archaeology)

[134] *Towards an Archaeology of Law*

Law stands at the intersection of symbolic and practical action, directing individual behavior and guiding or restraining social structure in long-term processes of change. How might we recognize law and legal practice, or resistance to it, in the archaeological record? What gains might such efforts produce? This paper compares the archaeological records of law, legal practice, sanctioned punishment, and outlaws in early medieval Iceland and Anglo-Saxon England. We examine what it was like to live within and beyond the law, considering how legal practices produced enduring and archaeologically recoverable reflections – both material and symbolic – on landscapes, settlement patterns, and individual bodies.

Smith, Michael (Arizona State University)

[205] *Spatial Organization of the Postclassic Central Mexican City of Calixtlahuaca*

This paper reports fieldwork at the Aztec-period city of Calixtlahuaca in the Toluca Valley of central Mexico. Most houses and temples at this large urban site were built on terraces on the slopes on Cerro Tenismo. I describe the results of intensive systematic surface survey of the site (2006) and ongoing excavations of houses and terraces (2007). This fieldwork illuminates a number of issues, including the size of the city, the large-scale spatial patterning of settlement, urban planning, and localized spatial organization at the level of the household and terrace field.

Smith, Monica L. (UCLA) and Mohanty, R.K. (Deccan College)[135] *Excavations at the Early Historic City of Sisupalgarh, India*

Ancient cities, like modern ones, consist of spatial organization at three scales: the household, the neighborhood, and the urban interaction sphere. Our research program at Sisupalgarh has addressed these three components through survey, geophysics, and excavation. By the early centuries A.D., the site had grown to over 1 square kilometer, with a substantial perimeter rampart and other forms of monumental architecture as well as thousands of ordinary households. The city survived a significant economic disruption at the midpoint of its occupation, but recovered and thrived for several hundred years before an unknown combination of circumstances caused its final abandonment.

Smith, Monica L. [125] *see Baker Brite, Elizabeth*; **[187]** *Discussant*

Smith, Ross [4] *see Hoffman, Brian*

Smith, Scott C. (University of California, Riverside)[137] *Spatial Practices and the Constitution of a Late Formative Built Environment: Architecture at Khonkho Wankane, Bolivia*

The construction of a built environment is characterized by many concerns and reflects many aspects of society. Pragmatic concerns such as available materials, design limitations, and intended use all contribute to the form of built environments. Additionally, however, a built environment is constructed within a social context and as such both reflects and recursively influences sociopolitical dynamics. Viewing spatial organization as a historical process prompts the realization that it should be a sensitive material indicator of social dynamics. This paper analyzes spatial practices and architectural development at Khonkho Wankane to discern social organization and dynamics during the Late Formative.

Smith, Susan (Northern Arizona University)[105] *The Pajarito Plateau Under the Microscope: Archaeological Palynology from the Los Alamos Land Conveyance and Transfer Project*

More than 400 pollen samples from 38 sites located on the Pajarito Plateau, New Mexico, were analyzed for the Los Alamos Land Conveyance and Transfer Project. The sites are dated primarily to the Coalition and Classic periods and include artifact scatters, fields, field houses and roomblocks. The pollen analysis has resolved patterns in the distribution and abundance of pollen between sites and at the larger pueblos, between contexts. The results contribute valuable insights to the research themes of land use, subsistence practices, chronological change and human behavior.

Smith, Susan [34] *see Anderson, R. Scott*

Smith, Suzanne [80] *see Jones, Bradford*

Smyth, Michael (Center for Maya Research)[140] *The Teotihuacan Factor in the Yucatan: Beyond Economic Imperialism*

My memories of Robert Santley involve his passion for understanding Teotihuacan's role in Classic Mesoamerica, particularly outside Central Mexico. Although his ideas of economic imperialism no longer seem viable, especially in the Maya Lowlands, the diverse impact of Teotihuacan in the Northern Yucatan is only now being appreciated. This paper explores the Teotihuacan factor in the Puuc region in particular and northern Yucatan in general. Framing the discussion to account for the range of variation of impact from long-distance elite emulation to direct intrusive contacts, questions of chronology, economic process, and cultural consequence are addressed.

Snead, James (George Mason University)[125] *A Memory of Nightmare: Conflict and Transformation in Pueblo History*

The Tano Origins Project has implemented a multiscalar approach to study the Ancestral Pueblo occupation of the Galisteo Basin, using information from excavation, survey, and archival analyses. One compelling pattern to emerge from this research concerns conflict. Although data from the Burnt Corn Pueblo excavations can be interpreted to reflect "decommissioning" of the community center, evidence for contemporaneous site destruction and abandonment in the Galisteo as a whole resembles overt warfare. Viewed in context, this

implies that a regional transformation at the beginning of the 14th century AD laid the foundation for the Pueblo world as encountered by the Spanish.

Snow, Meradeth (UC Davis), Roler Durand, Kathy (ENMU) and Glenn Smith, David (UC Davis)

[157] *Genetic Analysis of the Tommy and Mine Canyon Sites in Context of Southwest Populations*

Mitochondrial DNA (mtDNA) analysis was carried out on teeth from 34 individuals from the Tommy Site (Pueblo I/II), and 9 individuals from the Mine Canyon Site (Pueblo III). These sites are Chacoan small houses in the Point Community, a cluster of ancestral Pueblo structures located along the San Juan River near Farmington, New Mexico. The results of this study were used to compare the genetic relationships between the inhabitants of the villages, previous mtDNA data from the region, and modern Native American populations in the Southwest.

Snow, Susan (San Antonio Missions National Historical Park) and Tomka, Steve (University of Texas, San Antonio)

[185] *Archeology, Historic Preservation, and Interpretation: The Courtyard Project at Mission Concepción, San Antonio Missions NHP*

In 1989, conservators from ICOMOS made a series of recommendations to help preserve the largest group of Spanish Colonial frescoes in North America, located in the convento at Mission Concepción, a National Historic Landmark. Since 2002, the National Park Service and the Center for Archaeological Research at UTSA have been working together to complete one of those recommendations; correcting the drainage and landscape of the area east of the convento known as the "courtyard". The project will be complete in 2007. The path from archeological investigation to final landscape design will be outlined in this paper.

Snyder, Charles (Washington State University), Duff, Andrew (Washington State University), Kantner, John (Georgia State University) and Shackley, Steven (U.C. Berkeley)

[90] *Obsidian Sourcing Analysis from Three Chacoan Great House Communities in Western New Mexico*

A sample of obsidian from three systematically investigated Chaco period Great Houses—Cox Ranch Pueblo, Cerro Pomo, and Blue-J—in the Cibola region was analyzed using X-ray Fluorescence. The study was conducted to evaluate obsidian procurement and its potential exchange within the region. Our results indicate that most of the obsidian at these sites was procured from proximate sources, while a small percentage was acquired from sources at a considerable distance. The implications of these results for the integration and function of the Chacoan regional system are discussed.

Sobolik, Kristin (University of Maine)

[10] *The Life and Times of Vaughn Bryant*

Vaughn Bryant is the recipient of the 2007 Fryxell Award for Interdisciplinary Research. Vaughn is truly an interdisciplinary scholar, one who has reached out professionally to a wide variety and number of botanists, geologists, archaeologists, and anthropologists, and is concerned with contributing to overall scientific knowledge through the dissemination of his work and others. I will review his interdisciplinary past from his B.A. in Geography, M.A. in Anthropology, and Ph.D. in Botany, to his first job at Washington State University to his present position at Texas A&M University. In particular, I will discuss the importance of his research to the archaeological and scientific community, not forgetting his true legacy as mentor, advisor, husband, dad, and grandpa.

Sobolik, Kristin [36] see Poinar, Hendrik

Soculaya Dávila, Carlo [216] see Kellett, Lucas

Soderberg, John (University of Minnesota)

[12] *Art, Conceptual Metaphors, and Collective Agency: A Case Study from Medieval Irish Iconography*

Theories of agency have grown to great prominence in archaeology. While proponents of agency generally begin with the reasonable assertion that entire social groups cannot be the

unit of analysis, establishing an alternative that does not create untenable dichotomies between structure and agent has remained difficult. George Lakoff and others have put forward theories about the influence of conceptual metaphors on individual thinking. This paper will explore an example of religious iconography from medieval Ireland in the context of conceptual metaphors. The aim is to foster an approach to material culture that blurs dichotomies between agent and structure.

Solis Ciriaco, Reyna [74] *see Melgar Tisoc, Emiliano Ricardo*

Solometo, Julie (James Madison University) and Moss, Joshua (James Madison University)

[129] *Gender Roles, Family Life, and the Allocation of Tasks in National Geographic's Artistic Recreations of Ancient Life*

The artists' recreations found in National Geographic Magazine bring the past back to life by reconstructing ancient places and peopling them with individuals who work, play, and interact with one another. These visual interpretations of archaeological data are thus one means by which National Geographic uses the past to legitimate and naturalize contemporary social relations. This poster presents the results of an analysis of all such artwork from National Geographic and describes how the depiction of men and women, family composition, and the division of labor by gender and age has varied over time and by the culture depicted.

Somers, Bretton (Louisiana State University)

[57] *Ancient Maya Wooden Architecture Beneath the Sea: 2006 Mapping and Survey on the South Coast of Belize*

In 2006, a sample of Late Classic Maya sites found beneath the surface of Punta Ycacos Lagoon in southern Belize was selected for survey and mapping of wooden architectural features. The presence of briquetage on the surface and embedded among the clusters of wooden architectural features implies association with salt production activity. Detailed analysis of the spatial and temporal variability of these features was conducted to determine the nature of the relationship between wooden architecture and salt production among the local ancient Maya. This study is part of a larger on-going project examining ancient Maya coastal adaptations in southern Belize.

Somers, Bretton [178] *see McKillop, Heather*

Somers, Lewis (Geoscan Research Archaeophysics LLC)

[31] *Analysis Techniques for Creating Testable Archaeological Models of Activity Areas and Architectural Detail Based on Resistivity and Magnetic Survey*

Testable archaeological models can be created by integrating generalized feature expectations / information with the results from a series of analytic data processing steps. The richness of the model can be enhanced with data from more than one geophysical survey method. The sequence of analytic and statistical data processing steps for resistivity and magnetic survey data are presented along with the opportunity to synthesize testable models based on the cultural and archaeological expectations associated with a site. Examples drawn from historic and prehistoric sites: Yucca House, Mission San Marcos, Fort Phil Kearny, Goodman Point and California Spanish Adobes are presented.

Soto, Alvaro[14] *see Silverstein, Jay*

Soto-Berelov, Mariela [27] *see Rempel, Sidney*

Spanos, Mary (University of Alabama)

[192] *A Comparison of Textiles Impressed on Ceramics at Beckum Village (1Ck24) and Salt Creek (1Ck222), Clarke County, Alabama*

Analysis of textile impressions on saltpan sherds collected from two saline sites in Southwest Alabama, Beckum Village and Salt Creek, suggest that the groups that used these salines created their textiles for different purposes. This paper will compare the personal use textiles of Beckum Village with the Salt Creek textiles, which appear to have been made specifically for producing saltpans. While Kimmswick Textile Impressed, var. Langston, ceramics were recovered from both sites, the differences in the textiles on those ceramics may help define the boundaries between salt production for personal use and salt production on a larger group-oriented scale.

Speakman, Jeff [39] *see Taylor, Robert*; **[62]** *see Wagner, Ursel*

Speakman, R. J. [17] *see Dietz, Michael*

Speakman, Robert J. (University of Missouri), Creel, Darrell (University of Texas-Austin), Miller, Myles, Reed, Lori (Animas Ceramic Consulting) and Glascock, Michael (University of Missouri)

[61] *Pottery Production and Distribution in the Mimbres and Jornada Regions of the American Southwest*

Use of instrumental neutron activation analysis in research on Mimbres and Jornada Mogollon ceramic production and exchange has progressed incrementally for more than a decade and has generated numerous revealing interpretations. Most of these studies, however, have not included all extant and relevant data. Approximately 3500 Mimbres, Jornada, and related pottery and clay samples have been analyzed. By combining and reevaluating the extant data we are able to identify production areas, refine existing ideas, and in some cases offer new interpretations and research questions regarding issues of production and exchange of pottery in these regions.

Speakman, Robert J. [160] *see Descantes, Christophe*; **[30]** *see Glascock, Michael D.*; **[30]** *see Reuther, Joshua D.*

Speal, C. Scott (Pennsylvania State University)

[3] *Skeletal Aging from the Sternal Rib: Intercostal Consistency in a Late Antique Provincial Roman Assemblage*

Chronological changes in sternal rib morphology have long been known to have applications for determination of skeletal age. Unfortunately, this technique has seen limited application in some circles due to a perception that it is only applicable to the fourth rib. This study demonstrates a reasonable consistency in sternal rib morphology within individuals from an archaeological collection recently excavated from a provincial Roman urban center located in modern day Serbia. It thereby reveals that identification of the fourth rib is not necessary and, in fact, the use of multiple rib scores is likely to improve the accuracy of the technique.

Spenard, Jon (Florida State University) and Woodfill, Brent (Vanderbilt University)

[108] *New Lines of Inquiry for Ritual Assemblages: The View from the Southern Peten*
Investigations within the caves of the San Francisco Hills near Cancuén, Peten, Guatemala, have uncovered evidence of 2000 years of continuous ritual activity. Utilization of these features is heaviest during the Early Classic period even though no substantial population centers have been documented until the Late Classic period. Analysis of the materials recovered from the caves in this system of hills has documented trade, population shifts, and cultural affiliations previously unrecognized during surface excavations in the region. Such studies of caves can open up new areas of inquiry and give new insights to the surface activities of the Maya.

Speth, John [99] *Discussant*

Spores, Ronald (Fundacion Alfredo Harp Helu) and Robles, Nelly (INAH- Monte Alban)
[211] *The Yucundaa (Pueblo Viejo de Teposcolula) Project: A Review of Findings and Achievements*

This paper presents the results of a three-year archaeological and ethnohistorical research of the Postclassic Señorío and early Spanish Colonial Mixtec City of Yucundaa, Pueblo Viejo de Teposcolula, Oaxaca. Among the objectives of the project was the definition of the major urban components of the settlement, and the interpretation of its structure and function, during the Postclassic, and those changes generated during early Colonial periods.

Spores, Ronald [211] *see Robles, Nelly M.*

Sprager, Della (Lozano Long Institute of Latin American Studies, U.T. at Austin)

[169] *Weights and Scales in the Pre-Columbian Americas - Unexplored or Just Ignored?*

Whereas the study of ancient mass metrology is usually considered an Old World domain,

there is sufficient archaeological and ethnohistorical evidence to establish a new perspective on the early use of weighing in the Andean and Mesoamerican regions. This paper will present an overview of the ancient technology, the New World artifact types, identification and arithmetic examination of weight sets, as well as introduce a viable New World weight standard.

Sprajc, Ivan (Scientific Research Center of the Slovenian Academy of Sciences and Arts)

[143] *Teotihuacan Architectural Alignments in the Central Maya Lowlands?*

During recent surveys in southeastern Campeche, Mexico, numerous formerly unknown archaeological sites, including major centers, have been recorded. The orientations of the most prominent buildings largely belong to the so-called 17° family, widely spread throughout Mesoamerica. Since the observational calendars corresponding to this alignment group in central Mexico seem to have been an elaborate version of simpler antecedents, suggested by the orientations in southeastern Campeche, and considering the latter are incorporated in several Late Preclassic buildings, the origin of this alignment family is likely to be sought in the Maya area, rather than in Teotihuacan, as has been commonly held.

Spurlock, Linda [96] see *Whitman, Linda*

Stabler, Jennifer (University of Maryland)

[164] *Historic Conservation Landscapes on Fort Hood*

Franklin Delano Roosevelt's New Deal programs, particularly the Civilian Conservation Corps, radically transformed the rural landscape of Fort Hood during the 1930s. Poor farming practices, overexploitation of the land, and periodic drought combined in the early 1930s to cause the great Dust Bowl. This paper will explore the surveillance and disciplinary mechanisms employed by the federal government during the New Deal era to conserve the country's natural resources and entice farmers to adopt their conservation methods.

Stackelbeck, Kary (University of Kentucky)

[58] *Adaptational Flexibility Among Preceramic Foragers on the North Coast of Perú*

Preceramic foragers of the lower Jequetepeque Valley in northern Perú during the Early to Mid-Holocene (9000-4500 RCYBP) exhibit tendencies toward increasing complexity, and persistence of some practices of their Paijaneño predecessors (10,800-9000 RCYBP). Localized settlement/subsistence patterns and occupation of multiple domestic structures began during this earlier phase. By Middle Preceramic times, populations in this area adjusted their settlement patterns, constructed rudimentary canals, intensively exploited small-scale resources, and almost exclusively used expedient technology. Flexibility in Preceramic lifeways in this area demonstrates the non-unilineal nature of the development of aspects of socio-economic organization that characterize later Andean civilizations.

Staeck, John (College of DuPage)

[182] *Recent Discoveries in Housing Patterns at Breclav-Pohansko, Czech Republic*

Recent combined Czech-American excavations at the Great Moravian center of Breclav-Pohansko have yielded additional data about residential structures, activities, and community space. Excavations in the southeastern quadrant of the settlement indicate significant changes in spatial use over the century-long Great Moravian occupation were likely unintended and were responses to increased localized flooding as well as the general saturation of this portion of the site. Such changes appear to be a function of the construction of the rampart, changing drainage patterns at the site brought about by increased human utilization, and the structure of the clay-laden sediments in the region.

Stafford, C. Russell [34] see *Munson, Cheryl Ann*

Stafford, Russell [64] see *Hansen-Speer, Karla*

Staley, Dennis [129] see *Stevens, Michelle*

Stanchly, Norbert (Trent University)

[202] *Postclassic Maya Ritual Faunal Use at Lamanai, Belize: Interpreting the Faunal Assemblage from Structure N10-10*

Structure N10-10 is a small building centrally located in the last fully functional large public

space in Postclassic Lamanai. Atop and surrounding the latest construction of this structure were large quantities of animal bone and ceramic figurine fragments. The majority of the bones are cranial elements from a variety of medium to large game species such as white-tailed deer, peccary, and tapir. The analysis of the faunal assemblage is presented within the context of the recovered ceramic figurine assemblage, the location, and architectural style of the building to suggest a ceremonial function for Structure N10-10.

Stanish, Charles (Cotsen Institute - UCLA) [137] *Discussant*; [179] *Discussant*; [88] *Discussant*

Stansbury-Odonnell, Mark (University of St. Thomas)

[12] *Encoding Gendered Patterns of Behavior in Archaic Athens*

It is proposed by a number of scholars that the social position of women declined during the sixth century b.c.e in Athens, but this is a period that is not well documented by literary testimony or excavations. By classifying spectator behavior in vase painting on the basis of gesture and pose, one finds strongly divergent patterns of behavior for adult and youthful men and for women. Early images of women reflect ritualized patterns of behavior drawn from weddings and festivals, later images show more distressed behavior, feeding into stereotypes of female behavior documented in the later classical period.

Stanton, Patrick [213] *see Becker, Kenneth*

Stanton, Travis (Universidad de las Américas, Puebla), Chávez Balderas, Ximena (Museo Templo Mayor), Hutson, Scott (University of Kentucky) and Magnoni, Aline (Tulane University)

[200] *The Constructed Past: Memory in Middle America*

Using examples from archaeological sites across Middle America, we outline different ways in which we can approach the study of memory. In particular, we focus on how memory can be manifested in material form, as well as how certain material patterns guide us towards specific interpretations. The links among the construction of memory, its reification in material objects and contexts, and our interpretations as archaeologists, ethnohistorians, and ethnoarchaeologists are complex and require scrutiny. In this paper, we review some of the complex issues involved in the archaeology of memory.

Stanton, Travis [168] *see Glover, Jeffrey*

Stark, Barbara (Arizona State University)

[219] *Marketing, Obsidian, and Late Classic Economic and Political Changes in South-Central Veracruz, Mexico*

In the Late Classic period (A.D. 600–900) economic and political organization underwent marked transitions suggesting greater competition, more intensive craft activity at centers, and likely new or enhanced market activity in the western lower Papaloapan basin, south-central Veracruz. A previously unified realm dissolved into several smaller polities. I examine fine prismatic blade production and consumption to evaluate distribution systems. Evidence points to differential blade production among centers, and I evaluate whether distribution reflects these differences or if, instead, a pan-polity system, such as marketing, ensured relatively even distribution to outlying households.

Stark, Barbara (Arizona State University) [178] *Discussant*

Stark, Edward [107] *see Berdan, Frances*

Stark, J.T. (Northern Arizona University)

[40] *Integrating Descendant's Views, Values, and Beliefs into the Federal Preservation Process*

For over a century, federally funded preservation projects have attempted to reverse the effects of natural and human impacts on Ancestral Puebloan architecture in the American Southwest. Past federal projects often employed methods and techniques inconsistent with traditional practices and eventually proved detrimental to original architectural elements. This paper examines contemporary Puebloan social perspectives on preserving architecture

connected with ancestral sites. I argue the benefits of greater descendant/government interaction in the preservation process and propose practical solutions based on the perspectives of descendant communities.

Stark, Miriam (University of Hawai'i-Manoa) [153] Discussant

Starkovich, Britt (University of Arizona)

[37] *Continued Analysis of Fauna from Hallan Çemi, an Epipaleolithic/Neolithic Transition Site in Eastern Anatolia*

This paper presents further results on a sample of faunal remains from the main midden feature at Hallan Çemi, a terminal Epipaleolithic site in southeastern Turkey. The analysis examines hunting practices around the forager/farmer transition, with a focus on the diet breadth and transport choices of the semi-sedentary foragers that inhabited the site. Faunal data are considered in the context of other artifacts from the site, specifically the location and abundance of groundstone artifacts, as the two lines of evidence can indicate an intensification effort that occurred shortly before the early adoption of domesticated plants and animals in this area.

Starratt, Hal [19] see Quilter, Jeffrey

Starzmann, Maria Theresia (Department of Anthropology, Binghamton University)

[193] *War and Violence: Archaeological Practice Interrupted*

This paper discusses the socio-economic conditions of archaeological knowledge production. It asks how practical interests characterize archaeological work interrupted by armed conflict. This question is addressed through an analysis of the problem of commodification of cultural heritage that is the basis of global cultural imperialism, which is exemplified by the case of the US-led invasion into Iraq in 2003. The tension that often arises from the contradiction between such neo-imperial domination and an assumed cultural dependency of those countries studied by archaeologists can only be solved through a dialectic mediation of theoretical archaeological knowledge and political activism grounded in recursivity.

Steadman, David W. [195] see Carlson, Lisabeth

Steadman, Dawnie (Binghamton University, SUNY) and Gassiot Ballbe, Ermengol (Departament de Preistoria, Universitat Autònoma de Barcelona)

[193] *The Political, Social and Scientific Contexts of Archaeological Investigations of Mass Graves in Spain*

Forensic archaeological investigations of Spanish Civil War mass graves have the potential to revive and reconstruct historical memory in Spain. But complex political and social contexts have created apathy and tension among politicians and the general populace. Formal government participation has been peripheral at best, and often obstructive. The Catalanian government recently allowed the search for a mass grave from 1936 but halted efforts after five days of fruitless exploration. Unrealistic expectations and near-daily policy changes on whether exhumations will be allowed force archaeologists to choose sites based on politically motivated availability rather than potential for reconstructing specific historical events.

Steele, Caroline (Geoarchaeology Research Associates)

[193] *Issues of Mass Grave Excavation in Iraq 2003–2006*

This paper explores issues of mass grave identification and excavation by international and national agencies in Iraq since 2003. Agendas of the sponsoring organizations determine identification as well as where and when to excavate mass graves. The results of excavation and forensic analysis can be used to fulfill the stated goals of those sponsoring the work, but information is also used by communities, political groups in ways that are at odds with the stated intents of excavation. Socio-political issues can often overshadow the ethical values of transparency, respectful treatment for the dead, and repatriation although these values should be transcendent.

Steele, Julia [208] see Orr, David

Steenhuysen, Alex (Virginia Commonwealth University)

[50] *Lithic Raw Material Exploitation Strategies During the Middle and Upper Paleolithic Occupations of the Brive Basin Region of Southwestern France*

This study results from the analysis of lithic assemblages recovered at eight Middle and Upper Paleolithic sites located in a micro-region of southwestern France. The analysis focused on the determination of hypothetical changes in lithic raw material exploitation strategies during the Middle to Upper Paleolithic transition. Best characterized by an overall lack of abundant and high-quality local lithic resources, the environmental specificity of the Brive basin region offered the opportunity to document original technological strategies designed to cope with specific resource-related stresses in both Middle and Upper Paleolithic contexts, including a Chatelperronian assemblage.

Steffen, Anastasia (Valles Caldera Trust) and LeTourneau, Philippe D. (BOAS Inc.)

[191] *A Source in the Middle: The Cerro del Medio Obsidian Database Project*

Cerro del Medio is a renowned but not well-studied Quaternary obsidian source located entirely within the Valles Caldera National Preserve at the center of the Jemez Mountains in northern New Mexico, USA. The Preserve is developing a database that compiles the regional and long-distance occurrences of Cerro del Medio obsidian in archaeological assemblages. We discuss the progress of the project, patterns apparent in the data, the utility of baseline source data for understanding how this raw material was used across the continent in prehistory, and the role of federal cultural resources management in materials sourcing research.

Steffy, Kenn [110] see Miller, D. Shane

Stein, Julie [34] see Taylor, Amanda

Steinbrenner, Larry (University of Calgary)

[63] *The Ceramics of Santa Isabel: Murmurs of Mesoamerica, Glimmers of Greater Chibcha*

Greater Nicoya, a cultural area encompassing Pacific Nicaragua and northwestern Costa Rica that was colonized by Mesoamericans before the Conquest, has long been viewed as the frontier between Mesoamerica and Greater Chibcha. The area's material culture drew on both cultural traditions, and nowhere is this more evident than in the ceramics. Drawing on an extensive ceramic database derived principally from four seasons of field work in Rivas, Nicaragua, this poster takes a fresh look at the evidence for both Mesoamerican and Chibchan influence in Greater Nicoyan ceramics, and re-evaluates previous attempts to assign specific ceramic types to specific ethnic entities.

Stelle, Lenville (Parkland College) and Sadler, Tonie (University of Illinois)

[41] *The Pictographs of the Blood of the Ancestors Grotto: Gender Related Iconography?*

The Blood of the Ancestors Grotto (11SA557), first documented in 2005, affords iconography both familiar and uncommon. Of the 46 discrete expressions, we find many images thought associated with spiritual power and healing. While our knowledge of iconographic expressions of femaleness in Midwestern North American rock art is quite limited, we also here find images possible to interpret as associated with females. When taken as a whole and viewed in the grotto's unusual biophysical context, the site's potential function as place of female learning and healing is most intriguing. Our observations are offered in a spirit of interpretative exploration.

Stemp, W. James (Keene State College)

[202] *Variation in Lithic Reduction Strategies and Technological Choices at Four Maya Sites in Belize*

Analyses of chipped cryptocrystalline silicates from the sites of Marco Gonzalez, Minanhá, Pook's Hill, and San Pedro have revealed much variation between the respective assemblages. In terms of formal and informal tools, expediency and curation, reduction sequences, and tool use, the four lithic assemblages reflect differing needs and choices by the ancient Maya who inhabited these sites. Access to and quality of raw materials, knapping skill, trade and exchange relationships, local and non-local subsistence and craft-production, environmental adaptation, as well as regional socio-political and socio-economic relationships, were all critical factors affecting the formation of these lithic assemblages excavated in Belize.

Stephen, Jesse (University of Hawaii, Manoa) and Graves, Michael (University of Hawaii, Manoa)

[167] *Locations and Landform: Analyzing Visibility from Prehistoric Hawaiian Temples*

The scattered presence of temples (haiau) within and across an expansive prehistoric agricultural field system begs the question of how they are placed with respect to the region's topography, other archaeological features, and known territorial boundaries. We focus on aspects of visibility to address these relationships as well as the greater cultural and environmental context of the Kohala landscape on the island of Hawai'i.

Stephens, Daniel (University South Florida) and Collins, Lori (University South Florida)

[5] *Using Spatial Data in the Documentation of Erosion at The Shaw's Point Archaeological District, 8Ma07/8Ma28 Bradenton, Florida*

This project will demonstrate the use of Global Positioning System data, and Geographic Informational System development collected to assist in the stabilization effort for the National Historic Landmark site of The Shaw's Point Archaeological District, 8Ma07/8Ma28. The GPS and GIS baseline data will document ongoing erosional problems at the site and will be used in conditional assessments, such as the monitoring of vandalism, and environmental management concerns of the site. The spatial display and monitoring is helping to develop future preservation strategies and show how these technologies can be used in day-to-day site management practices.

Stephenson, Keith (South Carolina Institute of Archaeology and Anthropology) and King, Adam (South Carolina Institute of Archaeology and Anthropology)

[12] *Labor Patterns, Scales of Surplus, and Centralized Society in the Middle Savannah River Valley*

In the middle Savannah valley, the clearest expression of a classic Mississippian adaptation appears only during the Hollywood phase, when mounds and social ranking expressed in mortuary contexts both first appear. This occurs despite the production of corn and complicated stamped pottery for at least a century before and after the phase. In this paper, we use political economy to explore the emergence and structure of Mississippian society in the middle Savannah valley. We conclude that long-standing labor patterns and resulting scales of surplus production, necessitated by life in the Aiken Plateau, fostered social contradictions making communally-oriented and decentralized societies more sustainable than hierarchical forms.

Sterling, Sarah (Portland State University) and Gillis, Nichole (Northwest Archaeological Associates, Inc)

[39] *The Excavation at Tse-whit-zen: An Overview of the Building History of a Large Precontact Village in Washington State*

The excavation of the Tse-whit-zen site (45CA523) along the shoreline of Port Angeles Harbor provided information about seven structures built and occupied between ca. 1800–300 years ago. Building remains and associated interior deposits allow the estimation of construction techniques, and use activities which serve as proxy demographic data. Structural data from Tse-whit-zen are compared to other locations in the region to determine whether the construction techniques are consistent with larger regional trends. Preliminary radiocarbon analysis indicates periods of diminished population; therefore sediment chemical analysis of interior deposits is used to further test hypotheses about periods of abandonment and use.

Stern, Charles [39] see Garcia-Herbst, Arleen

Sternberg, Robert [61] see Lengyel, Stacey

Stevens, Michelle (US Forest Service), Waskiewicz, Thad (University of Memphis), Vogt, Brandon (Arizona State University) and Staley, Dennis (US Forest Service)

[129] *3D Laser Scanning Documentation and Condition Assessment of Rock Art*

Terrestrial 3D laser scanning is a nondestructive technique that can be used to record sites and features at any scale greater than 6 mm. This paper discusses the technology and applications of the laser scanning approach. The advantages and disadvantages of this technique for documentation, condition assessment and site management of petroglyph and pictograph sites in southeast Colorado are also presented.

Stevenson, Christopher M. (Virginia Department of Historic Resources) and Boulanger, Matthew (University of Missouri)

[30] *The Trace Element Chemistry of Virginia Jasper Sources*

Virginia jasper sources consist of in situ primary deposits and terrain sources located in ancient stream channels of the Potomac and Susquehanna Rivers. A comprehensive base line for regional provenance studies requires that the full range of jasper source types be fully characterized and instrumental neutron activation analysis (INAA) has been performed on 101 samples. The study includes geological samples from five localities and artifacts from six different archaeological sites. The source data were examined to identify elemental differences that could be used to differentiate between individual sources. Assignments of the artifacts to geological sources were successfully made for 80% of the archaeological samples.

Stewart, David (East Carolina University)

[175] *A Maritime Cultural Landscape: East Carolina University's 2006 Field Season at Washington, North Carolina*

The city of Washington, North Carolina, has been a port for riverine, coastal, and bluewater shipping since the eighteenth century. Previous remote sensing surveys by the Program in Maritime Studies at East Carolina University revealed numerous wrecked and abandoned vessels in the vicinity of the city. In Fall 2006, East Carolina University conducted detailed investigations of two vessel abandonment sites at Washington. This paper describes the project, discusses the results, and places the vessels within the context of Washington's maritime cultural landscape.

Stiger, Mark (Western State College of Colorado)

[165] *Folsom Structures on the Mountaineer Site*

Block excavations at the Mountaineer site near Gunnison, Colorado, have exposed the remains of several Folsom features, including at least two prehistoric structures. While only one of the structures has been completely excavated, indications are that the stone assemblages from the two houses are different in composition. Differing relative frequencies of tools, projectile point manufacturing debris, and biface reduction technique indicate different activity organization between the houses. Nevertheless there are some similarities in the two structures' artifact assemblages such as, both have a high frequency of quartzite apparently from common sources.

Stiger, Mark [124] see Dukeman, Casey

Stiver, Laura (INAH -Oaxaca)

[211] *Surface Surveys of the Central Mixteca Alta: Results and Implications*

Several important archaeological surveys of the Mixteca Alta have been conducted since 1965 resulting in the location and reporting of more than 2500 sites. This presentation will emphasize research conducted in the Teposcolula Valley, the evolution of settlement from the Formative Period until the Spanish Conquest and consideration of the special set of relationships between the Postclassic capital center of Yucundaa (Pueblo Viejo de Teposcolula) and its subject communities within a radius of 25 kilometers. Attention will also be given to relationships between Teposcolula and surrounding areas of the greater Mixteca.

Stockdale, Neil (Institute of Archaeology, University College London), Nakoro, Elia (Fiji Museum), Cochrane, Ethan (Institute of Archaeology, University College London) and Hammond, Gail (Institute of Archaeology, University College London)

[167] *Colonization, Interaction, and Diversification: Now Evidence from Fiji's Western Islands*

Fieldwork and analyses over the last several years in the western islands of Fiji have been directed at several significant and unresolved questions in this important region of the south Pacific: how do we explain spatial and temporal variation in Fiji's colonization; how can we recognize interaction between Fijian populations and those in other archipelagos; and how have Fijian populations changed and diversified over time? These questions are addressed with new field and analytical data from the Mamanuca and Yasawa islands.

Stockett, Miranda (University of Pennsylvania) and McFarlane, William (Johnson County Community College)

[85] *Archaeology and Community Development in the Jesus de Otoro Valley of Honduras*
The socially constituted community model is traditionally used for archaeological investigation but can also be applied to development projects, as exemplified by the burgeoning field of public archaeology. We believe that the involvement of community members is integral to success in archaeological research. The community of Jesus de Otoro, Honduras has expressed interest in developing a Casa de Cultura to explore and understand a salient cultural heritage connected with the proto-Lenca. We propose to contribute archaeological resources and prioritize collaboration with existing institutions (the local municipality, IHAH) as the best way to incorporate diverse voices into such endeavors.

Stodder, Ann (Field Museum)

[115] *Motif and Memory in the Iconography of Sepik (Papua New Guinea) Skull Art*
The study of designs carved on human crania (collected 1894-1920) from the Sepik River and adjacent coast reveals multiple dimensions of mortuary ritual. The zoomorphic, naturalistic, and abstract elements incised on the frontals and parietals are common to a broad array of painted and carved media. There is not a unique iconography of decorative elements on the skulls, but no two incised crania are identical. This combination of the unique and the ubiquitous situates the deceased in the personal sphere of short term memory, and within the collective memory of ancestors and the shared aesthetic identity of the regional community.

Stokes, Robert (Archaeological Consulting Services), Jones, Thomas (Archaeological Consulting Services), Tactikos, Joanne (Archaeological Consulting Services) and Vargas, Victoria (Archaeological Consulting Services)

[104] *Early Milling in Arizona: Archaeology at the Hayden Flour Mill, Tempe*
Although milling in the United States has a long history, large-scale operations in the Southwest are more recent. Until the 1880s, mills were small-scale, local operations. In 1874, C.T. Hayden completed construction of a flour mill at the base of Tempe Butte near Phoenix. Hayden was able to harness the erratic flow of the Salt River to power his waterwheel, which was later converted to a turbine. Within a decade, the Hayden Mill was one of the largest, most successful in the Arizona Territory. This paper discusses historic milling in Arizona and the results of archaeology at the Hayden Mill.

Stoltman, James [60] see Bailey, Susanna

Stone, Elizabeth (Stony Brook University)

[27] *Corona vs. Digital Globe: Two Perspectives on Ancient Near Eastern Landscapes*
This paper compares the ability of older Corona imagery with newer Digital Globe Quickbird imagery to provide details of ancient landscapes in southern Iraq. Corona imagery has the advantage that it was collected before recent agricultural development, but the brightness of the desert soils often overwhelmed Corona's sensors, leaving large areas which were largely washed out. The high resolution and greater sensitivity of Digital Globe imagery allows it to record ancient landscape features even in cultivated areas. When used together, Corona and Quickbird imagery can provide an extraordinarily detailed view of ancient Mesopotamian landscapes.

Stone, Suzanne (engineering-environmental Management, Inc.)

[155] *Lessons Learned: Conservation and Stabilization of Artifacts Flooded by Hurricane Katrina*
Hurricane Katrina and subsequent broken levees inflicted massive damage and destruction to New Orleans, including a selection of artifacts stored by the University of New Orleans. As a result of flooding, contaminants, and heat, these collections became infested with mold and suffered deterioration. e2M's challenge was to clean and stabilize these artifacts. While there are excellent conservation resources available, it was problematic to find information specific to these circumstances. This paper presents some of the challenges we faced, our solutions, and the project outcome.

Stoner, Wesley (University of Kentucky) and Pool, Christopher (University of Kentucky)

[140] *But Robert, Where Did the Pots Go? Debating the Economy of Ancient Matacapán*
Among Robert Santley's major contributions to Mesoamerican archaeology was the modeling

of ancient economic systems. In particular, Santley proposed that the economies of Teotihuacan's dependents were organized as dendritic central place systems geared toward the bulking and export of goods and materials. Ceramic production and exchange figured prominently in Santley's dendritic model for the economy of Matacapán and the Tuxtla Mountains. In this paper we assess Santley's model in the light of recent data on ceramic production and exchange in the Tuxtla region and discuss the broader implications of our research for Classic period political economies in Mesoamerica.

Storey, Glenn [208] *see Enloe, James*

Storey, Rebecca (University of Houston) and Widmer, Randolph (University of Houston)
[140] *"Let's Relax the Assumptions a Little": Debates and Adventures with Robert during the Writing of The Basin of Mexico*

During 1977–79, when Bob was working on The Basin of Mexico we were privileged to watch the process unfold. Rebecca had a research assistantship to help Robert as needed and type the manuscript. Dolph had an office in the Sanders' lab along with Robert. It was a heady time, but what sticks in the memory are discussions about how representative the Loma Terramote site was and how realistic were the demographic estimates. We obtained a real insight to Robert's research philosophy. Robert was never one to let data limit his perspective on archaeological reconstructions. We see this as a good thing.

Storey, Rebecca [3] *see Piscitelli, Matthew*

Stosel, Victoria (CSULA)

[175] *The Relationship between Environment and Nutrition on San Nicolas Island, California*
Limited terrestrial resources on San Nicolas Island, California forced indigenous populations to subsist on the abundant marine resources. This paper examines faunal material from sixteen sites to explore the relationship between population and environment. Excellent preservation of eco-facts allows for the determination of relative frequencies of species in the diet. Simple frequencies fail to reflect nutritional importance so calculations of meat and protein yields are used as better indicators. The analysis focuses on the vitamin contribution of some shellfish species to the maintenance of health. Results of the analysis are compared with evidence of paleopathology in skeletal material.

Stotts, Rhian (The College of Wooster) and Kardulias, P. Nick (The College of Wooster)

[95] *Household Archaeology and the East Field at Isthmia, Greece: Interpreting Domestic Space at a Ritual Center*

Isthmia, location of the major Panhellenic Sanctuary of Poseidon, sits astride the major route from central to southern Greece. While excavations since the 1950s focused on the monumental public structures, work also revealed several large domestic quarters, one just east of the temple complex. Our study examines excavation records to undertake spatial and functional analysis of this area that dates to the Late Roman era by means of GIS. It will also compare the East Field to the Hellenistic settlement, located on a ridge to the south of the sanctuary. The study explores the interplay of ritual and domestic landscapes.

Strand, Katherine

[21] *Early Copper Age Circular Enclosures: An Analysis of Vészto-Bikeri and Körösladány-Bikeri*

The recent excavations of Vészto-Bikeri and Körösladány-Bikeri located within the Great Hungarian Plain have confirmed the presence of a series of three circular enclosures surrounding both sites. This presents an interesting contradiction to what was previously thought about Early Copper Age sites (ca. 6500–5000 BP), in that archaeologists originally argued that the conclusion of the Late Neolithic (ca. 8500–6500) brought an end to the appearance of defensive sites. This presentation will focus on a reevaluation of the function of these sites and the enclosures to include, among other things, the possibilities of defense and animal containment.

Straus, Lawrence (University of New Mexico) [24] *Discussant*

Straus, Lawrence (University of New Mexico) and Gonzalez-Morales, Manuel (Universidad de Cantabria)

[134] *The Magdalenian Occupations of El Miron Cave (Cantabria, Spain)*

Excavations since 1996 in El Miron Cave, located in the Cantabrian Cordillera of northern Spain, have revealed a sequence from the late Mousterian through the Bronze Age. Among the richest levels are those of the Magdalenian & Azilian, dated by 30 ¹⁴C assays between 17-10,000 BP. Occupations ranged from major, multi-purpose, residential stays with many structures to more ephemeral visits. Subsistence relied on hunting of both red deer & ibex, plus salmon fishing, but activities were highly varied, some involving use of bone needles. Lithic raw material catchment areas changed through time. Early Magdalenian inhabitants created significant works of both portable & rupestrian art and ornaments.

Strezewski, Michael (University of Southern Indiana)

[148] *Calm Before the Storm: The Wea Town of Kethtippecanunk*

The town of Kethtippecanunk, in Tippecanoe County, Indiana, was burned by the Kentucky militia in 1791. This occurred during a time of increasing conflict between American settlers and the Native peoples of the Wabash River valley. At this point, near the end of the fur trade period, the traditional leadership structure of the Wea had broken down and large-scale white settlement and subsequent removal were looming on the horizon. Materials recovered from two excavation seasons at Kethtippecanunk represent a snapshot of Native American economy during the period immediately prior to a dramatic change in their way of life.

Strickland, Albert [190] *see Lohse, Skip*

Strother, Eric (William Self Associates, Inc.)

[49] *Prehistoric Antemortem and Perimortem Skeletal Trauma from Central California Site CA-ALA-613/H, located in Pleasanton, California*

Analysis of 473 human burials from CA-ALA-613/H yielded 22 individuals that showed skeletal evidence of violence either before or around the time of death. Violence related trauma in this group included scalping, forearm trophy-taking, parry fractures, projectile point injuries, and sharp-force trauma to the neck. Although skeletal evidence of prehistoric violence is relatively rare in central California archaeological sites, a growing body of data from bioarchaeological studies in recent years indicates that interpersonal violence and trophy-taking was common within the San Francisco Bay Area prior to European contact.

Stroulia, Anna (University of Southern Indiana)

[134] *Thoughts on Neolithic Stone Vessels from Franchthi Cave, Greece*

The excavations at Franchthi Cave yielded a plethora of remains dated from the Upper Palaeolithic through the end of the Neolithic period. Among them are about ten Neolithic stone vessels. There are three interesting things about this small sample: 1. they are made of non local stones; 2. they are all fragmentary; 3. with one exception, they all retain a rim or handle portion of the vessel. Interestingly, similar patterns are observed in other Aegean Neolithic assemblages. In this paper I investigate these patterns in an attempt to understand the meaning and function of stone vessels in Neolithic Greece.

Stuart, David (University of Texas at Austin) [16] *Discussant*

Stuart, George (Center for Maya Research)

[162] *The Education of an Archaeologist: In the Field with Willie Folan, 1958–1975*

Working first at Dzibilchaltun in 1958 and later at Cobá with Willie Folan provided me with an extraordinary, indeed unique, addendum to my education in the profession of archaeology—and in life in general. This, then, is the largely personal memoir of a remarkable relationship and friendship that has endured without wavering for almost 50 years.

Sturm, Jennie and Conyers, Larry

[84] *Ground-Penetrating Radar Mapping for Site Identification*

The three-dimensional mapping method, ground-penetrating radar (GPR) can be used to discover, map and visualize buried archaeological sites. Recently this method has been used to project information from excavations to provide a broader contexts of buried sites. It can also be used as a method to plan excavations with limited budgets or time.

Styles, Bonnie (Illinois State Museum) [114] Discussant

Suárez, Sergio (Instituto Nacional de Antropología e Historia (INAH))

[55] *Cholula, Ciudad Sagrada y Comercial, en el Centro del Estado de Puebla, México*

En nuestro trabajo intentaremos mostrar, a partir de la información arqueológica y de las fuentes, la manera en que estaba integrada la sociedad cholulteca durante el Posclásico (850 a 1521 después de Cristo), su organización política, religiosa y social; a la vez que trataremos de entender los mecanismos que utilizaron para mantener el control político y religioso durante tantos siglos.

Suarez Cruz, Sergio and Iwaniszewski, Stanislaw (Escuela Nacional de Antropología e Historia, Mexico /State Archaeological Museum, Warsaw)

[97] *¿Acaso Progresan las Sociedades Complejas? El Calendario de Horizonte en Cuicuilco y el Zacatepetl en la Cuenca de México*

Archaeoastronomical investigations of the ceremonial landscape of the Valley of Mexico revealed a possibility of an existing framework based on the observation of solar horizon astronomy combined with calendrically significant periods and rituals that were performed at these places. I revise the arguments regarding that the essential concepts of this solar and calendric scheme may be derived from the Pre-Classic roots within the Basin of Mexico.

Suasnavar, Jose (Fundacion de Antropologia Forense de Guatemala), Robinson, Alan (Fundacion de Antropologia Forense de Guatemala), Alvarado, Silvia (Universidad de San Carlos), Barrientos, Tomas (Universidad del Valle) and Fahsen, Federico (Universidad Francisco Manoquis)

[26] *The Violent Collapse and Royal Massacre at Cancuen: Evidence, Historical Significance, Interpretive Challenges, and Implications*

At the Classic Maya site of Cancuen in a 2005 unprecedented osteological find included the remains of over 50 elites and the ruler. This evidence has been the subject of forensic analyses by six members of the Foundation de Antropologia Forense de Guatemala. Meanwhile, the archaeological team has completed preliminary artifactual and epigraphic study. This osteological and artifactual evidence, together with directly associated inscriptions, indicate that the royal court of the Cancuen kingdom was executed at AD 800. The find, its potential for analysis, and its culture-historical and theoretical implications are discussed.

Sugandhi, Namita (University of Chicago)

[135] *In/different Landscapes: Heritage and Inequality at the Limits of the Mauryan Empire*

As perceived markers of Mauryan imperial integration, the Asokan edicts (3rd century BC) figure prominently in official narratives of early Indian unity. However, as monuments reflecting a shared sense of national heritage, these inscriptions occupy some very different landscapes across the modern Indian nation. This paper presents a view of the edicts from a local perspective in rural Karnataka. By contrasting this view with other regional, and national perceptions of the Mauryan empire, an argument is made that the unequal distribution of value placed on monuments runs parallel to larger national and global inequalities of socio-economic development and incorporation.

Sugiyama, Nawa (Independant (ASU)) and Sugiyama, Saburo (Aichi Prefectural University/ASU)

[198] *From Dedication Burials to Murals: Re-Interpreting the Teotihuacan Animal Imagery*

More than 77 animal remains have been found in the Moon Pyramid including canids, felids, serpents and eagles. Burial contexts indicate that virtually all animals were sacrificed and dedicated to newly constructing monuments. Preliminary species identification on these fauna led us to question some of the taxonomic classifications that are assigned to the animal representations in Teotihuacan. In re-considering which species were depicted, we must also question the validity of the symbolism that has been inferred to the murals. We especially focus on some of the canid and felid species that are found abundantly in both burials and murals.

Sugiyama, Saburo (Aichi Prefectural Univ./ASU)

[168] *New Evidence on the City Layout at Teotihuacan and Mesoamerican Preclassic/Classic Periodification*

Teotihuacan's layout as currently visible was apparently designed according to a master plan to materialize a cosmogram, and was given material form by the end of the second century A.D. The Sun and Moon Pyramids and the Ciudadela were main elements of the city's presentation. Recent excavations at the Moon Pyramid and an ongoing 3D mapping project of the urban center provide precise measurements and chronological information on their repeated modification, enlargement, or destruction. The paper briefly describes their architectural sequences during the 2nd–5th century in a city-wide context and discusses the implications for Preclassic/Classic periodification.

Sugiyama, Saburo [198] see *Sugiyama, Nawa*

Sullivan, Alan (University of Cincinnati), Uphus, Patrick (Gray & Pape, Inc.) and Mink, Philip (Kentucky Archaeological Survey)

[163] *Ceramic Measures of Mobility and Interaction: Lessons from 11th and 12th Century Grand Canyon Assemblages*

Spatial distributions of red wares, white wares, and gray wares have been used to develop regional and inter-regional models about the nature and scale of ancient mobility and interaction patterns in the northern Southwest during the 11th and 12th centuries. The methods and assumptions that underlie these models are evaluated with survey and excavation data from the Grand Canyon and Upper Basin areas of northern Arizona. In addition, we explore how variation in surface artifact density of different wares can be used to measure sub-regional mobility and interaction patterns and to advance plausible alternative hypotheses about ceramic assemblage formation.

Sullivan, Lynne (Univ. of Tennessee) and Rodning, Christopher (Tulane Univ.)

[68] *Residential Burial, Gender Roles, and Political Development in Late Prehistoric and Early Cherokee Cultures of the Southern Appalachians*

Native people in the southern Appalachians began placing graves in and around residences in the thirteenth century A.D. Burials previously were placed in specialized burial mounds that likely belonged to individual kin groups. For several centuries, the practice of residential burial was contemporary with burial in or near public buildings that sometimes were built on platform mounds. During this time, residential vs. 'public' burial became related to spatial symbolism of gender and leadership roles. These changes suggest a developmental trajectory that distinguishes Southern Appalachian societies from their contemporaries elsewhere in the southeastern U.S.

Sullivan, Lynne [212] see *Rodning, Christopher*

Sullivan, Mary (University of Mississippi)

[169] *Before the Inka to After the Spanish: Interpreting Different Cultural Patterns Using GPR in Pambamarca, Ecuador*

Although archaeologists have been using ground penetrating radar to uncover buried sites and features for years, interpreting GPR results can be difficult. GPR surveys conducted at sites from three different periods (pre-Inka, Inka, and Spanish-colonial) are compared. Interpretations based on plan view and profile images are contrasted, allowing a number of methodological and processing concerns to be addressed as well as the assessment of differences in cultural deposits within the same region.

Sullivan, Michael [85] see *Bell, Ellen*

Sullivan, Norman [3] see *White, Benjamin*

Sullivan, Timothy (University of Pittsburgh)

[55] *The Response of Hinterland Populations to Centralized Political Change: 1000 years at Chiapa de Corzo, Chiapas, Mexico*

New data from a surface survey of 107 square km of the Chiapa de Corzo hinterlands demonstrate changes in settlement and political hierarchies from the inception of the site as a dominant regional center in the Middle Formative, to its decline in the Early Classic.

Excavation data from Chiapa de Corzo suggest that the polity experienced substantial political transformations over its span as a regional center. Utilizing data from this survey and from earlier excavations at Chiapa de Corzo, this paper examines changes in the mode of governance at the center, and the responses to these changes by hinterland populations.

Sundstrom, Linea (Day Star Research)

[154] *Toward an Understanding of Northern Plains Cave Shrines*

Many precontact North American belief systems included cave shrines. Archaeological and ethnographic data from Mesoamerica, the Southeast, the Middle Mississippi, and the Great Plains indicate broad cross-cultural beliefs and local traditions about caves. Cross-regional beliefs include a perception that caves incubate life, an association with herd animals, a symbolic system opposing caves and ground water to clouds and rainwater, a link with spiritual concerns of women (fertility and childbirth), and the use of minerals associated with caves in ritual contexts. Locally, petroglyphs and artifacts at cave shrines in the northern Great Plains refer to a spirit-being that confers creativity.

Sunseri, Charlotte (University of California, Santa Cruz)

[129] *Economic Landscapes of Prehistoric Central California*

Spatial analysis critically tests the theorizing of exchange in the prehistoric economy of Monterey Bay. This project will apply spatial analysis methods to archaeological signatures of exchange, resource use, and socio-political organization during the Middle-Late Transition (A.D. 1000–1250). This pivotal period in the region's prehistory is characterized by widespread changes in settlement patterns and technology, and provides a timeframe in which socio-political and environmental factors in prehistoric economy may be elucidated. To explore economic landscapes and relationships, catchment resource patterns and potential territorial boundaries around major basecamps, as predicted by Thiessen polygons, will be examined.

Sunseri, Kojun (UC Santa Clara) and Abdenur, Adriana (The New School)

[5] *Border Multiculturalism: Historic Archaeology of Colonial Buffer Settlements in Northern New Mexico*

How closely did everyday practices of ethnic identity in 18th Century New Mexico border towns match the top-down colonial classifications devised by Spain? This poster—incorporating interdisciplinary collaboration between an archaeologist and a sociologist—combines historical and excavation data with GIS analysis to explore how the material vestiges of community practices in three buffer settlement sites in the Rito Colorado Valley express hidden dimensions of multiculturalism. The project clarifies how people's lived experiences accorded or clashed with social identities ascribed by colonial authorities, and it questions the traditional dichotomy of "Spanish" and "Indian" archeological sites in the area.

Suratissa, D.M. (Department of Zoology, University of Colombo) and Zhou-Wei, Tang (Research Center for Chinese Frontier Archaeology of Jilin University)

[45] *The Transition from Hunting to Domestication at the Wangbabozi prehistoric Settlement: Late Neolithic to WeiJin Dynasties – North East China*

Zooarchaeological remains from Wangbabozi indicate variations in patterns of animal resource utilization from the late Neolithic to WeiJin Dynasties (316AD). The inhabitants gradually consumed more domestic animals while decreasing their consumption of wild animals. They exploited four wild animals significantly more than others; wild pig, domestic pig, red deer and roe deer. Climatic shifts and changes in human population played roles in altering their consumption patterns, which resulted in decreasing wild resources near the settlement. This is interpreted as an increased intensity in environmental resource utilization due to population increase which subsequently forced people to husband animals (Davis, 2005).

Surface-Evans, Sarah (Michigan State University)

[5] *"Where Many Paths and Errands Meet": Modeling Archaic Hunter-Gatherer Movement in the Ohio Falls Landscape*

This poster presents a case study for modeling hypothetical regional-scale movement and spatial interaction between known archaeological sites. With the aid of Geographic Information Science (GIS) travel paths and corridors are developed between Archaic shell mound sites in the Ohio Falls region. These modeling techniques are based on environmental and cultural

landscape attributes and can allow us to explore aspects of hunter-gatherer settlement, subsistence, and social organization. Methodological and theoretical considerations for modeling are discussed. The results of the Falls study indicates long-term locale reuse within a logistic collector economy and suggests several possible corporate group boundaries within the region.

Suyuc, Edgar (Mirador Basin Project / FARES)

[35] *La Complejidad Social en el Preclásico Tardío Vista Desde El Complejo la Pava, El Mirador, Peten, Guatemala*

Excavaciones sistemáticas en el grupo La Pava (pirámide Danta) han evidenciado datos del complejo sistema que se desarrollaron las ciudades mayas hace 2,000 años. La importancia particular del complejo Pava durante el Preclásico es evidente en los elementos constructivos. El elaborado diseño escultórico y la monumentalidad arquitectónica muestran un sistema ideológico-político capaz de mantener un orden social para manipular la construcción de trabajos de tanta especialización. A la vez, ha brindado evidencias de acontecimientos que agilizan el abandono de este complejo arquitectónico.

Suyuc, Edgar [35] see Hansen, Richard D.

Suzuki, Tetsuya [209] see Yonekura, Kaoru

Swarts, Kelly (Northern Arizona University)

[64] *A Preliminary Model For Understanding the Late Archaic in The Taos District, New Mexico*

The Taos District, New Mexico, was occupied sporadically throughout the Archaic Period but agriculture came late to the region. Very little is known about the Archaic Period occupation and the processes that withheld agricultural introduction. This poster presents an energetic optimization model for understanding subsistence use with implications for site distribution and mobility and examines how early agriculture might fit the optimized model. In this preliminary study I also present the results of a macrobotanical analysis of the first Archaic Period hearth excavated in the Taos District, and how these data fit into the abovementioned theoretical framework.

Swenson, Edward (University of Lethbridge)

[69] *Sacrificial Dialectics and the Emergence of Political Hierarchy*

This paper explores the causative link between the emergence of stratified polities in prehistory and the coalescence of political theologies founded upon ritualized violence. A comparison of sacrificial ideologies cross-culturally reveals that the religious rationale of early states was often grounded in dialectical metaphysics that framed comparable theories of action, change, empowerment, and social differentiation. I argue that the effective politicization of such native anthropologies/cosmologies—particularly the notion that order and reproduction (in their myriad manifestations) are consummated through acts of consumptive destruction—played a critical role in the development of hierarchical polities in both the Old and New Worlds.

Swidler, Nina (Navajo Nation) and Yeatts, Michael (Hopi Tribe)

[42] *Balancing Benefits*

Archaeologists have long maintained the upper hand in directing treatment priorities for prehistoric archaeological sites. However, the era of TCPs has cracked open the door to alternative perspectives on the larger importance of such places. For public archaeology to benefit a diverse public, some circumstances may merit valuation of archaeological sites from the perspective of their tribal value, and this is likely not as conventional archaeological resources. Subjugating archaeological methods in favor of other approaches that are more meaningful to associated communities may also serve to reveal the broader significance of such places to the public-at-large.

Swink, Clint (Swink Art), Dangerfield, Cory (Dangerfield Design) and Valdez, Fred (University of Texas)

[75] *Maya Ceramic Experimental Archaeology in Belize: Solving the Mystery of the Missing Maya Kilns*

Experimental data generated by a platform firing model may explain why Maya kilns are absent in the archaeological record. In five years of workshops at the University of Texas

Research Facility in Belize, 37 potters used prehistorically available materials, tools and techniques to build and fire authentic replicas of Maya pottery. We also clarified important but misunderstood Maya pottery production techniques such as simple molding/casting, terra sigulata use as slip and paint, and unique finishing techniques. This research has also identified and solved seasonal and daily potting challenges of Maya production.

Tactikos, Joanne [104] see *Stokes, Robert*

Taff, Jeffrey (University of Texas at Austin)

[99] *Hunter-Farmer Interaction and Exchange: Compositional Analysis of Toyah and Caddo Ceramics Through INAA*

This paper examines the results of an instrumental neutron activation analysis undertaken on a sample of ceramics from hunter-gatherer sites in Central Texas. The sample includes ceramics from the Toyah (ca. A.D. 1250–1700) interval as well as the Middle (ca. A.D. 1200–1400) and Late (ca. A.D. 1400–1700) Caddoan periods. The results of this research confirm previous conclusions regarding Toyah mobility while providing some interesting insights into hunter-farmer interaction and exchange in this region during the last centuries before European contact.

Tafilica, Zamir [134] see *Galaty, Michael L.*

Tainter, Joseph (Arizona State University)

[131] *Collapse and Abandonment, Resiliency and Sustainability, in the Prehistory of the American Southwest and the Sahel*

During a remarkable career of insights into abandonments and population movements in the prehistoric Southwest, Linda Cordell once wondered why “southwesternists appear not to view the thirteenth-century abandonment of large portions of the Southwest as one of history’s most extraordinary examples of social collapse and failure.” With this observation, Cordell recommended that Southwestern archaeologists situate collapse and abandonment in the broader context of similar events elsewhere in history and prehistory. In the spirit of Cordell’s challenge, this paper compares regional abandonments in the Southwest and the Sahel, relating these events to strategies of resilience and sustainability in arid lands.

Takakura, Jun (Hokkaido University)

[209] *Identification of Blade and Microblade Flaking Techniques in the Upper Paleolithic Assemblages of Northern Japan*

The Upper Paleolithic assemblages in Northern Japan contain a formal blade and microblade technology. A research of flaking techniques (both use of knapping material types and knapping techniques) of these blades and microblades will bring a valuable insight to the understanding of emergence and diffusion of pressure flaking techniques in North Asia and America. This paper will present the criteria that will contribute to the identification of flaking techniques, based on the analysis of lithic crack velocity, and to assess the identification of blade and microblade flaking techniques in the Upper Paleolithic assemblages of Northern Japan.

Takamiya, Hiroto (Sapporo University)

[20] *Spread of Agriculture into the islands of Okinawa, Japan*

Agriculture system based on rice was introduced into Japan via Korean peninsula and spread from there to north and south. Hokkaido and Okinawa, locating northernmost and southernmost regions of Japan respectively, were probably the last regions where agriculture spread in East Asia. The question naturally asked is how agriculture spread into these regions. Was it cultural or demic diffusion? This paper deals with this question focusing on the Okinawan situation.

Takase, Katsunori (Tokyo Metropolitan University)

[209] *Use Angle and Motional Direction of Endscrapers*

This paper examines functional variability of endscrapers from paleolithic Hokkaido, the northernmost island in the Japanese Archipelago. Firstly, use-wear analysis combined the high-power approach with the replica method is adapted to identify worked material and use angle. Secondly, motional direction of the tools is estimated using interpretative model built

by ethnographic data and experimental information. As a result, two different ways of using are recognized in the endscrapers while all of them have "dry hide polish" (E2 and OB-E type polish in Japanese archaeological context) on their working edges. This consequence provides a clue to gestures of hideworkers.

Talavera Sáenz, Gabriela (Instituto Chihuahuense de la Cultura)

[136] *Certification and Application of the Workshop on the Archeology and History "El Camino Real de Tierra Adentro" in Chihuahua*

The process by which the "workshop on archeology and history" came to be presented in Chihuahua began with a training in Santa Fe, NM. Carol Ellick, author of the didactic materials, taught the staff of the Chihuahuan Institute of Culture the methodology so that they could prepare, adjust, and implement the workshop in Chihuahua later on.

Taliaferro, Matthew (The University of Texas at Austin)

[205] *Black Mountain Phase Household Organization*

Excavations conducted during the Summer of 2006 targeted the Black Mountain phase component of the Old Town ruin (LA1113). These investigations were aimed at delineating households in order to better understand the nature of household organization during this period of "reorganization." It is hoped that this study will contribute to an under-emphasized period within the Mimbres Mogollon cultural sequence.

Taube, Karl (Dept. of Anthropology, U.C. Riverside)

[18] *Portrayals of the Sun Deity in Huastec Iconography*

Although research concerning ancient Huastec religion has focused largely upon goddesses of the earth and fertility, the celestial realm must also have been of interest to the Huastec, not only as the source of rain, but also as the diurnal realm of the sun and the nocturnal domain of demons of death and darkness. In this study, I will identify and describe the attributes of the Huastec sun god, which will be viewed in the broader context of Huastec cosmology, including celestial symbolism and his dawn ascent out of the eastern sea.

Taube, Karl [14] see Leonard, Daniel

Taylor, Amanda (University of Washington) and Stein, Julie (University of Washington)

[34] *Big Sites and Small Sites in the San Juan Islands, Washington*

Archaeological studies on the Northwest Coast have traditionally centered on material remains from single large sites. Investigations conducted by the San Juan Islands Archaeological Project (2005–2006) focused on small sites at a regional scale. Using data collected through this fieldwork and past work we compare dates, accumulation rates, and composition of small shell midden sites with large ones. We use this information to interpret change over time in settlement patterns and use of marine resources in the San Juan Islands. We also discuss the impact of erosion and site destruction on coastal archaeological research.

Taylor, Christine [6] see Baker, Kristin

Taylor, David (University of Dublin) and Itzstein-Davey, Freea (University of Dublin)

[86] *Wild and Domesticated Forms of Rice (Oryza sp.) in Early Agriculture at Qingpu, Lower Yangtze, China: Evidence from Phytoliths*

The presence of phytoliths from domesticated rice, *Oryza sativa*, indicates that rice agriculture was well developed at Qingpu on the Yangtze Delta by ca. 2350 BP, but was comparatively late in relation to other areas in the Yangtze valley. Phytoliths also indicate the cultivation of wild rice remained a prominent feature of food production in the area to at least as late as ca. 1800 BP; that there was a period of overlap, during which both wild and domesticated forms of rice were cultivated; and highlight the influence of environment in an area vulnerable to inundation.

Taylor, James [129] see Phillips, Stephen

Taylor, Matthew (The University of Texas at Austin)

[49] *Dental Morphological Variation of Early Texas Populations*

Since most of the forager peoples of Texas were destroyed in historic times, the genetic relationships of pre-contact populations is unknown. In order to reconstruct these

relationships, a survey was undertaken of dental heritable traits. Samples were drawn from the Caddo area, the Gulf Coastal Plain, the Edwards Plateau, and the Lower Pecos Region. Over 700 individuals were scored and analyzed using statistical distance analysis. Results of this study indicate that there was considerable genetic diversity between and within these regions. The results of this research have significant implications for NAGPRA compliance issues and the genetic history of North America.

Taylor, Robert (Arkansas Archeological Survey), McGaha, Shaun (Arkansas State University), Morrow, Juliet (Arkansas Archeological Survey), Speakman, Jeff and Glascock, Mike

[39] *Instrumental Neutron Activation Analysis of Greenbrier Phase Ceramics*

Instrumental Neutron Activation Analysis (INAA) of ceramic sherds and unfired clay samples from Late Mississippian sites in the White River Valley of Northern Arkansas was conducted at the University of Missouri Archaeometry Lab (MURR). The sherd sample derived from the Greenbrier site and contemporary communities that include Magness (3IN8, Akron Mounds (3IN3), and Guion (3IZ136). Results from INAA are used to sort sherds and clay samples into chemically similar groups in order to identify local and nonlocal sources of ceramics and compare and contrast manufacturing techniques among the communities represented in this study.

Taylor, Timothy (University of Bradford)

[53] *The Brno Effect: Materiality and Operative Development*

This paper focuses on two of Andrew Sherratt's abiding interests, grand theory and Mitteleuropa. By building on an observation first made by Herder, concerning the unique life-world of humans, and examining the Middle Upper Palaeolithic mammoth ivory marionette of a male human figure from Brno, Czech Republic, it is possible to argue that a recognizably modern form of human intelligence emerged, and perhaps could only have emerged, through an essentially 'accidental' interaction between minds and material artefacts.

Taylor, Zachary [86] see Horn, Sally

Taylor-Montoya, John (Southern Methodist University)

[190] *The Late Paleoindian Occupation of the Gault Site: A Perspective on the Big Picture*

Recent work on the late Paleoindian period on the Great Plains has focused on regional level analyses of entire assemblages from sites. The result has been a rejection of over-generalized models of late Paleoindian adaptations. In light of these findings, the Gault site is examined within a regional framework and the implications discussed in this paper.

Tchakirides, Tiffany (Cornell University), Henderson, John (Cornell University), Joyce, Rosemary (University of California) and Brown, Larry (Cornell University)

[169] *Understanding the Use of Space in Early Formative Honduras: A Geophysical and Archaeological Analysis of Los Naranjos, Honduras*

Ground-penetrating radar and magnetometry data were acquired at Los Naranjos, Honduras, one of the earliest archaeological sites in Mesoamerica with monumental architecture and sculpture and one of the easternmost where Olmec artifacts have been recovered. Geophysical surveys were integrated with archaeological excavations adjacent to one of the largest earthen platform mounds, built early in its history. Interpretation of geophysical data and analysis of cultural material from excavations are helping to understand how the construction and significant expansion of these mounds altered the Early Formative physical environment in dramatic ways, both reflecting and intensifying social differentiation and concentration of political power.

Tebben, Alexander

[21] *A Comparison of Ceramic Vessel Types between Two House Structures at Veszto-Bikeri, Hungary*

This project seeks to explore the areas of specialization and use patterns of the ceramics found at the Copper Age site of Vészto-Bikeri in south-eastern. The project seeks to compare the distribution of ceramic vessel types between two possible house structures. The basis for the spatial analysis of this project is the Excavation Unit. The number of each of the vessel types in each EU was mapped according to its position in its respective block. Clusters of

vessels were revealed on the maps and used to determine the ways in which areas in the house structures were used.

Teeter, Wendy (Fowler Museum at UCLA)

[119] *Stories Shared: On the job training at the UCLA Fowler Museum*

I will always thank NAGPRA for saving archaeological collections. Ten years ago the UCLA archaeology collections were in bad shape and in need of rehabilitation to make them more usable and accessible for research. Through NAGPRA consultation with tribal members questions were asked and observations made that really shaped the priorities and ways of curating the collections. One result was realizing the need to reconnect with previous UCLA archaeologists and learning the oral history of these collections. This paper will share some lessons learned and stories shared from the indigenous communities and the many benefits received from their involvement and partnerships.

Tejada, Ana [7] see *Rosenswig, Robert*

Tennant, Edward (University of Florida) and Davidson, James (University of Florida)

[171] *3D GIS and Memory: Virtual Reconstructions of 1920s Rosewood, Florida and Its Public Archaeology Potential*

In the early 20th century, race riots, lynchings and destruction of black homes were common headlines. One of the best known cases involved the 1923 destruction of Rosewood, Florida. Eight people died, and buildings were put to the torch by a white mob. While archaeological deposits at Rosewood are likely well preserved, much of the land is currently owned by white landowners hostile to the concept of remembering what happened there. What options are left to archaeologists who investigate these sites when traditional archaeological methods are unavailable? The use of 3D GIS and the Internet provides one compelling answer.

Tennessen, David (University of Minnesota)

[199] *Early Lithic Technology on the Katmai Coast of Alaska: The View from the Mink Island Site (XMK 030)*

One of the earliest sites on the Pacific coast of the upper Alaska Peninsula is the lower locus of the Mink Island site (XMK 030), dated between 6300 +/- 50 and 4180 +/- 40 uncalibrated years BP. Excavation of the lower locus by the National Park Service produced tens of thousands of lithic artifacts constrained by more than 40 radiocarbon dates. This project offers an opportunity to describe early lithic technology on the Pacific coast of the upper Alaska Peninsula, to consider potential relationships with other technological traditions and to make inferences about mobility strategies employed by the earliest inhabitants of the Mink Island site.

Tenorio, Jose Luis (INAH)

[211] *Arquitectura y Mapeo del Pueblo Viejo de Teposcolula*

Esta ponencia trata de la diversidad de componentes arquitectónicos encontrados en las áreas excavadas del Pueblo Viejo de Teposcolula, así como de algunos tratamientos de estabilización llevados a cabo para asegurar su conservación. También se trata acerca de la metodología utilizada para llevar a cabo las diferentes expresiones gráficas que se generaron del sitio.

Tenorio Castilleros, Dolores (ININ), Calligaro, Thomas (Musée du Louvre) and Jaime-Riveron, Olaf

[74] *A Study of Serpentinities from La Venta: NAA and PIXE*

In this paper we will present new results of a sample of serpentinites from La Venta in order to study provenance of raw materials. The implications of long-distance exchange are relevant for a better understanding of ancient economic systems.

Teranishi, Keiko [206] see *Liendo, Rodrigo*

Tercero, Geraldina

[85] *Archaeological Knowledge and Heritage Conservation in Honduras: Public Ideas and Values*

Archaeological investigations in the Ulúa Valley of Honduras since the late nineteenth century have documented a complex occupational history. To explore how knowledgeable the public is

about the Valley's archaeological record, a survey involving school children, school teachers, and cultural reporters, was conducted by the author. Topics included general knowledge of archaeology, the perception about aboriginal groups that populated the region in the past, and values and attitudes toward archaeological heritage. Based on the responses, suggestions are presented on how to improve public outreach programs, interpretive archaeological exhibits, and how to incorporate archaeological and heritage conservation content in school curricula.

Terceros C., Zulema (Universidad Mayor de San Andres) and Anderson, Karen (University of California, Santa Barbara)

[83] *Plant Remains and Mortuary Customs during the Middle Horizon in Cochabamba: The Evidence from Piñami*

Numerous Middle Horizon burials were excavated at the site of Piñami in Cochabamba Bolivia and the majority included some sort of plant remains. In this paper we report on the variety of plants used during interment, most notably leaves, grasses and tree bark, as filler, wrappings and tomb lining. We present evidence from botanical analyses identifying the plants found, the context of use for each plant type, changes in plant use over time as well as variable conservation of plant remains. We end by discussing the implications of this data for understanding Cochabamba-Tiwanaku interactions.

Terrell, John (The Field Museum), Cochrane, Ethan (Institute of Archaeology, University College London) and Lipo, Carl (California State University, Long Beach)

[158] *Branching vs. Blending is Not the Question*

The straightforward application of phylogenetic techniques to cultural datasets has engendered facile readings of phylogenetic results as straightforward descriptions of cultural evolutionary trends. We argue, however, that many cultural phylogenetic interpretations are influenced by 1) the inability to simultaneously evaluate phylogenetic and non-phylogenetic models, and 2) the false view that particular explanatory models can be divorced from the generation of data to which they are applied. We illustrate an alternative approach to explaining homologous similarity by applying phylogenetic and reticulate models to Pacific linguistic and material culture datasets and compare the conclusions and limitations of each model.

Terrenato, Nicola (UNC / University of Michigan) [179] Discussant

Terrones Cevallos, Jorge [43] see Cutright, Robyn

Terry, Karisa (Washington State University), Buvit, Ian (Washington State University), Konstantinov, Aleksander (Chita State Pedagogical University) and Konstantinov, Mikhail (Chita State Pedagogical University)

[34] *Ongoing Fieldwork at the Ust'-Menza Archaeological Complex*

Since 1982, Russian archaeologists have excavated at least five separate site localities at the confluence of the Menza and Chikoi rivers in southern Siberia. The sites have yielded radiocarbon dates in excess of 17,000 B.P., but initial human occupation may be much older. As digging continues and new discoveries are made, our understanding of how humans adapted to rapidly changing post Late Glacial Maximum environmental conditions will undoubtedly increase. Here we present an overview of the sites and discoveries, then briefly discuss the Ust'-Menza archaeological complex in the context of late Pleistocene human colonization of NE Asia.

Terry, Richard (Brigham Young University), Dahlin, Bruce (Retired) and Bair, Daniel (Brigham Young University)

[161] *Soil Chemistry in the Search for Ancient Maya Marketplaces at Chunchucmil, Yucatan, Mexico*

Other than rocks that demarcate individual selling space, contemporary marketplaces in Mesoamerica leave few signs of the trade activities. It is unlikely that artifactual evidence of ancient marketplaces would remain as they are cleaned at the end of each market day. Our objective was to use soil chemical analysis of a variety of public spaces at Chunchucmil to identify ancient marketplaces. Patterns of extractable phosphorus in the soils of both contemporary and ancient market plazas have indicated years of food trade at certain locations. These methods hold promise in resolving the vexing question of how large ancient Maya urban populations were sustained.

Terry, Richard [161] *see* Bair, Daniel

Tesar, Louis (Florida Bureau of Archaeological Research) and Rao, Yamini (Pre-Columbian Archaeological Research Group, Inc.)

[186] *Wari Warfare and Trophy Taking: More than Just a Skull*

The role of warfare among the Wari has long been a subject of debate. A recent trophy skull discovery at the site of Cotocotuyoc sheds light on this issue. The attributes of this skull, which support warring and ceremonial activity, are described in this paper. They include various morphological modifications, removal and replacement of dentition, scalping and reattachment of hair, and a series of healed and unhealed cranial wounds.

Tews, Amber [128] *see* Betts, Matthew W.

Thacker, Paul (Wake Forest University)

[23] *Espadanal and Upper Paleolithic Landscape Archaeology in Portugal*

A regional model of landform evolution in the Rio Maior drainage contextualizes Late Pleistocene settlement patterns in central Portugal. The deeply buried, stratified open-air site of Espadanal documents changing prehistoric land use and site organization leading into and immediately following the Last Glacial Maximum. Geoarchaeological studies at Espadanal supplement data on the chronology and depositional context of nearby sites such as Gato Preto and Chainca. This integrated landscape archaeology would not have been possible without the intensive archaeological fieldwork program initiated by Tony Marks in the late 1980s.

Theodoro da Silva, Rosicler (IGPA/UCG) and Rubín de Rubín, Julio (IGPA/UCG)

[176] *Cultural Vestiges and Landscape Dynamics in Macaúba I Archaeological Site. Goiás, Brazil*

Macaúba I site is spread over 2.242m² of an inter-fluvial area of the Brazilian mid-western plateau. The 516 surveys, which did not exceed 0.82m, identified two different occupations: A ceramic period dating 1.088+/-36 B.P and, above this, a pre-ceramic period associated with 2BC Cambisol horizon, resulting from soil and sediments accumulation due to erosive/depositional processes. There are two main hypotheses for the lithic/soil association: 1) The relief modeling process covered the cultural vestiges in their original context and 2) the artifacts were incorporated in the soil/sediment flow during transportation.

Thibodeau, Alyson [194] *see* Murakami, Tatsuya

Thomas, Ben (Archaeological Institute of America)

[182] *From House Floors to Pyramids: Assessing Maya Architectural Variety and Variability in the Sibun River Valley in Belize*

Archaeological surveys and exploration of even moderately-sized regions in the Maya area obliges one to consider the incredible variety of styles and techniques present in the Maya corpus of architectural design. In this paper, I discuss the architectural variety seen in the Sibun river valley of Belize—from house platforms, to pyramids, to structures within caves—and attempt to place these myriad styles in archaeological context by linking them to local resources, landscapes and beliefs. The Sibun valley, a fairly small and circumscribed part of the Maya world, is representative of the Maya penchant for creating locally appropriate architecture.

Thomas, David Hurst (American Museum of Natural History)

[116] *Southwestern Archaeology in the 21st Century: Back to the Future?*

Southwestern archaeology in the early 21st century resembles, in some important ways, the archaeology of a century ago - a time when archaeologists listened to the stories of Native people, interacted with Indian people on a daily basis, advocated for some Native American Indian issues, and understood that without (at least tacit) Native approval, the archaeological research simply wasn't going to materialize. Today, as litigation and legislation are increasingly unattractive ways to settle conflicts over cultural patrimony and intellectual property rights, Southwestern archaeologists are once again actively involved in resolving disputes between American Indians and the non-Indians who wish to study them.

Thomas, David Hurst (American Museum of Natural History) [19] Discussant; [201] Discussant

Thomas, Jonathan T. (University of Iowa), Woods, Alexander D. (University of Iowa) and McCall, Grant S. (University of Iowa)

[95] *Experimental Replication of the Iberian Slate Plaques: An Examination of Authorship and Materials*

The engraved slate plaques of the Late Iberian Neolithic/Chalcolithic (3000-2500BC) have been posited as heraldic/lineage markers, material mnemonics, religious icons, or as nascent prestige goods. These plaques, found exclusively in burial contexts in Portugal and Spain, employ a symbolic grammar of geometric shapes and anthropomorphic figures. Little is known about the creation of the plaques or their association with interred individuals due to secondary depositional practices. A microware analysis was undertaken to determine if replicas of these plaques illustrate that individual engravers and engraving materials are discernable, and to better understand how craft production was organized in the Neolithic/Chalcolithic.

Thomas, Judith (Mercyhurst Archaeological Institute)

[164] *From Ranches to POW Camps: Historic Archaeology at Fort Hood*

Mercyhurst Archaeological Institute has conducted three historic field schools at Fort Hood, Texas. The research targeted sites that are potentially eligible for the NRHP and will provide a perspective on mid-twentieth century life in Central Texas. The Dorn Site (41CV1021) documents a traditional rural lifeway that lingered well into the middle of the 1900s. At the other end of the spectrum, the North Camp Hood Internment Camp housed WWII German prisoners-of-war and demonstrates homefront participation in a global historical event. This paper summarizes the investigations conducted at the two sites.

Thomas, Roberta (California State University Long Beach), Neff, Hector (California State University Long Beach) and Lipo, Carl (California State University Long Beach)

[92] *The Sourcing of Stemmed Obsidian Bifaces on Easter Island*

One of the most ubiquitous artifact classes on Easter Island are obsidian bifaces. These irregular shaped stemmed objects are found by the thousands across the landscape. The determination of the chemical composition of obsidian bifaces from Easter Island provides information about population movement and resource acquisition. Using laser-ablation time-of-flight ICP-MS to measure compositional variability, this study focuses on the characterization of source samples and a large collection of obsidian bifaces from the interior of the island. Information from this study provides new insight on mobility, trade, and interaction among the prehistoric populations of Easter Island.

Thomas, Roger M (English Heritage)

[210] *Closing the Loop - The Archaeological Process in England Today*

Interpretation, synthesis and model-building lie at the heart of the archaeological process. In England today, as a result of contract archaeology, the rate at which new primary site-specific evidence is being accumulated has completely outstripped our ability to make use of this evidence in wider ways. This paper will look at some of the causes of this situation, examine some current initiatives designed to tackle it, and consider some of the implications of the present situation for the longer-term health of the subject.

Thomas, Sunshine (Texas A&M University) and Thoms, Alston V.

[33] *Earthmoving in South Texas: Stabilization Efforts and Future Excavation Potential at the Richard Beene Site (41BX831)*

Primary field work at the Richard Beene site (41BX831), a Texas State Archaeological Landmark located south of San Antonio, TX, was completed in 1995. This large site spans multiple occupation periods, and excavations have recovered cultural features that date to 700 to 8800 years B.P. Subsequent site monitoring illustrated the effects of weathering over a ten year period. Work was conducted in 2005 to ensure the proper stabilization of the site and lay the groundwork for the development of an archaeological park. Mechanical slope reduction, hydro-mulching, and detailed mapping will ensure that the site remains accessible for future excavations.

Thompson, Amanda (University of Alabama) and Wimberley, Virginia (University of Alabama)

[192] *Limits in Raw Material Selection for Mississippian Textiles Gleaned from Moundville Artifacts*

Using textiles in association with copper artifacts from the Mississippian Period at Moundville, Alabama, the researchers performed a technical analysis for the textile remains to establish the level of their complexity and function. With this analysis, boundaries between different ceremonial artifacts incorporating textiles can be defined. Microscopic analysis using ESEM and EDS identified the composition of the raw materials used for construction. This data in comparison to field notes indicates what was available both locally and through trade, and what was culturally acceptable for use by elites of the society.

Thompson, Jason [208] *see Enloe, James*

Thompson, Jennifer [99] *see Mauldin, Raymond*

Thompson, Jessica (Arizona State University)

[37] *Contrasting Faunal Exploitation Strategies at Two Middle Stone Age Sites, Western Cape, South Africa*

Blombos is a small, isolated cave located high on a steep cliff. Pinnacle Point Cave 13B is a large, accessible cave in close proximity to many others, and would have presented very different costs in terms of faunal acquisition and transport effort. The artifactual assemblages, and by extension site use, also differ dramatically. Analysis of skeletal element abundance and butchery marks at these sites provides data on how faunal exploitation strategies were adjusted across the MSA landscape, and shows how subsistence decisions are at least partially determined by site context.

Thompson, Josephine

[67] *Mirador Cultural Zone: Coincident Boundaries between the Natural and Cultural World of Early Maya Civilization*

Archaeological studies in the Mirador Basin show that more and more sophisticated ancient Maya settlement patterns are emerging. This suggests a greater need to understand the natural environment and the transformation that occurred during the Maya occupation. Adding to a clear cultural settlement landscape are two natural systems: hydrology and vegetation. Advances in our understanding of these natural systems has impacted our knowledge of the cultural landscape. With the use of (30 meter) Infrared Satellite information, ground surveys and hydrologic and vegetation studies, the regional picture for the Mirador area are starting to emerge.

Thompson, Kevin [33] *see Horton, Kristina*; **[34]** *see Eckerle, William*; **[4]** *see Slessman, Scott*

Thompson, M. Scott (Arizona State University) and Benton, J (Arizona State University)

[129] *An Agent Based Model of the Dual-Processual Theory*

Blanton et al.'s (1994) "Dual-Processual Theory" proposes that leadership strategies vary along a continuous axis, with the corporate strategy on one pole and the network strategy on the opposite pole. We develop an agent-based computer simulation that models variability in leadership strategies using the corporate-network axis. In the model, a leader's behavior is governed by weighted parameters. Corporate behavior emphasizes a leader's social connections, while network behavior favors the acquisition of wealth. We evaluate a hypothesis that change in the social perception of a leader's responsibility is a principal factor in change in leadership strategies.

Thompson, Victor (University of West Florida) and Kidder, T. R. (Washington University-St. Louis)

[58] *Archaeologies of Transformation*

To make studies of cultural complexity more dynamic, archaeologists must focus on the transformative elements within societies as well as how societies transform themselves. Such studies are specifically concerned with how societies reproduce themselves (both ideologically and physically) in the context of disjunctures; how societies maintain older structures within the context of new ones; and finally how unique histories work to create these mechanisms of

transformation over multiple geographic and chronological scales. In this paper, we explore the theoretical issues surrounding the archaeology of transformations by drawing on examples from the archaeology of the Southeastern United States.

Thoms, Alston (Texas A&M University)

[159] *Land-Use Localization: An Intensification Hallmark of Early-to-Late Holocene Hunter-Gatherers at the Richard Beene Site*

Hunter-gatherer land-use patterns on the Gulf Coast Plain, as described by Cabeza de Vaca in the early 16th century, are consistent with the site's 10,000-year archaeological record. From the onset of intermittent, short-term occupations, the site's inhabitants focused on a similar suite of winter-time resources available from the adjacent riparian zone and savannah-dominated terraces. Deer, rabbits, and other small mammals characterize the faunal assemblage to the virtual exclusion of bison and pronghorn that, at times, undoubtedly occupied nearby uplands. FCR features are consistent with the inferred importance of locally available plant foods, including geophytes.

Thoms, Alston V. (Texas A&M University)

[1] *Allaying Suspicions and Forming Alliances: Toward Collaboration at Richard Beene Site, South-Central Texas*

Excavations in 1991 near San Antonio revealed a 13,000-year-old archaeological record and opened doors to productive working relationships among archaeologists and Native Americans who endeavored to preserve the Richard Beene site and environs as an ecological park. The resulting 1,200-acre park, owned by the Land Heritage Institute Foundation, is dedicated to educational, recreational, heritage-preservation, and scientific research purposes. Tap-Pilam Coahuiltecan Nation, comprised of families who trace their ancestry to the region's native inhabitants, played leadership roles in this effort, which created a place for them to present their perspectives on past lifeways and contemporary solidarity.

Thoms, Alston V. [33] see Thomas, Sunshine

Thulman, David (Florida State University)

[110] *Paleoindian Social Organization in North-Central Florida*

Projectile point distributions and regional variation in the form of these points reveal a pattern that can be inferred as the social organization of Middle Paleoindians in north central Florida. Three social groups are apparent, which were located in the Chipola River basin, the Suwannee-Santa Fe river basins, and the Tampa Bay-upper St. Johns River area. These data also show a process of regionalization and social group differentiation from the Early to Middle Paleoindian periods. The methodology used in this study has application to the regional distribution of material culture in general.

Thunen, Robert (University of North Florida)

[204] *Two Years of Testing at the Cedar Point Site, Jacksonville, Florida*

This paper presents the results from two field seasons (2005 & 2006) at the Cedar Point Site (8DU81) on Black Hammock Island, Florida. Archaeological survey and testing have defined the probable location of the relocated Mocama mission of San Buenaventura de Guadalquini de Santa Cruz (ca. 1685-1696). To date no mission period structures have been defined yet the material culture suggests a relocated native population from the Georgia Coast. The excavations were a joint undertaking between the University of North Florida's Archaeological Laboratory staff, students and the National Park Service's Timucua Historic and Ecological Preserve's personnel.

Thurston, Tina (SUNY at Buffalo)

[152] *Bitter Arrows and Generous Gifts: What Was a King in the European Iron Age?*

Scandinavia's early Iron Age appears remarkably egalitarian, especially considering an earlier, more socially stratified Bronze Age. By the late Iron Age, an emergent state was co-opting and incorporating independent border regions. Once conceptualized as driven by newly authoritative elites asserting growing power to enforce and control, such models are now untenable, given the recent scholarly rethinking of our evidence for sociopolitical organization across Iron Age Europe. More complex, locally embedded models are offered, considering different organizational structures, alternate courses toward 'power' and what constituted

power, and growing inequality as a long-term restructuring and renegotiation, from social difference to social distance.

Thyse, DeAnn [104] see *Folb, Lisa*

Tiedemann, Erica and Jakes, Kathryn (Ohio State University)

[192] *What, no spindles? The Case Against Change in Spinning Technology*

The adoption of spindle technology tends to be explained away as obvious labor-saving innovation. In an experimental study, thigh- and spindle-spun yarns were replicated toward defining the differences between the two technologies. Contrary to common assumptions, the authors have shown that spindle-spinning is not necessarily faster than thigh-spinning. Results from a preliminary comparison of yarn quality show no difference in yarn strength, but suggest a difference in yarn evenness. These findings support a discussion about the persistence of thigh-spinning and its place within particular contexts of textile manufacture and use.

Tiesler, Vera (Universidad Autonoma de Yucatan), Hurtado, Araceli (Universidad Autonoma de Yucatan), Horteaga, Allan (INAH Quintana Roo) and Cucina, Andrea (Universidad Autonoma de Yucatan)

[162] *Biological Distances, Affinities and Dental Morphology in Pre-Contact Maya Populations from the Yucatan Peninsula*

Dental morphological traits vary within and between populations. To contribute to the understanding of Yucatec Maya population dynamics through time, the biological relationships among Maya groups that occupied the Yucatan peninsula during the Classic and Postclassic periods were assessed. To this end, 27 non-metric dental traits were scored on nine skeletal series dated to the Classic and Postclassic periods. The pattern of morphological affinities between time periods and geographical areas were validated statistically through PCA, MMD and Maximum Likelihood. Results express group differences between Classic and Postclassic coastal populations and point towards south-north migrations at the onset of the Postclassic period.

Tiffany, Joseph (University of Wisconsin-La Crosse) [179] *Discussant*

Till, Jonathan (Crow Canyon Archaeological Center)

[138] *The Shields Pueblo Artifact Assemblage: Material Culture Variability and Center Place(s) Through Time*

This presentation focuses on the artifact assemblage of a multicomponent, ancestral Pueblo site in southwestern Colorado. The site evidences occupation from the late A.D. 700s through the late 1200s. Variation in the composition of the site's artifact assemblage suggests changes in the site's function through time. In particular, these changes reflect the evolution of community and social landscapes through the so-called Chaco to Post-Chaco eras within the Mesa Verde region.

Till, Jonathan [75] see *Baxter, Erin*

Timperley, Cinda (The Gault Project--University of Texas at Austin) and Lundelius, Jr., Ernest (Department of Geosciences, University of Texas at Austin)

[190] *Dental Enamel Hypoplasia in Late Pleistocene Grazers in the Southern Plains: Implications for Clovis-Era Paleoeecology*

Dental enamel hypoplasia (DEH) in mammals indicates nutritional stress during tooth mineralization. Paleoindian-age droughts are well-documented and likely affected forage for large herbivores like Bison and Equus. Some late Pleistocene Equus in the Southern High Plains exhibit DEH, while DEH appears rare in Bison, even in drought-coincident sites. We predict that Equus with DEH will correspond to droughts in the terminal Pleistocene. This higher incidence of DEH in Equus than Bison may indicate that horses were more susceptible than the large bovids to the terminal Pleistocene environmental changes.

Tinsley, Clayton (Binghamton University)

[134] *Households on the Margin: Smallholder Resilience in Northern Highland/Island Scotland AD 1200–1700*

Recent archaeological and documentary data from four farm sites, offers the first comprehensive view of rural Medieval (AD 1200–1700) economy in Northern Scotland. Research has focused on farm management strategies responsible for economic resilience in

the context of growing external market forces, climatic change and state/regional level power transformations (AD 1200–1700). Project data from four Medieval farm sites is used to test the applicability of Netting's (1991) smallholder model in understanding the factors of economic resilience for small-scale farmers in Northern Highland/Island Scotland (AD 1200–1700).

Todd, Claire [5] *see Rademaker, Kurt*

Todd, Lawrence [129] *see Reiser, Marcy*; **[34]** *see Bechberger, Jillian*

Toft, Mike [110] *see Wiewel, Adam*

Tomka, Marybeth (Center for Archaeological Research-Univ. of Texas, San Antonio)

[54] *Everything is New Again: San Antonio's Spanish Colonial Heritage Collections*

The Center for Archaeological Research (CAR) at the University of Texas at San Antonio has the great honor of caring for the collections from the five San Antonio Spanish Colonial Missions and an associated ranch. Over the last five years CAR staff have rehabilitated the collections from three of these sites totaling over a quarter of a million artifacts. These collections have only been available for study on a limited basis due to their previous condition. This paper will discuss the types and quantities of artifacts in the collection and their significance for understanding cultures in contact.

Tomka, Steve (UTSA) and Mauldin, Raymond (UTSA)

[50] *Exploring Trends in Texas Point and Projectile Technology*

Nearly 100 projectile point types have been defined in Texas from the Early Archaic through the Late Prehistoric. The range of point types, defined by stylistic attributes, offers an ideal sample for a functional study of projectile technology. In this presentation, we look at neck widths and weights of selected projectile point samples from four regions of the state and identify distinct temporal and regional trends in these two attributes. These trends may be related, in part, to broad ecological conditions, such as differences in vegetation structure and faunal resources, as well as to changes in those conditions through time.

Tomka, Steve (UTSA) [99] *Discussant*; **[185]** *see Snow, Susan*

Toney, Elizabeth [138] *see Roth, Barbara*

Toney, Joshua (University of Florida) and Heckenberger, Michael (University of Florida)

[192] *Return to Afukaka's Midden: Perishable Materiality and Archaeological Identities*

This paper addresses social and material identities and, specifically, how these are represented in perishable artifacts. It builds on work conducted by the authors with Jim Petersen in two areas of the Americas: (1) northeastern North America, including changes in Native American adornment and identity from Early Woodland to Historic times and (2) Amazonia, including both ethnographic and archaeological manifestations of identity. Issues of materiality, archaeological visibility, and taphonomic mechanisms are discussed to elaborate themes that permeated Petersen's work, notably questions of practice and cultural identity.

Toohy, Erin (The College of Wooster)

[142] *Graveyards and GIS: How the Town of Lewes, Delaware is Learning More About Its Past*

The town of Lewes, Delaware, has a rich history dating back to its settlement by the Dutch 375 years ago. Community graveyards reflect the local history and spirit. Through the Historic Gravestone Project, operated by the Lewes Historical Society, these graveyards are being documented and analyzed for use by genealogists, historians, and archaeologists. The Society has implemented the use of GIS technology to map not only the spatial relationships of the graveyards and their stones, but also patterns and population trends. Technology and the material record have combined in Lewes to give us a better glimpse of the past.

Tooth, Stephen [56] *see Bousman, Britt*

Topping, Peter (English Heritage)

[87] *Blinkered Vision: A Review of Flint Mining in Neolithic Europe*

This paper will review the evidence for regionalised trends amongst the Neolithic flint mines of continental Europe. Explanations will be sought for the range and scale of the various forms of extraction, the presence/absence of artefact assemblages, burials, animal remains and trade networks. The collected data will be used to sketch the possible social implications of this information.

Torres, Paola (Universidad de San Carlos), Demarest, Arthur (Vanderbilt University) and Forne, Melanie (Sorbonne)

[26] *The Cancuen Ballcourts as Reflection and Reinforcement of the Multiple Levels of Classic Maya Political Alliance, Hegemony, and World View*

The ballcourts of the Classic Maya gateway center of Cancuen were variable in form and function reflecting its interregional nature and political and "ethnic" complexity. The great ballcourt of Taj Chan Ahk was a political instrument of alliance. The central ballcourt fulfilled multiple religious, social and political roles. The northern ballcourt was a center of local feasting of non-elite groups with non-elite ceramics of variable regional styles. Extensive excavations and analyses have sought to describe and interpret this variability in ballcourt architecture and artifacts. Here the sociopolitical implications of this variability are also explored.

Towner, Ronald (Lab. of Tree-Ring Research)

[105] *Dendroclimatology of the Los Alamos Area*

Dendroclimatology is the application of tree-ring data to understanding past climate variation. This project uses abundant living tree and archaeological tree-ring series data from a wide geographic area to generate the most detailed precipitation reconstruction yet available for the northern Rio Grande. These data provide information concerning both low-frequency, long-term precipitation variation, and the frequency and magnitude of extreme events. Comparing these data to the archaeological record of the Pajarito Plateau provides new insights into the adaptive behavior of past peoples of the area.

Trejo Campos, Silvia

[18] *The Heart Extraction Rite among the Prehispanic Huastec People*

The prehispanic Huastec people produced an immense amount of in-the-round stone sculptures. Some of the figures illustrate human sacrifice involving heart extraction. These figures represent males that have a skeleton hanging from their backs with a heart protruding from the ribcage. This paper will analyze examples of this sacrificial practice, its patterns, and associated iconography. It will also present a hypothesis of how these sculptures were sacred icons used in a specific ritual that continued to evolve through time until it was adopted by the Aztecs.

Tripcevich, Nicholas (UC Santa Barbara)

[191] *Llama Caravans and Obsidian Circulation in the South-Central Andes*

Changes in mode of transport can have measurable effects on the distribution of archaeological materials. In the south-central Andes, camelid domestication and eventual llama caravan networks provided a less costly means of transporting goods through the Andean highlands. These caravans were a part of sweeping socio-economic changes, including early social competition. To what degree were early caravans responsible for the increases in the presence of non-local goods and wider stylistic distributions in the Early Formative (1800BCE)? This question is addressed using evidence from research at the Chivay obsidian source and at consumption sites in the larger region.

Trubitt, Mary Beth (Arkansas Archeological Survey)

[173] *Cahokia's Palisade: An Overview of Seven Field Seasons of Tracking the Wall*

The Cahokia Palisade Project has been a multi-year research project to identify archeological residues of the fortifications that once surrounded the core of this major Mississippian mound center. New field work between 1998–2004 located palisade features on the west side of Cahokia's Grand Plaza. Building on past palisade investigations, we now have a more complete picture of the configuration and timing of the construction of this massive wall, and can discuss the role that the palisade played in Cahokia's defense and in the historical trajectory of this community during the 12th and 13th centuries AD.

Tsang, Cheng-hwa [20] *see Li, Kuangti*

Tsesmeli, Evangelia (Southern Methodist University)

[103] *Mapping the Maya Universe: Survey Practices at El Perú-Waka'*

Since 2003, intensive survey has concentrated on recording both the built and natural landscape at El Perú-Waka'. Excavated architecture, visible unexcavated remains of structures, plazas and other features, and complete topographical coverage of the natural terrain form the corpus of survey data documenting this dense site center. This presentation describes the different aspects and objectives of the survey; discusses settlement patterns at the site; highlights how ritual spaces such as tombs and ballcourts are being recorded to maximize and interface with excavation data; and introduces a custom-built geospatial database to facilitate further research, excavation and management of Waka's archaeological resources.

Tsesmeli, Evangelia [33] *see Adler, Michael*

Tuck, Patricia (Agua Caliente Band of Cahuilla Indians)

[5] *Spatial Analysis of Cultural Resources within the Agua Caliente Indian Reservation*

Within the Agua Caliente Band of Cahuilla Indian (ACBCI) Reservation a database of previously recorded cultural resources will be managed utilizing Geographic Information Systems. Spatial distributions may give rise to potential models useful for maintaining cultural resources. Analysis of multiple spatial datasets will characterize previously recorded and unrecorded cultural resources within the ACBCI Reservation. Preliminary analyses indicate spatial patterns and correlations with distance to resources, regional slope and elevation. Ultimately spatial analysis of the database can serve additional needs such as identifying areas requiring further study and as a tool for future preservation planning within the reservation.

Tucker, Bryan (University of Florida) and Krigbaum, John (University of Florida)

[49] *Do Differences in Mortuary Treatment Reflect Differences in Status? Isotopic Investigations of Mortuary Variability at Harris Creek-Tick Island*

The Harris Creek (Tick Island) site is a Middle Archaic shell mound in Volusia County, Florida. In 1961, Ripley Bullen excavated over 175 human burials from the site and suggested differences in mortuary treatment reflected differences in social status. We explore this hypothesis through the analysis of light stable carbon and oxygen isotopes derived from human and faunal remains. Models are developed and evaluated to explain differences in mortuary treatment at the site. Differences in $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ ratios suggest the burials represent at least two groups of people—one local and one or more extra-local.

Tung, Tiffany A. (Vanderbilt University)

[49] *Trauma and Violence at the Wari Capital: Bioarchaeological Analysis of the Monqachayoq Burials at Huari*

Analysis of skeletal trauma from the Wari capital site is crucial for evaluating the role of violence within this Middle Horizon (AD600-1000) Andean state. While iconographic evidence suggests that violence and militarism were important facets of Wari ideology, no osteological studies of Huari skeletons have evaluated physical traces of actual violence. This paper reports cranial trauma data from 33 individuals from the Monqachayoq sector at Huari, demonstrating that half of the children and over two-thirds of the adults exhibit pre- and peri-mortem cranial fractures. These new data are compared to three other Wari affiliated populations previously analyzed by this author.

Turley-Ames, Kandi [190] *see Lohse, Skip*

Turnbull, Jocelyn [62] *see Lee, Jennie Borresen*

Turner, Bethany (Emory University), Kingston, John (Emory University), Burger, Richard (Yale University) and Salazar, Lucy (Yale University)

[174] *Isotopic Reconstruction of Immigration and Paleodiet at Machu Picchu, Peru*

An important and elusive variable in skeletal populations is the degree of non-local

immigration. This study examines population dynamics among the Inka population from Machu Picchu; burial analyses suggest that the population consists of yanakuna, servants with highly variable backgrounds. Enamel $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ were characterized to reconstruct individual patterns of diet and residence, confirming substantial diversity in dietary and geographic backgrounds. Dental and skeletal pathologies were analyzed against isotopic parameters, revealing unexpected relationships to local geography. This approach brings new parameters to the study of Inka social classes and highlights the importance of controlling for immigration in bioarchaeology.

Turner, James [42] *see Underwood, John*

Turner, Rebecca [86] *see Roberts, C Neil*

Turpin, Solveig [82] *see Eling, Herbert H.*

Turrentine, J. Scott [4] *see Welch, Ransley C.*

Turton, Charles [36] *see McAndrews, John*

Tuzin, Donald (University of California-San Diego) [58] *Discussant*

Twiss, Katheryn (Stony Brook University), Bogaard, Amy (University of Nottingham), Charles, Michael (University of Sheffield), Russell, Nerissa (Cornell University) and Martin, Louise (University College London, Institute of Archaeology)

[217] *Plants and Animals Together: Interpreting Organic Remains From Building 52 at Çatalhöyük*

A recently excavated burnt building (Building 52) at Çatalhöyük in Anatolia offers the opportunity to investigate in situ activities/events in an unusually well preserved Neolithic house. Rich botanical and faunal assemblages point to the use, storage and structured deposition of plant and animal resources. We consider how these two datasets can be interpreted in tandem as evidence of Neolithic foodways and of perceptions of wild and domesticated plants and animals. We explore issues of research design and integration between archaeobotany and zooarchaeology, with a view to developing more rounded and accurate images of past socioeconomic strategies and structures.

Two Bears, Davina (Navajo Nation Archaeology Department NAU Branch Office) [201] *Discussant*

Tykot, Robert H. (University of South Florida)

[30] *Stable Isotope Analysis and Ancient Diets: They Are What They Ate*

Stable carbon, nitrogen, and oxygen isotope studies have become widely applied to studies of ancient subsistence patterns, providing complementary information to faunal, paleobotanical and other dietary indicators. Using small samples of bone, teeth, and/or hair for this inexpensive analysis, the study of many individuals has often revealed dietary differences based on age, sex, status, and other sociocultural factors; local ecology; seasonal variation; and chronological change. Presented here is an overview of sampling and analysis methods; examples of studies on maize in the New World, millet in the Old World, and the importance of seafood; and suggestions for future research.

Tykot, Robert H. (University of South Florida) [191] *Discussant* ; [157] *see DeBoer, Beau;* [137] *see Berryman, Carrie Anne*

Tyler, James [202] *see Wrobel, Gabriel*

Ugan, Andrew [4] *see Byers, David*

Ullah, Isaac (ASU, School of Human Evolution and Social Change) and Barton, Michael (ASU, School of Human Evolution and Social Change)

[101] *Alternative Futures of the Past: Modeling Neolithic Landuse and Its Consequences in the Ancient Mediterranean*

The complex interactions between landuse and landscape change make unraveling the long-

term consequences of early farming difficult in the archaeological record alone. New geospatial modeling tools, developed by the Mediterranean Landscape Dynamics project, establish a new laboratory to study dynamic relationships between humans and the environment and to make archaeological comparisons. We present the results of experiments to more fully understand the dynamics of Neolithic landuse in Wadi Ziqlab, northern Jordan (ca 7500-6500 bp). The differential impact of alternative pastoral and agricultural land use scenarios is assessed by comparison of the resultant erosion and deposition patterns.

Ulrich, Kristi (UTSA-CAR)

[54] *Archaeological Investigations at 41BX6, Mission San Antonio de Valero*

During July and August of 2006, the University of Texas at San Antonio held an archaeological field school at 41BX6, Mission San Antonio de Valero, known today as the Alamo.

Excavations were conducted to obtain information concerning the Long Barrack wall, as well as gather additional information in areas that had been previously investigated. A class of thirteen students opened a total of ten units during the course of the excavation. This paper aims to discuss the progress and findings of the investigation, as well as future plans for additional excavations to be conducted at the Alamo.

Underwood, John (Mississippi Department of Transportation), Turner, James (Mississippi Department of Transportation) and Velasquez, Lizbeth (Mississippi Department of Transportation)

[42] *Beyond Compliance: Efforts to Promote and Preserve Archaeological and Cultural Heritage in Mississippi Transportation Project Development*

Recently, the Mississippi Department of Transportation (MDOT) has begun utilizing compliance-driven archaeological projects as a means to better promote cultural awareness in Mississippi. These projects featured close collaboration between state, federal, Native American Tribes and public and private institutions to develop creative and innovative research designs and solutions to mitigate adverse impacts to cultural resources under Section 106. Through planned educational videos, interpretive signage, permanent displays, posters, brochures, and public lectures, these projects are intended to provide long-term educational opportunities to the general public and, in the process, promote MDOT's commitment to environmental sensitivity and cultural stewardship.

Underwood, Sali [123] see Rager, Hal

Uphus, Patrick [163] see Sullivan, Alan

Ur, Jason (Harvard University)

[27] *CORONA Satellite Photography and the Structure of Ancient Near Eastern Landscapes*

Fieldwork on the ground can recover disconnected fragments of ancient landscapes, but remote sensing data from a vertical perspective often allows their structures to be more readily understood and interpreted. Imagery from the CORONA and GAMBIT intelligence satellite programs has proven to be a powerful tool for recovering the structure of ancient settlement and land use. The case studies presented will range widely throughout the ancient Near East, including Early Bronze Age road networks in northern Mesopotamia, imperial irrigation systems in northern Iraq and the southern Caucasus, and transhumant pastoralists in northwestern Iran.

Urincho, Fernando Baez [13] see Vonarx, Amy Jo

Uruñuela, Gabriela [168] see Plunket, Patricia; [63] see Mauricio, Natalia

Usher, Bethany (SUNY Potsdam), Baker, Lori (Baylor University), Case, D. Troy (North Carolina State University), Weets, Jaimin (SUNY Potsdam) and Boldsen, Jesper (University of Southern Denmark)

[3] *Ancient Cemetery Social Patterning Project: Tirup Cemetery*

Fundamental to the anthropological study of any community is an understanding of the genetic and social relationships among its members. The aim of the Ancient Cemetery Social Patterning Project is to use methods and models that test assumptions about the interpretation of data from cemeteries, to better understand social organization. In this project, we are using

new genetic methods to reconstruct the social organization of the Danish medieval community that used Tirup cemetery. Additionally, we are directly testing how well osteological markers of relatedness serve as proxies for genetic markers that are more destructive and expensive to evaluate.

Usman, Aribidesi (Arizona State University)

[120] *Recent Archaeological Research in the Yoruba Periphery, North Central Nigeria*

In Africa, the archaeological sequence and cultural history of the areas intervening between large polities are becoming relevant in research. The period 1400-1600 AD was one of regional socio-political changes in the Yoruba and Edo areas. The spread of sociopolitical and material culture innovations of this period in the periphery was mediated through population movements, inter-societal networks of elites, economic relations and cultural imitations. I use archaeological and ethnohistorical data to describe the impact of the broader regional socio-political and economic developments on societies located on the Yoruba periphery. The paper focuses on Ila-Iyara site in the Osun northeast, Nigeria.

Uzel, Barish (University of Utah)

[77] *The Ethnoarchaeology of Local Bread Ovens in Eastern Turkey*

As part of the Upper Tigris Archaeological Research Project (UTARP), ethnoarchaeological work began during the summer of 2006. This paper presents preliminary results of an ethnoarchaeological study of Tandir-style bread ovens which are common both in the modern world and the archaeological record in this part of the Middle East. By researching the construction and use of these ovens and the social structure of the people who make and use them, this paper will propose theories about the identification and interpretation of similar ovens that appear in the archaeological record.

Vader, Michael D. [213] see Holmes, Amy

Vail, Gabrielle (New College of Florida)

[200] *The Construction of Memory: Ritual and Divinatory Texts in the Late Postclassic Maya Codices*

The scribes who painted the hieroglyphic Maya codices relied on cultural memories of past events to understand and interpret the present. Knowledge of these events, transmitted in oral and written form, was kept alive in sacred books like the Dresden and Madrid codices. Records of Venus stations, eclipses, and other celestial occurrences dating to the Classic period were used to prognosticate into the distant future, based on concepts of cyclical time. Mythological events, focusing on the original creation on 4 Ahaw 8 Kum'ku, were also highlighted. Rituals recreating these events form an important component of almanacs from the Madrid Codex.

Vail, Gabrielle [143] see Hernandez, Christine

Valdez, Fred [149] see Reid, Elizabeth; [75] see Swink, Clint

Valdez Jr., Fred (The University of Texas at Austin)

[151] *With Your Permission Please: Archaeology and Research Opportunities in Belize, Central America*

Nearly 20 seasons of archaeological research in Belize are reviewed in terms of various professional field experiences. The experiences described include practical aspects of research as allowed by the Government of Belize. Clearly, (foreign) researchers in Belize serve in a collaborating relationship with Belize officials. The pros and cons of foreigners conducting research in Belize are discussed from an outsider's perspective. The expectations and understanding of rules and regulations by the home institution (Belize) and the foreign entity (the archaeologist) are also reviewed. Finally, the type or format variability for research in Belize is discussed as a model for future consideration.

Valentine, Benjamin (University of Florida), Krigbaum, John (University of Florida) and Kamenov, George (University of Florida)

[174] *Reconstructing Human Mobility in Neolithic Borneo Using Lead and Strontium Isotopes*

Lead and strontium isotope analysis of Neolithic human tooth enamel in Borneo reveals discrete groups based on variations in geography and subsistence. The isotopic values can be

tied to probable 'homelands' as inferred from differences in underlying geology. Data from Niah Cave, Lobang Angin and Gua Sireh, all sites in present-day Sarawak (East Malaysia), suggest at least six 'homelands.' Analysis of faunal remains and soils argues against diagenetic alteration of enamel and for non-local origin among some Niah burials. Human bones assayed may preserve a biogenic signal, allowing diachronic study of individuals due to differences in tooth and bone formation.

van 't Hooft, Anuschka [18] *see Caretta, Nicolas*

van der Leeuw, Sander (Arizona State University)

[52] *The Reverse Case for Water Management as a Driver of Institutional Development*
Most papers in this symposium are about little water, this one is about too much water. It will describe the process of institutional development that accompanied the 'struggle for dry feet' in the western half of the Netherlands from prehistoric to medieval times. This process shows striking parallels with the emergence of water and irrigation management institutions in dry regions. The comparison allows us to focus on the social dynamics involved, rather than those of the water.

van der Leeuw, Sander (Arizona State University) [179] *Discussant*

van Doesburg, Sebastian (Biblioteca Francisco de Burgoa-UABJO)

[211] *Salt production in the Mixteca Baja, Archaeological and Ethnohistorical Evidence*
This paper relates the control in the salt production in the Mixteca Baja and the relationships with the archaeological evidences and lienzos as part of the cultural complex in this region.

Van Dyke, Ruth (Colorado College)

[25] *Time, Scale, and Social Transformation at Chaco Canyon*
In the Ancestral Pueblo Southwest U.S., dendrochronology provides year-by-year temporal resolution, yet we often think about time in terms of homogenous, century-long periods, imagining the social world in a state of punctuated equilibrium, with major changes occurring at regular intervals. As we search for catalysts for transformative events, quotidian human decisions, behaviors, and actions tend to drop out of the picture. Ancestral Puebloans referenced the past at different scales, revisiting events within living memory, and constructing imagined, ancestral pasts. At Chaco Canyon, symbolic threads such as directionality and dualism extend across centuries but were continually reworked within changing sociopolitical contexts.

Van Dyke, Ruth [90] *see Robinson, Tucker*

Van Galder, Sarah [4] *see Maxwell, David*

Van Gijseghem, Hendrik (Universite de Montreal)

[17] *Demography, Environment, and Punctuated Change at the Close of the Early Horizon*
The Early Horizon / Early Intermediate Period transition is marked throughout the central Andes by profound changes in culture and society, affecting subsistence, patterns of authority, wealth distribution, and interregional relationships. In a relatively short span large-scale population movement created the necessity for new bases of interregional integration. By examining published settlement and environmental data over a large portion of the south coast, as well as excavation data from Nasca, I address the social and demographic context that fostered the development of Early Nasca society out of Paracas.

Van Gilder, Cynthia (St. Mary's College of California)

[51] *Heterodoxy in the Home: Practice Theory and Cultural Change in the Maui Chieftdom*
Both oral traditions and the archaeological record attest to broad transformations in social structure, land tenure, and religion in the Hawaiian pre-contact past. Focusing on the commoner household as a primary locus for the formation, performance and negotiation of social identity, this paper applies Pierre Bourdieu's concept of "doxic universes" to illuminate material correlates of these social changes in one district of the late prehistoric Maui chieftdom.

Van Hoose, Jonathan (University of New Mexico)

[163] *Pottery, Information Flow, and Social Boundaries in Northwest New Mexico, AD 1600–1750*

The social context of contact between Navajo and Pueblo populations was far from static during the 17th and 18th centuries. This period saw changes in Navajo subsistence, social structure, and settlement patterns, while northern Rio Grande Pueblo communities experienced social and political upheaval. Both groups manufactured pottery, but differed in other aspects of technology, mobility, and economy. This paper addresses the role of pottery – specifically, ceramic learning—in this interaction by examining the exchange of potmaking information, both passively and actively, between these groups. The study is based on detailed technological analysis of sherds from more than 30 sites.

Van Hove, Doortje [106] see Lazrus, Paula Kay**van Rossum, Peter (Penn. State Univ.)**

[215] *Recoding the Past: GIS and Settlement Survey in Mesoamerica*

Mesoamerica has been a focus of regional settlement pattern analysis for over 40 years. The data collected by these projects are fundamental to our understanding of Mesoamerican prehistory. However, since these data exist only as paper records, their potential use in further research is limited. This presentation demonstrates the creation and analysis of a GIS database of survey data collected by Dr. Ken Hirth from Morelos, Mexico, in the 1970s. I will discuss the methodology for creating highly accurate site locations and artifact databases and discuss how these techniques can be applied to digitizing data from other survey projects.

Van West, Carla (SRI Foundation)

[131] *Building on Solid Foundations: Cordell's Legacy in Mesa Verde Region Settlement Studies*

Cordell's 1972 dissertation on settlement patterns at Wetherill Mesa, Colorado was a landmark study. Hers was the first computer-based modeling study in the Mesa Verde area that explored and made explicit the dynamic relationship between environmental variability, site location, and settlement duration. In the 35 years since, others have built on her solid foundation and have developed databases and designed quantitative models to understand settlement dynamics and human ecology in the core Mesa Verde region. This paper reflects on several recent efforts to explicate settlement in the Mesa Verde area. Each has incorporated fundamental elements and approaches pioneered by Cordell.

VanderVeen, Jay (Indiana University South Bend)

[62] *Reconstructing Diet through an Alternative Method of Absorbed Residue Analysis*

The technique of absorbed residue analysis is now used in archaeology to extract and identify food compounds from pottery sherds in order to reconstruct the diet of people in the past. The analytical procedure, however, has involved irrevocably damaging the samples. Therefore museum pieces, complete vessels, or irreplaceable sherds are poor choices for this technique. This study developed and tested an alternative protocol that was able to remove organic compounds from within pottery sherds without their destruction. The new method will be of considerable benefit to researchers seeking to gather data while doing the smallest harm.

VanDerwarker, Amber (Muhlenberg College) and Pool, Christopher (University of Kentucky)

[156] *Intra-Site Variability of Plant Remains at Tres Zapotes, Southern Veracruz, Mexico*

There has been much speculation about the nature of agriculture along the Formative Gulf Coast, and regional subsistence economy is still poorly understood. Here we report on the Tres Zapotes plant data collected during the 2003 excavations. Maize and coyol were identified most frequently in the samples, which speaks to their importance in the diet of the Formative and Classic period residents of Tres Zapotes. Quantitative analysis of the data suggests little difference in the distribution of these resources across space and time at Tres Zapotes, although there is some evidence of more fruits in non-elite areas of the site.

Vandiver, Pamela [63] see Iizuka, Fumie

VanPool, Christine S. (University of Missouri, Columbia), Leonard, Robert D. (Human Inquiry), VanPool, Todd L. (University of Missouri), Harmon, Marcel J. and Rakita, Gordon F.M. (University of Northern Florida)

[32] *Casas Grandes Intellectual Traditions: Implications for Ancient Northwest Mexico, the American Southwest, and South America*

The development of the ceramic iconography of the Medio period Casas Grandes archaeological culture of northwestern Mexico and the southwestern US is traced using phylogenetic methods. The iconography reflects historical connections with the Classic period Mimbres culture of New Mexico and the Aztatlán and preceding traditions of western Mexico and South America. Additional lines of evidence support these proposed connections, which require a reconsideration of both the source and intensity of Mesoamerican and Southwestern interaction. Further, the cultural connections between West Mexican and Southwestern groups indicate the presence of a broadly dispersed cultural system whose extent has remained largely unrecognized.

VanPool, Christine S. [32] see Rakita, Gordon F.M.; [32] see Sall, Candace A.

VanPool, Todd (University of Missouri)

[158] *Sex and Labor: An Evolutionary Model of the Division of Labor*

Darwin's concept of natural selection facilitates an understanding of the workings of adaptations such as sex-based labor divisions, which are universal in human groups. Here, I use an evolutionary archaeology approach to model the impact of the variables of technology, social redundancy, and fertility on sexual divisions of labor. The model seeks to account for both the structure of a sexual division of labor and the intensity of task differentiation. It is applied to understand changes in sex-based labor divisions associated with increased aggregation in the North American Southwest.

VanPool, Todd L. [32] see Fuld, Kristen A.; [32] see VanPool, Christine S.; [32] see Jones, Teresa M.; [32] see Heldermon, Laura; [32] see Rakita, Gordon F.M.

Vargas, Benjamin (Statistical Research, Inc.)

[146] *Life on the Edge: Persistence of Native American Identity on the Periphery of Hispanic Influence*

While numerous studies in Alta California have viewed the responses enacted by Native Americans and Hispanic colonizers during the Contact era, few synthetic discussions of this interaction have been presented for the Los Angeles basin. Most studies have focused on the loci of Hispanic influence, the Franciscan missions. Meanwhile, sites on the periphery have often been ignored or are simply unknown. Using data from recent excavations at sites near the Ballona Lagoon, this paper questions the relative influence of Hispanic religious and secular institutions on the Gabrielino of southern California and the plausibility for cultural autonomy during this complex time.

Vargas, Benjamin [146] see Douglass, John G.

Vargas, Victoria [104] see Stokes, Robert

Vargo, Barbara A. (AMEC Earth & Environmental), Perra, Mauro (Museum of "Genna Maria" of Villanovaforru, Italy), and Holt, Emily M. (University of Michigan)

[134] *The Pran'e Siddi Project – "Choropoiesis and Koinopoiesis": Transformation of the Neolithic landscape during the Early Nuraghic Period on Sardinia, Italy*

The preliminary study of the Pranu Plateau, located in the southwestern section of Sardinia, Italy, identified 16 Early Nuraghic Period sites and the presence of a southern style Giant's Tomb. GIS analysis of the location of each corridor Nuraghi and the spatial relationship of these sites to each other and to the giant's tomb provides us with valuable information regarding the size, type and possible function of these structures. Our investigation included pedestrian surveys to determine the presence/absence of cultural material and the current condition of each structure to establish which sites would be eligible for further study.

Varien, Mark D. (Crow Canyon Archaeological Center)[181] *The Depopulation of the Mesa Verde Region: A Historical Perspective*

The depopulation of the northern Southwest, especially the Mesa Verde region, has been a focus of research for over one-hundred years. Explanatory theories have emphasized many different factors. Some focus on "push" factors that drove people from the region, including warfare, disease, drought, and other types of environmental change. Others focus on "pull" factors, especially the development of new forms of social organization in Pueblo communities to the south. This paper reviews this research to provide the context for the new studies presented in this symposium.

Varien, Mark D. (Crow Canyon Archaeological Center) [203] Discussant

Varney, R.A. (Paleoresearch Institute, Inc.), Cummings, Linda Scott (Paleoresearch Institute, Inc.), Bryson, Reid (Center for Climatic Research, University of Wisconsin, Madison) and Caporale, Salvatore (Metro State University)

[100] *Colorado Climate and Human Distribution through the Holocene: Where Do You Go When Everything Changes?*

Archaeoclimate models for each National Weather Service record in Colorado were constructed and assembled into an animation of climate for the last 14000 RCYBP at 200 year intervals. Modeled temperature, precipitation, and precipitation minus evaporation animations were overlain with the position of absolutely-dated archaeological sites in the SHPO record file for which XY data could be derived. Methods of construction of this amalgam and inferences on the climatic implications of the observed human distribution are discussed.

Vasquez, Ramon (American Indians in Texas-at Spanish Colonial Missions)[1] *Mission Indians and Archeology in San Antonio, Texas*

Beginning in 1967, over 100 Indian remains were excavated at Mission San Juan Capistrano in San Antonio under the auspices of the Catholic Church, the State of Texas, and Witte Museum. Local mission Indians protested these excavations, established American Indians in Texas-Spanish Colonial Missions (AIT-SCM), and, with Church approval, reburied the remains at the mission in 1999. Through increased dialog that centered on the cemetery excavations and work at the nearby Richard Beene site, positive working relationships eventually developed with archaeologists. Today, AIT-SCM works with stakeholders through the Land Heritage Institute Foundation to preserve archaeological sites.

Vaughn, Kevin (Purdue University), Eerkens, Jelmer (UC Davis), Edwards, Matt (UC Santa Barbara) and Linares, Moises (Universidad Nacional Mayor de San Marcos)[17] *Three Millennia in Upper Valley Nasca: Recent Excavations at Upanca*

In this paper we report on recent work at Upanca, a multicomponent site located in the chaupiyunga of the Nasca region. Excavations further defined a previously reported Archaic component dating to the third millennium B.C., a poorly understood period in the region's prehistory. Excavations also provided more context to the Early Nasca component of the site. In this paper, we offer insights into how these new data can be understood within the context of the region's prehistory.

Vaughn, Kevin [17] see Carpenter, Tim**Vaughn, Sallie**[169] *A Predictive Model of Archaeological Potential: An Example from Northwestern Belize*

An inductive predictive modeling approach is used to identify areas of high archaeological potential in a portion of the central Maya lowlands. This process incorporates information about known archaeological sites using Geographic Information Systems, remote sensing, and advanced statistical techniques. Both present-day and ancient landscape characteristics are considered for their predictive utility. Areas of high archaeological potential are identified which could contain previously undiscovered sites. Future archaeological surveys should focus on these regions to decrease time, effort, and expenses and increase overall archaeological yield.

Vavrasek, Jessica [215] see Schulenberg, Janet

Vehik, Susan (University of Oklahoma), Cleeland, Lauren (University of Oklahoma) and Drass, Richard (Oklahoma Archeological Survey)

[112] *Transformations in Hide Scraping Technology on the Southern Plains*

The period A.D. 1300-1800 was marked by a series of important changes in bison hide processing on the southern Plains. Early on production was for household use. Prior to contact production expanded to include trade. Post-contact the scope of production increased to include the world market. We assess arguments that as hide production intensified scraper production design became less formal and more expedient while the tools themselves became more expendable.

Vehik, Susan [208] see Drass, Richard

Velasquez, Juan Luis [35] see Morales-Guos, Paulino I.

Velasquez, Lizbeth [42] see Underwood, John

Velasquez, Steph [106] see Bonstead, Leah

Velasquez, Veronica

[70] *Topolobampo Bay: a Historical Archaeology Perspective*

In 1886, Albert K. Owen established an agricultural colony: The Credit Foncier Company. These pioneers, mostly American, lived and worked in these settlements, under a Socialist Utopia ideology. By 1890, the colony underwent important productive changes until its abandonment in 1903. This paper presents a research proposal undergoing a Historical Archaeology perspective. Photographs of the colony, maps and historical documents will be combined with archaeological methods and materials, in order to reconstruct some aspects of its inhabitants' lives.

Velázquez, Adrián (INAH)

[200] *Is it Possible to Speak of a Shell Mollusk's Technological Tradition in Prehispanic Central Mexico?*

In recent years in Templo Mayor Museum, Mexico City, has been developed an experimental archaeology project, one of which main goals is the knowledge of the technological traditions that took place in different times and places of Prehispanic Mexico. In the present work the results of the analyses of four different collections of shell objects are presented, which encompass more than 2,000 years of central Mexico's history, from Early Formative to the Arrival of the European conquerors (1850 B.C.–1521 A.P.). These data allows the discussion on the existence of one or more traditions of shell work in the mentioned region.

Vellanoweth, René (Dept. of Anthropology, Humboldt State University), Cannon, Amanda (Statistical Research, Inc.), Bartelle, Barney (Dept. of Anthropology, Humboldt State University) and Kendig, William (Dept. of Anthropology, Humboldt State University)

[146] *Persistence and Change of Native American Belief Systems on San Nicolas Island, California*

European contact and expansion in California had profound effects on the traditional lifeways of Native Peoples living on the Channel Islands. To examine the effects of colonialism on Native American cultural and spiritual identities, we turn to the archaeological record of San Nicolas Island with particular emphasis on a large village (CA-SNI-25) intensely occupied between the 14th and 19th centuries. We focus on the ritualistic interpretation of features as evidence for persistence and change among native belief systems and conclude by evaluating these material remains in relation to the Chengüichngech and other historically documented religious practices.

Vellanoweth, Rene [195] see Rick, Torben C.

Vento, Frank (Mercyhurst Archaeological Institute/Clarion University), Adovasio, James (Mercyhurst Archaeological Institute) and Madsen, D. B. (Mercyhurst Archaeological Institute/Texas Archaeological Research Laboratory, University of Texas)

[164] *Geoarchaeological Investigations at 41CV115*

For three years, Mercyhurst Archaeological Institute (MAI) has conducted data recovery operations at 41CV115, a rockshelter on Fort Hood, Texas. These investigations have focused on the Late Prehistoric period component at the site and have resulted in the recovery of a very substantial corpus of material from this time horizon. Concurrent with these investigations, MAI has extensively studied the genesis and evolution of the rockshelter itself as well as the paleoenvironmental parameters within which these geomorphological transformations have occurred. The objectives, protocols, and preliminary results of the geoarchaeological investigation at 41CV115 are detailed and compared to other MAI closed-site studies.

Ventresca, Alicia (University of Pittsburgh)

[188] *"No Child Left Behind": Andronovo Culture Child Burials and Social Complexity*

Extant archaeological research on the Eurasian steppe focuses on warrior chiefdoms, patriarchal systems, and status. While these male oriented perspectives are worthwhile aims, they only take us part of the way in explaining social complexity in the region. Child and sub-adult burials are largely missed in both the archaeological record and accompanying literature. Kurgan (barrow) burials in Kazakhstan from the late Bronze Age indicate a high number of child and sub-adult burials. I suggest that through the analysis of Andronovo child burials the relationship between achieved and ascribed status and social complexity can be elucidated.

Vera, Manuel [63] see Mauricio, Natalia

Versaggi, Nina (Binghamton Univ. (SUNY))

[170] *Engaging the Public: Binghamton University's Community Archaeology Program (CAP)*

Historic preservation is based on the premise that identification and protection of significant sites is in the public interest. However, there are many constituencies that assign "value" to the preservation of sites: descendent communities, educational communities, landowners, and archaeologists. This paper discusses Binghamton University's Community Archaeology Program, which acknowledges these diverse interests, and engages cross-sections of the public in the process of discovery and stewardship. CAP provides entertainment for our "passive" audiences, education for those seeking advanced knowledge, and participation for those who want to be actively engaged in the whole process of archaeology and preservation.

Veth, Peter [214] see McDonald, Jo

Vetters, Marianne (Freie Universitaet Berlin)

[83] *Tiwanaku Ritual and Political Mechanisms as Reflected in Tiwanaku Burial Patterns at El Convento, Santivañez Valley, Bolivia*

During Tiwanaku times, the mound site of El Convento was used, at least partially, as a burial ground. Our excavations exposed horizontally contiguous burials that each showed the same orientation. While this presents a rather uniform picture, other burial characteristics inside this "cemetery" varied considerably, including burial type, number and style of offerings, as well as number, age, sex and burial position of the deceased, suggesting that socially different people were buried together. I further discuss grave offerings and their social implications, especially vessel pairs, often keros, which I argue are related to political rituals of gift-giving and reciprocity.

Vicent García, Juan

[214] *Levantine Rock Art Systems*

The rock art of Eastern Spain has been found to be highly structured in locational terms. Its distribution is well organized and understandable after several landscape variables. Now, how can this descriptive finding, in the first instance, be extended into a robust historical explanation? It is proposed that this strong structure is a product of the neolithisation process, but still some interpretive paths are available.

Vicente, Julio[70] *Los Tahues de Culhuacan*

Las investigaciones de la porción central del estado de Sinaloa han quedado estancadas por lo menos desde los últimos 60 años, sin embargo, este enclave cultural representa una importancia superior para el conocimiento de las culturas prehispánicas de Mesoamérica y de norte de México, ya que representan la frontera norteña de la gran Mesoamérica. En la ponencia abordaremos cuestiones relacionadas con los resultados de las últimas investigaciones en la región.

Vicente, Julio [70] see Sanchez, Guadalupe

Vidal, Juan[21] *Ceramic Vessel Type Use as a Means to Determining Site Function*

The 2006 KRAP excavation season at Körösladány-Bikeri finds are inconclusive, if not contradictory as far as site function is concerned. The association of pottery with every feature unearthed (pits, baby-burials, a well and a palisade) should work as an aid to determining site function through the determination of possible vessel type uses. This aspect of pottery analysis, however, is often neglected. This paper sets out to explore the possible uses of vessel types through the consideration of spatial and residue analysis as well as the comparison with the associated site of Vésztő-Bikeri.

Vierra, Bradley (Los Alamos National Lab)[105] *Changing Hunter-Gatherer Foraging Strategies in the Northern Rio Grande, New Mexico*

The northern Rio Grande Valley represents an isolated finger projecting out of the southern deserts northward towards the Rocky Mountains, and bounded by the Colorado Plateau to the west and Great Plains to the east. From river valley to mountaintop, the region contains a diverse array of resources. Hunter-gatherer groups have coped with various changes in the abundance and distribution of plant and animal resources during the past 9000 years. This paper presents the results of stone tool material use and technology studies of Late Paleoindian and Archaic period artifacts, and documents significant long-term changes in hunter-gatherer foraging strategies.

Villalpando, Elisa (INAH Sonora)[116] *Prehistory of the Southwest and Northern Mexico Archaeology*

To most archaeologists of Northern Mexico, regional processes of cultural adaptation, integration, and external relations can't be understood if we don't know about similar events outside the borders of our country. Prehistory of the Southwest, is by far, the top book that everyone has read about southwestern archaeology, and Linda Cordell's name is associated to Mexican scholars with an ample view of knowledge and prehistoric developments that connect US and Mexico.

Villalpando, Elisa [131] see McGuire, Randy

Vlass, Glenn [91] see Ninnemann, Laura

Vogel, Melissa (Clemson University)[43] *An Emerging Power: Recent Investigations on the Casma Polity of Peru*

Several international projects have recently shown renewed interest in a previously neglected archaeological culture known as the Casma. This group was thought to have lived on the north coast of Peru during the Middle Horizon period (ca. AD600-1000), but these dates are now being questioned. This paper will gather disparate reports on the Casma polity and attempt to reconcile the results of recent investigations with earlier hypotheses. The results of the first season of excavations at the proposed Casma capital city, El Purgatorio, will be examined in light of the somewhat conflicting evidence being drawn from other Casma sites.

Vogt, Brandon [129] see Stevens, Michelle

von Schwerin, Jennifer (University of New Mexico)[147] *Identifying Style: The Sculpture of El Paraiso in a Regional Context*

Maya rulers integrated their polities using media systems they found effective; architectural sculpture was used as a powerful conveyor of information, identity, and power. While Copan is

known for its architectural sculpture, mosaic sculpture was employed throughout the southeastern Maya region: at Quirigua, La Entrada, El Abra, and other sites in the La Venta/La Florida valleys. Sculpture also has been unearthed at El Paraiso. This paper examines the material from El Paraiso and contextualizes it within the sculptural tradition of the Copan region to consider the existence of a Copan regional style and its strategic use on local and regional levels.

Vonarx, AJ [194] *see Murakami, Tatsuya*

Vonarx, Amy Jo (University of Arizona) and Urincho, Fernando Baez (ENAH, Mexico)
[13] *Illustrating an Old Debate: Modeling Ancient Fire Events at Tula Grande, Hidalgo Mexico*
Remains of burned architecture at Tula Grande are traditionally interpreted as evidence of raiding events related to the centers depopulation. Aggression, intentional ignition, and desecration are often assumed without: 1) consideration of competing hypotheses (Midland fire, accidental human ignition, and intentional termination behavior) or 2) attention to: the patterning of burned material within and around individual structures. Fire signatures and architectural details in Edificio IV, an Early Postclassic palace, were documented by examining excavation notes, photos, and artifacts. Using modeling and visualization programs developed by modern fire investigators, ignition scenarios and their expected material effects are compared, directly, to the archaeological record.

Vos, Lindsey (George Mason University)

[125] *Persistently Rare: St. Johns Black-on-Red in the Galisteo Context*

White Mountain Redwares are found in low frequencies on Coalition period sites throughout the northern Rio Grande region. These ceramics have been interpreted as reflecting patterns of trade and/or ceremonial ties between these communities and districts further west. Systematic examinations of such correlations, however, are scarce, with dominant research interests focusing on more common types of ceramics. Comparing the distribution of St. Johns Black-on-Red/polychrome within the sites recorded by the Tano Origins Project and other excavation and survey data from the surrounding area provides an important test case for evaluating the potential cultural significance of these ceramics in context.

Voss, Barbara (Stanford University)

[19] *Indigenous Heritage at Spanish-Colonial Military Settlements*

The interpretation of Spanish-colonial military settlements continues to neglect the historical participation of Native Americans. How would archaeological interpretations be different if indigenous history were at the center? At El Presidio de San Francisco, labor regimes conscripted indigenous laborers to build the settlement's quadrangle and fortifications. Thus the site of El Presidio de San Francisco is ambiguously "authored": its architecture remains are just as much indigenous artifacts as a colonial ones. This paper also discusses the diverse strategies being used by present-day Native Californians to make claims to the colonized landscape of this former military settlement.

Voss, Barbara (Stanford University) [153] *Discussant*

Voytek, Barbara (University of California, Berkeley)

[53] *In the Footsteps of the Grand Narrative: Revisiting the Early Holocene of the Northern Adriatic*

In a 1995 article by Andrew Sherratt, "Reviving the Grand Narrative" (Journal of European Archaeology), he critiqued stadial models based on binary opposition, causing some to question whether "post-Pleistocene" should be considered really "post." This paper takes off from that critique and examines the Early Holocene of Mediterranean Europe, not as the backwater of Pleistocene big-game hunters, but rather as a dynamic period of socioeconomic as well as environmental changes, separate yet related to both the preceding Epipaleolithic and the Early Neolithic which follows.

Wade, Mariah (University of Texas at Austin)

[54] *The Ethnohistorical work of Thomas Nolan Campbell and Its importance for Archaeology*

In 1971, Dr. Campbell gave a talk in Nacogdoches about the principles that anchored his ethnohistorical work and the importance of ethnohistory to archeology. Dr. Campbell had been working with historical records about Native American populations in Texas, northeastern Mexico, and the southern United States since the early 1960s, and this paper synthesized

what he saw as the essential guidelines for ethnohistorians who are also archaeologists. In this talk, I will use Dr. Campbell's "Systematized Ethnohistory and Prehistoric Culture Sequences in Texas" to discuss its premises, and I will illustrate those premises with examples of Dr. Campbell's ethnohistorical work.

Wagner, Fritz E. [62] *see Wagner, Ursel*

Wagner, Mark (Center for Archaeological Investigations, Southern Illinois University, Carbondale)

[112] *"All Desperate Fellows and Great Murderers": The Archaeology of Nativism Among the Nineteenth Century Kickapoo of Illinois*

During the early nineteenth century many Algonquin groups within Illinois fractured into opposing nativist and accommodationist factions. Heavily influenced by the revitalistic movement led by the Shawnee Prophet, nativists rejected much of Euro-American material culture in an attempt to recapture sacred power by returning to "traditional" forms of subsistence, artifact manufacture and use, and clothing. This paper examines how this strategy played out in actuality by using subsistence, material culture, and other archaeological data recovered from sites occupied during the War of 1812 era by central Illinois Kickapoo nativist factions who were among the strongest supporters of the Prophet.

Wagner, Ursel (TU-Muenchen), Haeusler, Werner (TU-Muenchen), Shimada, Izumi (Southern Illinois University), Speakman, Jeff (Missouri Research Reactor) and Wagner, Fritz E. (TU-Muenchen)

[62] *First Results of a Moessbauer Study of Recent Finds from Pachacamac, Central Peru*
Recent excavations at Pachacamac in Central Peru resulted in the discovery of a number of large ceramic vessels at the Pilgrims' Plaza (AD 450-1533) in front of the Pachacamac Temple. Neutron activation analyses yielded a relatively homogeneous elemental fingerprint. A clay from the excavation site is used for systematic laboratory firing studies. Mössbauer spectra of the fired clay and of ancient ceramics are compared in an attempt to assess ancient firing procedures. The most characteristic feature of the material is an unusually high content of hematite which undergoes the Morin transition on cooling to 4.2 K.

Wahl, David [35] *see Hernandez, Enrique; [86]* *see Byrne, Roger*

Wahl, David B. (USGS) and Schreiner, Thomas (University of California, Berkeley)

[35] *Prehistoric Settlement and Climate in the Mirador Basin*

Sediment cores from the Mirador Basin provide detailed records of human impacts and climate variability for the last 9500 years. The arrival of maize agriculture ~4600 BP is followed by accelerated deforestation that persisted until ~1000 BP. Within this period of prehistoric settlement, three distinct local abandonments are evident: 520-330 BC, AD 110-230, and AD 900 to present. Climate is relatively dry from ~4500-1000 BP suggesting drier conditions in this humid tropical environment may have been beneficial for prehistoric agriculture and settlement. All indicators of human activity disappear permanently ~AD 900, coincident with a dramatic transition to a wetter climate.

Wake, Thomas (The Cotsen Institute of Archaeology at UCLA)

[178] *Vertebrate Subsistence Patterns Through Time in Greater Soconusco*

This paper examines vertebrate archaeofaunas from four archaeological sites along the coastal plain of Chiapas and adjacent Guatemala. Trends in species representation, diversity, and habitat use from the Preceramic through the Early, Middle and Later Formative periods at Cerro de las Conchas, Paso de la Amada, La Blanca, and El Ujuxte are discussed in relation to settlement size and social organization. The ultimate goal of this discussion is to develop a better understanding of how people used wild and domestic vertebrate resources as society became more complex in the region.

Wales, Nathan [124] *see Klein, John*

Walker, Caroline (York University)

[142] *Breastplates, Beads, and Bandoliers: New Periods for the North American Northeast*
Fitzgerald (1982:31ff) argued that the quantities and relative frequencies of European trade goods can establish chronologies and relationships between Contact Period sites. A study of

copper goods suggests that Europeans developed "trade bundles," to use a term from African trade, which distinguish periods and links between Europeans and Americans, more finely-grained than glass bead periods: the Chesapeake, 1550-1616; St. Lawrence "Beads and Scraps" 1550-1610; Banyoliers and breastplates: 1550-1616; Basques, 1550-1615; James Fort, 1600-1620; French GBP 2 and GBP 3, 1600-1650; and Dutch Polychrome, 1610-1623 and Cored Bead, 1624-1666.

Walker, Chet [208] see *Wilson, Samuel*

Walker, Debra (Florida International University) and Patino, Alejandro (University of Calgary)

[16] *An Analysis of the Naachtun Ceramic Assemblage*

Three seasons of investigations at Naachtun have yielded a sizeable ceramic assemblage. Our analysis of this assemblage has revealed that the site was occupied from the Late Preclassic through the Terminal Classic periods with two intervals of exponential growth. Additionally, because Naachtun was located in a strategic position between the warring Kan and Mutul alliances, the ceramics reflect influences from both the central Peten and the south-central Yucatan. This paper explores the ceramic evidence for the growth of Naachtun as a major centre of power in the north-central Peten and the shifting political dynamics of this pivotal region.

Walker, James L. (Cotsen Institute of Archaeology)

[187] *The View from an Excavation Unit*

Itineraries of a feature and of an object are followed from the initial observation through its representations - numerical, descriptive, analogical and synthetic. The record is built up within a given excavation unit from multiple observations, each retaining its individual documentary identity, and yet blending into a coherent whole. We seek to achieve the two complementary goals of a rigorous preservation of every single observation and construction of a meaningful and intuitive framework within which the observations cohere. It shows how the accretion of details shapes the ongoing strategy while at the same time building up the "final" publication.

Walker, John (University of Central Florida)

[206] *Spatial and Social Organization of Amazonian Farming*

Indigenous South Americans record their social world in the spatial organization of their houses, villages and cities. Ideas about cosmology, kinship and social organization are encoded in the layout of house interiors, dance grounds, trails and plazas. The spatial patterns of agricultural features such as causeways, canals and raised fields also carry meaning. Three archaeological examples from the Bolivian Amazon include agricultural infrastructure that is still extant. Variation in the spatial patterns of these earthworks suggests variation in forms of social organization encoded in these patterns. The histories of several spatial patterns are used to trace the histories of different forms of social organization.

Walker, Phillip [154] see *Erlandson, Jon*

Walker, Renee (SUNY Oneonta)

[154] *Dogs in Caves: The Implications of Dog Burials in Cave Contexts*

The burial of domestic dogs is a cultural practice that is both chronologically and geographically widespread. Dog burials are often found at sites ranging from shell middens to cemeteries. The burial of dogs in caves is particularly interesting due to the importance of caves to prehistoric people. While caves certainly served as a place of shelter for many cultures, they also served as ceremonial sites-a practice that dates to Upper Paleolithic times. This paper explores the significance of burying dogs in caves and how this relates to the ritual practices of prehistoric cultures.

Walker, Steven James (Lone Mountain Archaeological Services/ Iziko: South African Museum), Church, Tim (Lone Mountain Archaeological Services), Kludt, Trevor (Lone Mountain Archaeological Services) and Kuehn, David (Lone Mountain Archaeological Services)

[169] *Footsteps in the Desert: Recent Discoveries with Non-Site Archaeology*

Isaac and Harris's 1975 landmark paper on the "scatter-between-the-patches", introduced the idea that low density 'offsite' data are an instrumental part of the archaeological record.

Advances in technology, and in the affordability of equipment, have allowed Lone Mountain Archaeological Services to develop a non-site survey method capable of efficient data capture. The recently discovered linear kilometer-long footpaths delineated by the distribution of broken sherds and adjacent 'pot drops' are presented as an example of the value of this approach. The scattered artifact distribution would not have been recognized using traditional survey methods.

Walker, William (New Mexico State University)

[180] *Gallina Towers: Spirit Warriors of the Ancient Southwest*

Were the stone towers of the Gallina Culture of Northern New Mexico defensive structures? The earliest towers (AD. 1050-1100) were contemporary and possibly a reaction to the expansion of roads and outliers in the Chaco system to the west. Tower use persisted into the 13th century, when cliff dwellings and towers were also constructed in the Mesa Verde region. Perhaps protective functions of Gallina towers would be clearer if we could envision the role of spirits in pueblo warfare. In this paper I explore the possibility that the Gallina deployed the spiritual power of their towers in defensive strategies.

Wall, Sage B. (Alpine Archaeological Consultants, Inc.)

[203] *Gateway to the Past: A GIS Analysis of the Gateway Tradition*

The Gateway Tradition is a recently defined cultural unit in west-central Colorado. The location of Gateway sites are compared to other Formative groups using a GIS and presented in this paper. Gateway sites tend to be located along tributaries of the Dolores River. Most Gateway sites are located on canyon rims. Viewshed analysis indicates that the majority of these sites are not visible from the bottom of these canyons. When comparing the currently defined Gateway sites with other formative aged sites in the area, little distinction can be made based on site location.

Walsh, Matt [45] see *Fitzhugh, Ben*

Walter, Tamra (Texas Tech University) and Kimball, Bennett

[54] *Living on the Edge: Frontier Life at the Spanish Colonial Presidio of San Saba*

In 1757, Presidio San Saba was established along the Spanish frontier in an area of present-day Central Texas. Virtually isolated from other Spanish settlements and situated amid their enemies, the Comanche and other Norteno groups, the presidio residents eked out a bleak existence for nearly 13 years before the fort was officially closed in 1770. Excavations at the fort conducted by Texas Tech University have been on-going since 2000. The data recovered from these investigations are helping to paint a picture of what daily life was like for the soldiers and their families that made San Saba their home.

Walter, Tamra L. [43] see *Martinez, Valentina L.*

Walshall, John [210] see *Emerson, Thomas*

Wampler, Marc E. (TRC, Inc.) and Deter-Wolf, Aaron (TRC, Inc.)

[66] *Data Recovery at 40CH195: A Complex of Prehistoric Fire-Cracked-Rock Pit Features*

In the spring of 2006, the Nashville office of TRC, Inc. conducted data recovery excavations at site 40CH195, along the Cumberland River in middle Tennessee. The work identified twenty-nine fire-cracked-rock pit features and one refuse pit. Feature depth below surface and recovered projectiles suggest a Late Archaic temporal affiliation. Preliminary analysis of morphology and contents of the features indicates the main activity at the site was stone heating for cooking and/or processing plants and animals. Analysis of feature orientation and radiocarbon assays has provided evidence about intra-site relations and occupation duration.

Wands, Cortney (Colorado State University) and Mack, Steven (Southwest Archaeological Consultants)

[49] *A Reassessment of the Presence of Three-Rooted First Mandibular Permanent Molars on the Park Plateau*

In a 1980 paper, entitled "Suggestive Dental Evidence for Athabaskan Affiliation in a Colorado Skeletal Series," Christy Turner reports the frequency of three-rooted mandibular first permanent molars (3RM1) among 13 mandibles recovered from Sopris phase (A.D. 950–

1250) sites on the Park Plateau of southeast Colorado and northeast New Mexico. Based on the high frequency (23.1%) of 3RM1 in the sample Turner suggests a possible Athabaskan affiliation for the Sopris phase, indicating the possibility of an Athabaskan migration into the Southwest prior to A.D. 1400. We reassess the skeletal evidence and present new data on the presence of 3RM1.

Wandsnider, LuAnn (University of Nebraska–Lincoln) and Dooley, Mathew (University of Wisconsin–River Falls)

[129] *Evaluation of Remote Sensing Tools for Locating and Characterizing Terrace Cobble Deposits in the Interior Wyoming Basin*

Terrace cobble deposits in the Wyoming Basin were utilized by prehistoric groups throughout the Holocene. Understanding the extent and character of these deposits is important for interpreting the character of area chipped stone assemblages. This poster reports on our evaluation of the utility of archived, low- (or no) cost imagery—panchromatic digital orthophotos, color infrared digital orthophotos, ASTER satellite imagery, and LANDSAT satellite imagery—and off-the-shelf software for detecting and characterizing the nature of terrace cobble deposits.

Ward, Cheryl (Florida State University)

[10] *Shipwrecked Seeds and Other Botanical Remains*

The recovery and analysis of botanical remains from archaeological sites under water, especially those from shipwrecks, provides unique evidence for trade and exchange, life aboard ships, and international contact and exchange. Using examples of plant remains recovered and analyzed from the c. 1300 BCE Uluburem Shipwreck (Turkey) and the c. 1765 CE Sadana Island Shipwreck (Egypt), I will summarize some of the contributions that Vaughn Bryant conceived of and encouraged students to study beginning nearly three decades ago.

Warner, John (University of Kentucky)

[182] *An Examination of the Plaza/Ramp/Platform Complexes of Canoncillo, Peru*

The site of Cañoncillo, located on the north coast of Peru within the Jequetepeque Valley, has been the focus of recent intensive mapping efforts. Detailed spatial analysis has revealed the presence of a unique series of co-occurring plazas, ramps, and platforms associated with many of Cañoncillo's large rectilinear compounds. The preliminary results of surface collection and excavation indicate the important role played by this complex in ceremony and ritual. Using recent methodological techniques and theoretical perspectives such as proxemics, gamma analysis, and performance theory, this paper will examine the role played by this architectural complex in political and social mediation.

Wasklewicz, Thad [129] see Stevens, Michelle

Waterman, Anna (The University of Iowa)

[188] *Health Status in Prehistoric Portugal: Dental Pathology and Childhood Mortality Patterns from the Late Neolithic burials of Feteira (Lourinhã)*

The collective burials of Neolithic/Copper Age Portugal (3500–2000 BC) provide an extensive skeletal record from which to test the hypothesis that increased social complexity in this time-period and region had a deleterious effect on community health-status. This paper assesses the health of individuals from a community in prehistoric Portugal based upon the author's analysis of (>1500) teeth from the Late Neolithic burial cave Feteira (II), and then compares these findings with published data from other skeletal collections of similar location and time-periods. From this study, it appears that health status improved rather than deteriorated as social complexity increased.

Waters, Michael [89] see Shafer, Harry

Waters, Michael R. (Center for the Study of the First Americans, Texas A&M University)

[190] *Geoarchaeological Investigations at the Gault Site, Texas*

The Gault site is located at the head of Buttermilk Creek in the Balcones Ecotone. Geoarchaeological studies at the site show a complex stratigraphy of alluvial channel, bar, and floodplain sediments, colluvial sediments, and paleosols that are correlated across the site. Clovis, Late Paleoindian, Archaic, and Late Prehistoric artifacts are well documented within these sediments. Chronological control is provided by diagnostic artifacts and luminescence

ages. The late Quaternary geological stratigraphy defined at Gault appears to correlate with geological sequences at other sites in central Texas. These sequences provide an understanding of regional late Quaternary geological processes and events.

Watkins, Joe (University of New Mexico)

[201] *Unlocking the Gate: Opening Archaeology to Indigenous Voices*

The conflict over the Ancient One and Spirit Cave Man must be seen to be more than a conflict over scientific "rights" to study the past. While scientists celebrate the retention of "data", Indigenous groups lament the loss of the very fabric of their identity. The archaeologist, as a supposedly objective observer, is given a status that is "better" merely because it is based in western scientific thought. This paper reminds archaeologists that, while archaeology has been used in service to the state, archaeologists must be aware of how it can be used to undermine the identity of other cultures.

Watkins, Joe (University of New Mexico) [68] Discussant

Watkinson, Charles [134] see Galaty, Michael L.

Watson, Adam (University of Virginia), Holeman, Abigail (University of Virginia), Heitman, Carolyn (University of Virginia) and Plog, Stephen (University of Virginia)

[172] *Reexcavating Chaco: the Chaco Digital Initiative*

The Chaco Digital Initiative is a joint effort directed by a group of scholars with the goal of assembling information from excavations in Chaco Canyon, New Mexico over the last 110 years. Information from key excavations is scattered among more than a dozen institutions, making integration and synthesis difficult. We are attempting to collect this information and make it available to our colleagues in a variety of formats, one of which is a relational database that will allow key contextual questions to be addressed in a more thorough manner than has been possible.

Watson, Anna (Indiana University of Pennsylvania)

[126] *MNI, MAU, ABC: Examining Methodological Bias in Two Monongahela Faunal Assemblages in Western Pennsylvania*

The interpretation of archaeological sites can be strongly affected by a biased analysis, particularly in zooarchaeology. This project subjects two faunal assemblages to a wide variety of analytical strategies. The sites, Brant I and Johnston, are both Late Prehistoric Monongahela village sites from Western Pennsylvania, and this similarity makes them ideal candidates for a regional comparative study. Disparate perceptions of the Monongahela subsistence strategy arise depending on which tests are given credence, allowing for an intra- and inter-site comparison of methodological bias.

Watson, Karen [194] see Biskowski, Martin

Watson, Matthew (University of Florida)

[14] *Hieroglyphic Histories: Collaborative Productions of Mayanist Knowledge*

Mayanist archaeologists, iconographers, and epigraphers have used public forums such as the Palenque Mesas Redondas (or Roundtable meetings) and the Texas Maya Meetings to articulate and stabilize knowledge of the ancient Maya. My historical ethnographic project combines evidence from interviews with Mesa Redonda and Maya Meeting participants with narrative analysis of meeting publications and workbooks and participation in the 2007 Maya Meetings. This paper specifically questions how transnational and transdisciplinary collaborations enacted in such public spheres have contributed to the legitimization of epigraphic and archaeological interpretations of Palenque's hieroglyphs as literal historical texts.

Watson, Patty Jo (Washington University-St. Louis)

[36] *Ancient Environments, Prehistoric Peoples, and Paleo-Dietary Remains*

Vaughn Bryant's professional career to date includes a wide range of research foci from ethnobotany to paleoethnobotany (macro- and micro-), from Pleistocene to Holocene, from dry caves with long stratigraphic sequences to ships wrecked suddenly and catastrophically but preserved indefinitely in marine sediments. In this paper I discuss some aspects of Vaughn's

contributions to knowledge concerning past environments and human dietary regimes via his analyses of ancient human paleofecal deposits.

Watson, Rachel (Louisiana Division of Archaeology) and Emery, Jason (Louisiana Division of Archaeology/FEMA Liaison)

[155] *Louisiana State Historic Preservation Office Perspectives of Hurricanes Katrina and Rita: Balancing Recovery Efforts and Archaeological Preservation*

In the aftermath of hurricanes Katrina and Rita, Louisiana was faced with unprecedented destruction of the historic fabric of its communities. In response to this destruction, the State Historic Preservation Office was faced with a difficult choice: What to fight to save and what would be lost in the disaster recovery. The Louisiana Division of Archaeology has developed innovative solutions to these problems through agreement documents, new categories of reporting, and staffing. This paper will outline some of these efforts; highlighting the successes, the pitfalls, and the surprising archaeological discoveries that were made along the way.

Wayman, Michael L. [61] see Cooper, H. Kory

Webb, David [92] see Boutain, Jeff

Webber, Charles (Northern Arizona University)

[147] *The El Paraíso Valley in its Near Regional Context*

Survey and reconnaissance have revealed connections among large and small centers throughout the El Paraíso region. Small settlements scattered outside the valley might have served as way-stations along trade or communication routes that connected the El Paraíso valley with the Copan, Quirigua, and Chamelecon regions during the Late Classic. Also found were local sources of volcanic tuff, crucial in constructing Copan style structures at the site of El Paraíso, and greenstone, a valuable commodity that may have drawn the interest of regional paramounts at Copan and Quirigua to the El Paraíso Valley. A model of regional interaction is proposed.

Weber, Andrzej (University of Alberta)

[45] *Prehistoric Shamans of Lake Baikal, Siberia*

The Neolithic site of Shamanskii Mys, located on Lake Baikal in Eastern Siberia, was excavated by Russian scholars in the mid-1970s and quickly proclaimed to be of shamanistic significance due to the nature of the recovered archaeological artefacts. However, interdisciplinary research conducted in the area recently by Canadian scholars has provided additional cultural context for better understanding the Shamanskii Mys site. Radiocarbon dating, stable isotope and genetic testing, human osteological and zooarchaeological studies, and comparative mortuary analyses, revealed several distinctive dimensions of Shamanskii Mys site making it unique and extending its relevance to the general archaeological and anthropological perspectives.

Weber, Robert [165] see Holliday, Vance

Weber, Robert H. [165] see Hill, Matthew E.

Weber, Steve [188] see Barela, Tim

Webster, David [14] see Silverstein, Jay

Webster, Laurie (University of Arizona)

[196] *Pueblo I Cultural Diversity in the Northern San Juan: A Perishables Perspective*

Recent research suggests that Pueblo I societies in the Northern San Juan region of the southwestern United States were culturally diverse, populated by demographic groups of two or more cultural backgrounds. If so, evidence of this diversity should be reflected in a wide range of material culture classes, including textiles, baskets, and other perishable artifacts. Using data collected by the Animas-La Plata Project, Dolores Project, Navajo Reservoir Project, recent road and pipeline projects, and Earl Morris's early excavations along the La Plata River, this paper examines the perishable evidence for Pueblo I cultural diversity at various scales of analysis.

Webster, Laurie [8] *Discussant*; [82] *Discussant*; [82] *see Mabry, Jonathan*

Weedman, Kathryn [6] *see Arthur, John*

Weeks, Rex (School of Human Evolution & Social Change)

[204] *Antiquity of the Midewiwin: An Archaeological Research Problem*

This study is a review of Anishinaabeg knowledge, anthropological debate, and archaeological research on Midewiwin antiquity. Anishinaabeg narratives suggest that the Midewiwin is ancient. Many anthropologists generally regard the Midewiwin as a recent revitalization movement. Much archaeological evidence from the Upper Great Lakes, however, appears to be consistent with Anishinaabeg tradition, indicating that Midewiwin origins may be found in remote antiquity.

Weets, Jaimin (SUNY-Potsdam)

[215] *The Dental Anthropology of Ancient Skeletal Remains in Ireland*

Having received limited attention, in comparison to Ireland's archaeological cultural materials, dental anthropological research was undertaken on skeletal collections dating from Ireland's Neolithic (c. 4000–1800 BC) to its Early Christian era (c. AD 400–1170). The primary reason for this research was to accumulate bioarchaeological data to inform hypotheses concerning large-scale population intrusions in ancient Ireland. In addition to finding patterns of morphometric variation with marked homogeneity between temporal populations, a previously unreported dental morphometric trait was discovered and regional patterning of dental variation, similar to findings from prior physical anthropological and genetic research, was revealed.

Weets, Jaimin [3] *see Usher, Bethany*

Wegener, Robert (Statistical Research Inc.), Ciolek-Torrello, Richard (Statistical Research Inc.), Hall, John (Statistical Research Inc.), Miljour, Heather (Statistical Research Inc.) and Natoli, Amelia (Statistical Research Inc.)

[38] *Early Formative Land Use and Dry Land Agriculture along Queen Creek, South-Central Arizona: The US 60 Archaeological Project*

As part of an Arizona Department of Transportation (ADOT) sponsored project, Statistical Research Inc., excavated 13 prehistoric sites situated along U.S. 60 between Florence Junction and Superior, Arizona. Included among these sites were extensive dry land agricultural fields and habitation loci representing 2,000 years of aboriginal use. Of particular interest was a large, non-riverine, Red Mountain phase (A.D. 1–400) settlement represented by 37 structures, 130 pits, and 21 human burials within the ADOT right-of-way. In this paper, we discuss our findings—focusing on Red Mountain phase land use and dry land agricultural practices.

Wegener, Robert [155] *see Hall, John*

Weigand, Phil C. [30] *see Glascock, Michael D.*

Weinand, Daniel C. (University of Tennessee) and Blankenship, Sarah (University of Tennessee)

[61] *Understanding and Minimizing Sources of Error in Radiocarbon Dating*

The conventional radiocarbon dating method has been used by archaeologists for more than 50 years. It is the primary means of establishing the necessary chronological framework for creating hypotheses and interpreting archaeological assemblages. There are, however, several sources of uncertainty when calculating dates from archaeological samples. Laboratory protocols minimize the effects of systematic and random errors. The archaeologist, however, can assist the laboratory in minimizing error by choosing the best possible samples for dating. We present some of the sources of error in an effort to assist the archaeologist, both in the field and during interpretation of radiocarbon dating results.

Weinstein, Richard (Coastal Environments, Inc.)

[60] *The Adoption and Spread of Shell-Tempered Ceramics along the Northern Coast of the Gulf of Mexico*

Shell-tempered ceramics appeared at different times in various places along the northern coast of the Gulf of Mexico. In some instances, these wares completely replaced local nonshell-tempered wares, while in other instances shell-tempered ceramics formed only a small addition to the nonshell-tempered, local ceramic assemblage. This poster will examine the chronological spread and geographical distribution of such shell-tempered wares, the possible causes for their emergence and adoption, and their potential points of origin.

Weisman, Brent (University of South Florida), Collins, Lori (University of South Florida) and Doering, Travis (University of South Florida)

[173] *Mapping the Moundbuilders: High Definition Techniques at Florida's Crystal River Mounds*

Laser scanning and high definition techniques are only now being applied to documenting aboriginal mound landscapes in southeastern North America. The detailed and highly precise mapping of site features across a landscape can provide information for analysis at multiple scales and allows rapid testing of complex ideas about site formation, stratigraphy, and settlement patterning. This is a report of a pilot study recently undertaken at Florida's famous Crystal River site. Despite the prominence of this site in Florida archaeology, much baseline documentation remained incomplete and many questions stood unanswered. This new approach begins to address those needs.

Weisman, Brent (University of South Florida) [148] *Discussant***Weiss, Ehud (Bar-Ilan University/Weizmann Institute) and Rabinovich, Rivka (Hebrew University)**

[217] *Which Food Pyramid is Represented in the 23,000 Years Old Hunter-Gatherers Fisher Site of Ohalo II?*

Ohalo II, a 23,000 years-old hunter-gatherers-fisher site on the shore of the Sea of Galilee, Israel, provides a wealth of evidence for diet reconstruction. The combination of a rich plant assemblage composed of cereals, pulses, fruits and grasses with animal remains of medium-sized mammals, birds, fish and reptiles is rare in the Paleolithic of the southern Levant. We examine food components from archaeobotanical and archaeozoological data and reconstruct an integrated diet. Our analysis addresses various food pyramids suggested to have been "the appropriate human diet," within the context of a hunter-gatherers-fisher site prior to domestication.

Welch, Daniel (Texas A&M University)

[93] *An Analysis of Lithic Technology from a Ceramic-Period Highland Site, Tutuila Island, American Samoa*

This poster introduces the results of a lithic analysis from a prehistoric Polynesian ceramic site in the highlands of Tutuila Island, American Samoa. The systematic excavation of this upland ceramic site presents new questions regarding settlement patterns of the ceramic period inhabitants. A comparison of the lithic assemblages from this upland site and coastal ceramic sites is conducted to investigate variances in coastal and mountain tool production practices, technology and scope of cultural activity.

Welch, John R. (Simon Fraser U & Wht Mtn Apache Tribe) and Hoerig, Karl (White Mountain Apache Tribe)

[201] *Archaeology, Ndee Identity, and Tribal Sovereignty*

The persistent caricature of Apaches as the ferocious nomadic masters of the frontier Southwest has obliged the Ndee (Western Apache) to struggle for scholarly recognition of their distinctive archaeological record and heritage perspectives. Although many archaeologists have uncritically accepted the popular stereotype of the Apache, recent collaborations among Apaches, Hopis, Zunis, and anthropologists on repatriation and the redevelopment and interpretation of Fort Apache and Kinishba Ruins NHL are contexts for the reassertion of Ndee sovereignty. Self-knowledge and self-representation—along with self-governance, self-determination, and peer recognition—are crucial elements of sovereignty to which archaeologists and other scholars can and should contribute.

Welch, John R. [138] *see* *Laluk, Nicholas C.*

Welch, Paul (SIUC)

[60] *Grog-tempered and Shell-Tempered Pottery at Shiloh*

Excavations on Shiloh Mound A, directed by David Anderson and John Cornelison, yielded pottery in tight stratigraphic contexts. Chronological information is provided by a suite of 28 AMS radiocarbon assays and 17 luminescence assays on sherds. Despite this wealth of chronometric estimates, the age of the earliest shell-tempered pottery, and the latest grog-tempered pottery, is difficult to assess. There is good reason to believe, however, that both kinds of pottery were made throughout the period from AD 1000 to 1200.

Welch, Paul (SIUC) [212] *Discussant*

Welch, Ransley [4] *see* *Wolverton, Steve*

Welch, Ransley C. (University of North Texas), Turrentine, J. Scott (University of North Texas), Densmore, Julie (University of North Texas), Fullerton, Benjamin (University of North Texas) and Barker, Andrew (University of North Texas)

[4] *Did White-Tailed Deer Harvest Pressure Decrease after Pottery Adoption in Southeast Texas during the Late Holocene?*

Body size in white-tailed deer (*Odocoileus virginianus*) decreases with population density. If pottery use in southeast Texas enhanced human foraging efficiency, carcass exploitation, and food-storage capacity enough that harvest pressure on deer decreased, then deer body size should also have decreased with reduced harvest pressure and resulting higher population densities. The faunal assemblage from the Eagle's Ridge Site (41CH252) in southeast Texas spans the pre-pottery, pottery transition. Measurements of white-tailed deer astragali are used to evaluate whether or not deer body size decreased through time.

Weller, Errin [15] *see* *Dixon, Christine*

Weller, Errin and Sheets, Payson

[13] *A Three-Dimensional Reconstruction of the Egalitarian Processional Landscape at Arenal, Costa Rica*

For some 10,000 years people in the Arenal area randomized walking across the landscape and left no record that we have detected. About 500 BC that changed dramatically when cemeteries were separated from villages and single-file processions occurred along the same straight path between them. Path entrenchment was an unanticipated consequence, detected by NASA remote sensing. The ancient processional landscape has been reconstructed by combining IKONOS satellite imagery with a DEM from Shuttle Radar Topography and topographic maps. The interactive visualization allows one to "fly over" paths at any elevation and sense the social meanings of their use.

Wells, E. Christian (University of South Florida), Davis-Salazar, Karla L. (University of South Florida) and Moreno-Cortes, Jose E. (University of South Florida)

[85] *Applying Archaeology to Rural Development in Honduras*

Rural development projects in Honduras have resulted in significant population displacements, which often engender a range of socioeconomic, biocultural, and ecological problems over long periods. With limited knowledge of the historical development of landscapes and associated resources, emigrants to new lands often make economic decisions that are not always consistent with local environments. This paper presents our on-going archaeological work in the Palmarejo region of northwest Honduras, which is collecting information about long-term land and resource management. This effort aims to inform local decision making so that displaced communities may learn from the past and not repeat it.

Wells, E. Christian [15] *see* *Davis-Salazar, Karla L.*; **[161]** *see* *Novotny, Claire*; **[30]** *see* *Darley, Zaida*

Wells, Joshua (Indiana University) and de la Cova, Carlina (Indiana University)

[3] *When the Corn Mothers Came to Stay: A Bioarchaeological Perspective on Maize Consumption and Cahokian Diffusion in Early Mississippian Indiana*

Twenty-nine burials from early Mississippian Vincennes phase contexts, in two adjacent glacial knolls, were subjected to dental, osteological, and stable isotopic analyses to generate data on dietary patterns in west-central Indiana, circa AD 1100. Archaeologists can connect the Vincennes phase to Cahokia, and neighboring Late Woodland and Upper Mississippian traditions, yet the Vincennes patterns of mortuary practices and biological responses to diet are distinctly organized. Vincennes people combined Late Woodland and Mississippian practices in ways which suggest introduced Cahokian fertility cults accompanied forces of cultural conservatism in this plural social landscape, and that local ideals (not coercion) strongly influenced Mississippianization.

Wells, Joshua [81] see Sievert, April

Wells, Peter S (University of Minnesota)

[12] *Visuality and Reception in Iron Age Europe*

What was the "visual culture" of Iron Age Europe? What kinds of representations did people see in the course of their everyday lives, and what did they see on special occasions, such as at rituals? The emphasis will be on what contexts in which visual representations are found can tell us about how people saw and responded to them.

Wendrich, Willeke (UCLA, Cotsen Institute of Archaeology)

[172] *Introduction*

Digital technology brings an enormous potential to archaeology, such as: rapid on-line publishing, availability of full datasets, duplicable analysis. Some of the inherent challenges are the long term preservation of digital data, data exchange, integration of materials generated in different programs, the incorporation of heritage data, and data analysis. Many of these and related issues, such as promotion and tenure, or intellectual property, are at the moment addressed by general discussions on digital scholarship, others are specific to archaeology. These aspects will be discussed and illustrated in the following presentations of actual systems for recording, storage, analysis and publication.

Wendrich, Willeke (UCLA, Cotsen Institute of Archaeology) [187] *Discussant*

Wendt, Carl

[107] *Bitumen Processing in Early Olmec Households*

This paper examines the organization of bitumen processing activities in the San Lorenzo Olmec region. Data from the sites of Paso los Ortices and El Remolino are used to explore how bitumen processing was organized and integrated with other activities within San Lorenzo Olmec domestic context. Domestic production specialization, risk, and scheduling are also considered. The role of bitumen and bitumen processing activities in the Olmec economy is evaluated to explore the various ways domestic craft producers were incorporated into the Olmec political economy.

Wernecke, D. Clark (The Gault Project)

[190] *Patterns and Process: Some Thoughts on the Incised Stones from the Gault Site*

Approximately 103 incised stones were collected at the Gault Site from various proveniences and contexts ranging from Paleoindian to Archaic and perhaps Late Prehistoric. The stones share an affinity with incised and painted stones from not only Texas but worldwide in a tradition dating back at least 75,000 years. Wherever these objects are produced, the end product does not seem to be nearly as important as the process of manufacture and the patterns employed.

Wernke, Steve (Vanderbilt University)

[19] *Resistance or Persistence? Recycling Spaces and Revisiting Ancestors in the Early Missionary Settlements of the Colca Valley, Peru*

This paper explores the tension between coercive and permissive dimensions of missionary encounters through combined archaeological and documentary investigation of early Franciscan doctrinal settlements in the Colca valley. While ecclesiastical memorials highlight the missionary zeal of the first friars who entered the valley in the 1540s, archaeological

indices point to an analogical approach to early evangelization. Associations between Inka ceremonial architecture and chapels at these short-lived doctrinas suggest how friars identified and mapped onto nodes of Inka ceremonialism, while preliminary excavations inside a chapel hint at post-interment burial offerings, suggesting persistence of prehispanic mortuary traditions.

Wernke, Steve (Vanderbilt University) [88] Discussant

Wesler, Kit (Murray State University)

[60] *Early Shell Tempering In Far Western Kentucky*

The Late Woodland to Early Mississippian transition is not fully documented in western Kentucky. Surface and plowzone sites demonstrate a Baytown Late Woodland presence, but do not provide datable deposits. Effigy stumpware surface-collected in Ballard County and Varney red-filmed sherds in AD 1100-1175 deposits at Wickliffe (15BA4) indicate an Emergent Mississippian horizon in the area. Marshall (15CE27) and Rowlandtown (15McN3) yielded deposits with ceramics that are shell tempered but can be characterized as transitional between Baytown and Mississippian types. The 2 σ ranges of the 14C dates are fairly wide, but argue for a pre-AD 900 introduction of shell tempering.

Wesson, Alex (SWCA Environmental Consultants), Clifford, Jim (SWCA Environmental Consultants), Arrington, Cindy (SWCA Environmental Consultants), Hunt, Kevin (SWCA Environmental Consultants) and Bass, Bryon (SWCA Environmental Consultants)

[155] *Knapping at the Beach: Prehistoric Resources at Quarry Site CA-SLO-77, Point Piedras Blancas, San Luis Obispo County, California*

In 2005-6, SWCA Environmental Consultants, assisted by Bureau of Land Management staff and volunteers, conducted an evaluation of archaeological site CA-SLO-77 within the Piedras Blancas Light Station grounds, in San Luis Obispo County, California. Fieldwork included limited surface collection, systematic auger testing, and the excavation of two 1 x 1 meter test units. Prehistoric activities at the coastal site included quarrying and reduction of locally-available Monterey chert, as well as habitation. Diagnostic artifacts and calibrated radiometric dates of 3370 to 2940 and 2740 to 2400 YBP indicate occupation in the latter half of the Early Period and early Middle Period.

Wesson, Cameron (University of Vermont)

[112] *A Political Economy of the Colonial Southern Frontier*

The European colonial enterprise in Southeastern North America resulted in many profound changes in the indigenous societies of the region. Although traditional studies have focused primarily on the European role in these cultural transformations, more recent examinations have explicitly recognized indigenous contributions to these changes. This paper examines the nature of alterations in the political economy of societies along the Southern Frontier, focusing on both the internal and external forces informing these changes.

Wetterstrom, Wilma [217] see Redding, Richard

Whallon, Robert [197] Discussant

Wheat-Stranahan, Patricia (Pam) (Texas Archeological Society)

[123] *Camaraderie and Training for All: Programs of the Texas Archeological Society (TAS)*

The Texas Archeological Society (TAS) is a dynamic statewide organization. The unwritten rule that the presidency will alternate between professionals and avocational exemplifies the heart of the partnership. Educational efforts are the hallmark of TAS. In 1928 founding members of the Society came together to determine how to report the finds they were making. The first Annual Meeting and the Bulletin resulted from these discussions. Well-defined field schools began in 1962 with Rock Art Recording added around 1992. In 2003 the TAS initiated training sessions called the Texas Archeology Academy to enhance members' skills and recruit new members.

Wheelbarger, Linda [157] see Durand, Kathy Roler

Wheeler, Dean (University of Pittsburgh)

[65] *Intensive Agricultural Production on the Southwest Periphery of the Maya Lowlands: Terrace Farming in the Morelos Polity*

A full coverage systematic survey in the Upper Grijalva Basin, a Mayan setting in Chiapas, Mexico, on the southwest periphery of the Maya lowlands, documented settlement and extensive agricultural terracing in the Morelos Polity during the Late-Terminal Classic period (A.D. 650–950). The degree to which elites managed intensive agricultural production on terraces in the Morelos Polity is investigated using three primary lines of evidence: the presence of elite or civic structures in direct association with agricultural terraces, the amount of labor required to construct and maintain the terraces, and uniformity in the construction and design of terrace systems.

Wheeler, Derek [6] *see Bon-Harper, Sara*

Wheeler, Sandra (University of Western Ontario), Beauchesne, Patrick (University of California Berkley) and Molto, J.E. (University of Western Ontario)

[3] *Fractured Childhood: A Case of Probable Child Abuse from the Kellis 2 Cemetery, Dakhleh Oasis, Egypt*

Much can be learned about cultural attitudes of violence towards children from the analysis of their skeletal remains. A bioarchaeological approach integrating cultural, social, and physical environments is used in analyzing a young child from the Roman period cemetery, Kellis 2. This child exhibits skeletal fracture patterns consistent with chronic physical abuse, which may or may not have led to the child's untimely death. Results from our investigation support this diagnosis. This case presents an opportunity to address questions concerning attitudes towards children, their social experiences and quality of life during the period of Roman rule.

Whelan, Carly (University of Texas)

[34] *Modeling the Coastal Migration Hypothesis*

Computer modeling has become a useful tool for testing hypotheses concerning human migration events, particularly migrations to the Americas. Existing models which test the coastal migration hypothesis are typically outgrowths of terrestrial models which measure population density in persons per square kilometer and rely on a very rough approximation of the length of the Pacific coastline. Instead, I present a model to test the coastal migration hypothesis which measures population density in persons per coastal kilometer, accounts for varying coastal productivity and uses a more detailed approximation of the shoreline length of the Pacific coast.

Whitaker, Adrian (University of California, Davis)

[37] *Sustainable Harvest of *Mytilus Californianus* at Punta Gorda Rockshelter, Northwestern California*

The Punta Gorda Rockshelter in Northwestern California is a highly stratified site with over 36 distinct depositional events over a period of less than 100 years. The majority of the deposit is made up of the shells of California Mussel (*Mytilus Californianus*). It has been argued that intensive procurement of Mussel can lead to local depletion of beds. However, the reproductive biology of Mussels would seem to make them difficult to overexploit. Issues of effective management vs. over-exploitation will be addressed using age profiles created from shell size measurements of *Mytilus* found at the site.

White, Benjamin (Marquette University), Ozga, Andrew (Marquette University), Cepon, Tara (Marquette University), Sullivan, Norman (Marquette University) and Devitt, Lauren (Southern Illinois University)

[3] *Dating and Analysis of Grave Goods in an Early Twentieth Century Almshouse Cemetery Collection*

The 1,649 burials excavated at the Milwaukee County Almshouse Cemetery date between 1884 and 1925. A total of 48 of the burials included grave goods or cultural material. Cultural material was comprised of trash, clothing fragments and medical prostheses, while grave goods included coins and items of personal adornment. Geospatial analysis of dated cultural materials and grave goods is employed to determine periods of use within the cemetery. The identified periods are confirmed by making reference to interment and death records kept by the county.

White, Carolyn [191] *see Dillian, Carolyn*

White, Chantel (Boston University)

[101] *Archaeobotanical Analyses at the LPPNB/PPNC Site of eE-Hemmeh, Jordan*

The multi-component site of el-Hemmeh, located in the Wadi al-Hasa, Jordan, contains occupation layers dating from the PPNA through the Early Pottery Neolithic. Here we concentrate on the results of three seasons of excavation in the Late Pre-Pottery Neolithic B/ Pre-Pottery Neolithic C levels of the site. In addition to the recovery of macrobotanical remains through flotation, phytolith samples were also collected and processed. The use of two separate techniques in the retrieval of archaeobotanical information provides a more comprehensive and specific understanding of local plant use as well as ecological changes occurring during this period.

White, Christine D. (University of Western Ontario), Maxwell, Jay P. (University of Western Ontario) and Longstaffe, Fred J. (University of Western Ontario)

[202] *The Enigmatic Identity of the Lamanai Lovers: A Bioarchaeological Exploration*

Biological data derived from morphology (age, sex, pathology) and chemical composition (food and water consumption $\delta^{13}\text{C}$, $\delta^{15}\text{N}$, $\delta^{18}\text{O}$) of the Postclassic (AD 1450 to 1500) skeletons of the male, female, and infant in a uniquely sentimental burial at Lamanai are combined with the cultural data of the burial (location and context, burial goods and position) to create social and personal identities for these enigmatic individuals. The meaning of conflicting data indicating their populational affinity during a period of shifting political and economic relationships is explored.

White, Christine D. [202] *see Olsen, Karyn C.*

White, Joyce (University of Penn. Museum)

[68] *Residential Burial and the Metal Age of Thailand*

The prevalent interpretation for mortuary remains in prehistoric sites dating between 2000 B.C. and A.D. 1 in Thailand is that interments took place in cemeteries. This paper argues that this taphonomic interpretation is incorrect. Instead, most mortuary deposition during this period probably occurred in residential contexts. Concomitant social reinterpretation views the deceased as ongoing stakeholders in descendant societies rather than passive reflectors of their own and their kin groups' status. The reinterpretation explores a landscape perspective on the unusual longevity of many mixed mortuary/occupation metal age sites, and implications for the region's heterarchical political and economic dynamics.

White, Julie-Anne (University of Calgary)

[186] *A Lucre Mortuary Edifice*

For the time period extending from the Middle Horizon to the Late Intermediate Period in the southern highlands of Peru, the site of Cotocotuyoc in the Huaró Valley presents strong evidence for material culture continuity. The excavation of a Lucre funerary edifice during the 2006 field season brought to light new data linking later mortuary traditions to earlier Middle Horizon ones in the region. This continuity can be traced in both funerary architecture and associated burial goods. The interment of the dead, however, shows important changes hinting at the broader socio-political changes occurring during this time.

White, Susan

[102] *Forensic Archaeology and Identification - The Role of Paranasal Sinuses*

Forensic archaeological sciences are utilised in mass disasters and terrorist acts, including identification issues. In 10% of medico-legal cases, remains are initially unidentified, with the majority eventually identified using comparative radiology. Paranasal sinus radiographs have been extensively used in identifying unknown persons, based on the hypothesis that each sinus is unique. The accuracy of this theory has not been determined definitively, undermining the legal validity of such identification. The enigmatic nature of the paranasal sinuses may yet yield the necessary evidence. Factors controlling pneumatization remain unclear, although genetic influences appear critical. This suggests the possibility of identification of family units.

Whiteley, Peter (American Museum of Natural History)

[131] *The House and the Lineage: Bilaterality and Unilineality in Pueblo Social Organization*
 How did Pueblo groups migrate? The prevailing anthropological model of an Eastern Pueblo-Western Pueblo dichotomy between bilateral and unilineal kinship systems, with moieties or exogamous matrilineages structuring social organization, respectively, rests upon mid-20th century descent theory. As an alternative, this paper assesses the utility of the 'house' (bilateral) model especially for the Hopi (of pre-split and splitting Orayvi), a classic case of the Western lineage-based system. If bilateral houses were the foundation of matrilineal formation, explanation of Pueblo social structures, their fissions, and movements may not need to be so dichotomous after all.

Whitley, David (W&S Consultants)

[41] *Archaic Rock Art and the Mid-Holocene Optimum in the Far West*

A well-documented Archaic rock art florescence has been documented in central Utah, the Pecos region of Texas, and central Baja California during the Mid-Holocene Optimum (ca. 4000–2000 YBP). Recent research adds the Chumash rock art of the Carrizo Plain, CA, to this list. Combined with settlement data, this indicates that ritual elaboration and intensity (and certain cases, population size) reached their peaks long before the Late Prehistoric in these regions. Given that religious and political authority were often homologous, this suggests that the evolution of prehistoric socio-political organization was more complicated than existing models allow.

Whitley, David (W&S Consultants) [214] Discussant**Whitman, Linda (University of Akron) and Spurlock, Linda (Stark State College)**

[96] *Two for the Price of One, Forensic Archaeological Field School at the University of Akron*

This poster offers a successful alternative to the canonical archaeological field school. During the 2005 archaeology field school at The University of Akron, students investigated mock crime scenes using pigs as "victims". While receiving training in all of the usual aspects of an archaeological field school, they also learned the procedures of delineating a crime scene, collecting evidence and maintaining the chain-of-custody, excavating decomposed remains, and analyzing remains and personal effects to successfully determine the manner and cause of death. Thus, the students not only became skilled in excavation techniques, but also became aware of the broader applications of archaeology.

Whittington, Stephen (Wake Forest University) and Workinger, Andrew (University of Tennessee-Chattanooga)

[46] *The Archaeology and History of Colonialism and Culture Contact at Teozacoalco, Mixteca Alta*

The Teozacoalco Archaeological Project is beginning a cross-cultural comparison of colonialism and culture contact in the Mixteca Alta. The project provides the opportunity to study the archaeological implications and social impact of European colonialism in the modern era, precapitalist Aztec colonialism, and Zapotec and Tilantongo Mixtec contact involving unstable power relations mediated by kin and marriage alliances. Guided by the Mapa de Teozacoalco and data collected from systematic survey, mapping, and test excavations, this study explores the social, political, and economic implications of multiple episodes of colonialism and culture contact on one society and landscape.

Whittle, Alasdair (Cardiff University) and Bayliss, Alex (English Heritage)

[25] *The Times of Their Lives: Neolithic Histories from Southern Britain*

Radiocarbon dating of long barrows and causewayed enclosures in southern Britain, with results interpreted in a Bayesian statistical framework, has enabled the estimation of much more precise chronologies of the early centuries of the southern British Neolithic. We can now suggest a development in centuries: beginnings c. 4000 cal BC, the first barrows c. 3800 cal BC, and the first enclosures c. 3700 cal BC. We can also now consider finer chronological resolution, at lifetime and generational scales. As case study, we take the latter part of the 37th century cal BC, a time of rapid and extensive change.

Whitwell, Katherine [45] see Levine, Marsha

Whyte, Thomas (Appalachian State University) [154] *Discussant*

Wichlacz, Caitlin (Washington State University) and Wright, Aaron

[90] *The Cerro Pomo Community Survey*

Full-coverage survey of contiguous blocks surrounding the Pueblo II (ca. A.D. 1050–1130) great house of Cerro Pomo have revealed much about the nature of its community. Numerous roomblocks have been documented in the surrounding landscape, including one with prominent features resembling those often associated with great houses. The presence of several smaller residential structures provides clues to the founding of the community. Ceramic assemblages collected from surveyed sites and excavations at the great house are used to assess community size, the timing of community formation and decline, and to compare these data to nearby communities.

Widga, Chris (University of Kansas)

Creating a Home where the Buffalo Roam: Contributions of Zooarchaeology to the Management of Tallgrass Prairie Preserves

Zooarchaeology has been increasingly used to inform modern conservation decisions. In the Great Plains, bison herds are a common component of habitat restoration efforts. The impact of these animals on ecological communities has led to the characterization of bison as a keystone species. In the fragmented landscapes of the eastern Plains there are few opportunities to assess the appropriateness of bison management strategies. Characteristics of prehistoric bison assemblages are a valuable archive of population characteristics (e.g., dietary niche, movement patterns, animal density, etc.). This study highlights differences between archaeological bison assemblages and management goals in three modern tallgrass prairie preserves.

Widmer, Randolph (University of Houston)

[107] *Elite Craft Specialization at 9N8, Patio H Copan*

Craft specialization including lapidary production artifacts of shell, greenstone, and other metamorphic stones, weaving, and feather working has been identified in Patio H of 9N-8 utilizing microartifact analysis and map overlay. Of particular interest is the organization of social distinctions within the patio and the spatial differentiation of this craft production. Craft specialization and lapidary production are clearly elite and take place in secular and sacred contexts within the patio group. This lapidary activity is not purely an economic activity but instead functions primarily in a sociopolitical and religious context.

Widmer, Randolph [140] see Storey, Rebecca

Wiederhold, Jim (Texas A&M University)

[89] *A Functional Study of Clovis Endscrapers from the Gault Site, Texas*

Endscrapers are often associated in the literature with both early and late stage hide processing. In this study, Clovis endscrapers recovered from the Lindsey Pit are considered from a hide-working perspective that incorporates experimental archaeology and microscopic usewear analysis. Results demonstrate that, while these scrapers were hide-working tools early on, they ended their use-life as general purpose scraping tools that were intensively used on materials other than hides. The formation and function of lateral "spurs" found on several endscrapers also are studied through microwear analysis.

Wiegand, Ernest (Norwalk Community College)

[142] *Norwalk Community College's Archaeology as an Avocation Program: The Contributions of the Citizen Archaeologist to Research and Preservation*

Since its inception in 1975, Norwalk Community College's Archaeology as an Avocation program has played a significant role in Connecticut archaeology. The role of the community college in providing an opportunity for learning about and participating in archaeology at the local level has proven to be an important force in education, research, public awareness and historic preservation. This paper presents the origin, purpose, structure and challenges of the program and summarizes the many contributions made by its students and staff to the study of prehistoric and historic archaeology in Connecticut and further afield.

Wiersema, Jason [89] see Bartelink, Eric

Wiewel, Adam (University of Wyoming), Kornfeld, Marcel (University of Wyoming), Larson, Mary Lou (University of Wyoming), Arnold, Craig (University of Wyoming) and Toft, Mike (Sterling, Colorado)

[110] *The Nelson Site: A Cody Occupation Component in Northeastern Colorado*

The Nelson Site in Northeastern Colorado represents a Cody age occupation of the High Plains. Because Paleoindian sites of any age are sparse in the archaeological record, each known occurrence adds significant information about prehistory. The Nelson Site has received no formal field investigation; however, small quantities of data have accumulated over nearly one half of the century of collecting. The cultural affiliation can be demonstrated with the recovered chipped stone assemblage, while zooarchaeological assessment of the fauna yields information about the nature of the occupation and Paleoindian lifeways.

Wilder, Michael (Prewitt & Associates), Frederick, Charles (University of Texas, Austin), Bateman, Mark (University of Sheffield) and Peter, Duane (Geo-Marine, Inc.)

[34] *Site Formation/Transformation Processes within Sandy Contexts in Highland Central Florida: Implications of OSL Dating*

Buried archaeological sites in sandy substrates are common in Florida, but away from dynamic depositional environments there is debate concerning how such sites are buried, with incremental eolian sedimentation and pedoturbation being the most commonly cited mechanisms. The results of geoarchaeological studies sponsored by Avon Park Air Force Range and the U.S. Army Corps of Engineers, Fort Worth District, indicate that site burial was most likely the result of pedoturbation. The data suggest that the traditional interpretation of such site contexts as in situ buried occupation surfaces in incrementally aggrading eolian sand sheet environments must be demonstrated rather than assumed.

Wilkie, Duncan C. (Vermont Agency of Transportation) and Dorshow, Weatherby (Earth Analytic, Inc.)

[42] *VTrans Going Electronic for Archaeological Review of Projects*

With FHWA enhancement funds, VTrans (Vermont Agency of Transportation) and VT SHPO have been working on computerizing all archaeological sites in the State of Vermont for both compliance and academic archaeology. Archaeologists can manipulate, study, review, educate, and conduct research from their computer stations long before conducting on-location site visits. One of the elements in this electronic technology is the development of a statewide GIS modeling (Earth Analytic, Inc.) to give the public, archaeologists best understanding of what areas in Vermont have potential for archaeological sites. The paper will discuss how this electronic technology was developed and implemented in Vermont by VTrans and the problems, issues, and solutions.

Wilkinson, Tony (Durham University)

[52] *Irrigation Strategies in the Ancient Near East and Arabian Peninsula*

Irrigation has played a major role in the development and spread of human settlement in the ancient Near East. Not only does irrigation serve to rectify moisture deficits in agriculture, in areas where rainfall is sufficient for cultivation it also enables agricultural production to be intensified. This paper examines the evidence for these practices and their changing relative significance through time.

Wilkinson, Tony (Durham University) [27] Discussant

Willett, Sarah [155] see Backhouse, Tara J.

Williams, Bryn (Stanford University)

[191] *Exotic Objects and Overseas Chinese Archaeology*

Although Chinese looking artifacts have long been quintessential "exotic objects" for Western consumption, localised permutations of this exoticization vary through time and space. With these objects, visual markers of "foreignness" that may have been salient to some non-Chinese groups were not important to others. Furthermore, for Chinese individuals these artifacts likely had still different connotations. Can archaeologists trace the complex and often divergent genealogies of the "exotic" in Chinese artifacts? This question is addressed by investigating the historical trajectories of artifacts manufactured in China, Europe, Japan and Vietnam that have been found at Overseas Chinese communities.

Williams, Erin Marie (The George Washington University)[94] *An Accurate and Precise Method for Quantifying Lithic Edge Angles*

Archaeologists have long relied on qualitative lithic descriptions in their analyses, but have largely ignored methods employed by physical anthropologists to quantify size and shape differences, such as multivariate and geometric morphometric analyses. These quantitative approaches may enhance the quality and objectivity of information available, offering an important avenue of research and data acquisition. One commonly sought—but notoriously difficult—measure is the edge angle of flaked pieces. Here, a method using a scanning electron microscope and the imaging data acquisition program, MacMorph, is presented. The method objectively measures lithic edge angles for use in multivariate statistical analyses.

Williams, Joel (DDL Omni Engineering) and Jansen, Susan (Graduate Student, New Mexico State University)[82] *Underground, But No Longer Unpublished: An Archaeological Reevaluation of Craven Cave, New Mexico*

Craven Cave is located on Chupadera Mesa in southern New Mexico. Archaeological investigations in 1967 recorded extensive prehistoric use and recovered a number of perishable artifacts. A reevaluation of the Craven Cave is currently being conducted by DDL OMNI Engineering environmental. The cave has been mapped, and a full survey is taking place. Previously collected artifacts are being reanalyzed. Comparisons with other prehistorically utilized caves in the region, as well as their artifact assemblages, reveal new insight with regard to ritual cave use in the American Southwest. The implications of this evidence to prehistoric social organization are also examined.

Williams, Joey (University of Arizona)[120] *The Orientation, Landscape, and Space of Early Mycenaean Tombs in the Argolid*

Many chamber tombs and early tholoi at places like Mycenae, Dendra, and Kokla, share particular spatial relationships with regard to the landscape and settlement. The exterior and interior spaces created by the construction and use of tombs are themselves artifacts indicative of cultural practices and imbued with symbolic meanings. As with the interior of the tombs, analysis of the spatial relationships with nearby settlements and the landscape reveals the symbolic meanings in these relationships. These symbolic spaces have implications not only for funerary culture, but also for analyses of Mycenaean religion, social organization, and the delineation of territory.

Williams, John (Smith Environmental, Inc.)[23] *New Information from the Boston College Excavations at Ksar Akil, Lebanon, 1937 & 1947 Seasons: The Upper Paleolithic Levels*

This study analyzes surviving artifact samples from the excavations of the Boston College team in the 1930s and 1940s of the Levantine Aurignacian levels from Ksar Akil, Lebanon. Although the 1937 material has been previously analyzed and published in detail, this study presents the first detailed analyses of lithic artifacts from both seasons, including the 1947 season. The 1947 material seems to be a more representative sample than the 1937 material, and new information is revealed about techno-typological correlations between the two seasons of excavations that were not published by the original excavators.

Williams, Lana (University of Western Ontario)[49] *Mortuary Evidence for Pagan and Christian Ideologies in Seasonality of Conception, Birth and Death at the Dakhleh Oasis*

Results from solar orientation analyses revealed pronounced seasonality in conception, birth and death of infants from the Kellis II cemetery (c. 50–350AD). Using solar orientation combined with developmental age-at-death data, calendrical weeks of infant birth and conception were estimated. Peak infant death was consistent with birthing-age females and known seasonal infant mortality in Egypt. Practices relating to the disposal of the dead in Kellis II strongly suggest a Christian ideology attached to the mortuary treatment of these infants. In opposition to this, conception and birth may have been related to atavistic ideology associated with seasonal rites and the pagan Egyptian calendar.

Williams, Mary Melissa (Center for Big Bend Studies, Sul Ross State University), Peel, Reeda J. (Center for Big Bend Studies, Sul Ross State University) and Boren, Roger (Center for Big Bend Studies, Sul Ross State University)

[73] *Stone on Stone: Newly Identified Petroglyph Sites in the Big Bend*

The geologically complex and topographically rugged terrain of the Big Bend region offered prehistoric people a variety of "canvases" for rock imagery, from free-standing boulders to rock shelters. Recent TAP survey work has identified a number of sites containing extraordinary rock imagery. The presentation includes photographs of these newly identified sites, describes the associated archaeological data, and discusses current thought on how Big Bend rock imagery resembles/differs from that in neighboring regions.

Williams, Samuel [126] see Ausel, Erica

Williams, Verónica (CONICET)

[43] *New Considerations of Inca Rule in Northwest Argentina*

Recent research in Northwest Argentina, specially chronology, burials, and food consumption data from Salta and Jujuy provinces, shows new evidence to understand Inca events in the Northwest Argentina conquest.

Williams, Verónica (CONICET) [88] Discussant

Williamson, Andrew [110] see Mattoon-Bowden, Sheri

Willis, Lauren [195] see Rick, Torben C.

Willis, Lauren M. (Southern Methodist University), Eren, Metin I. (Southern Methodist University) and Rick, Torben C. (Southern Methodist University)

[4] *Experiments in Fish Butchering: Implications for Bone Modification and Taphonomy*

Cutmarks are rarely observed on fishbone excavated from archaeological sites, although ethnographic studies describe various butchering techniques for immediate consumption and fish drying. Previous studies have failed to determine whether the dearth of cutmarks is a result of butchering practices, fish anatomy, taphonomic processes, or a combination of variables. In this study, commonly identified species from a variety of coastal settings were butchered according to ethnographic techniques using both stone and metal tools. The results of this study have implications for understanding ancient butchering practices, taphonomy, and the interpretation of coastal and other aquatic faunal assemblages.

Willis, Samuel [184] see Davis, Loren

Willoughby, Pamela (University of Alberta) [24] Discussant

Wills, Wirt H. (University of New Mexico) [8] Discussant

Wilshusen, Richard (SWCA)

[112] *Ethnogenesis at the Edge of History: The Northern Southwest between AD 1500 and 1750*

Archaeological data and oral history suggest that many Athapaskans were recent immigrants to the Four Corners in AD 1500. Between AD 1540 and 1640, a particular group of Athapaskan immigrants, the Dine, carved out a cultural identity that distinguished them from the various Ute, Pueblo, Apache, and Spanish cultures surrounding them. At a time when Spanish colonial interactions attempted to suppress ethnic identity among the Pueblo groups, peripheral groups, such as the Dine, were engaged in rapidly distinguishing themselves. The transformations between AD 1500 and 1750 in Dinétah will be examined using archaeological data from the recent Fruitland Project.

Wilshusen, Richard (SWCA) [196] Discussant

Wilson, Aaron (National Park Service/UAA)

[183] *Two Mid-Holocene Tent Ring Complexes in the Central Brooks Range, Alaska*

Agiak Lake in the central Brooks Range, Alaska exhibits both a high density and a wide array of archaeological features including lithic scatters, campsites, lookouts, hunting blinds, and caribou drivelines composed of hundreds of inuksuit (stone cairns). Of particular interest are two tent ring complexes at either end of the lake, and their possible association with two

caribou driveline complexes. These archaeological features are examined using a distributional approach to archaeology, emphasizing spatial relationships and accurate mapping of individual archaeological features. Charcoal found in hearths within tent rings produced calibrated radiocarbon dates ranging from 4870 14C yrs BP to 5640 14C yrs BP.

Wilson, David [32] see *Rakita, Gordon F.M.*

Wilson, Dean (Office of Archaeological Studies)

[105] *Ceramic Trends and the Coalition to Classic Period Transition on the Pajarito Plateau*
Ceramic Data from recent projects in the LANL area indicate major changes from the Coalition to Classic periods. Distributions associated with Coalition period ceramics indicate local production of similar ceramics over a wide area. They also indicate that ceramic vessels were used for very specific and similar ranges of activities over a wide area. Those associated with Classic period ceramics reflect aerial production of specialized forms that were used for different ranges of activities.

Wilson, Gregory (Muhlenberg College)

[212] *House and Clan: The Archaeology of Social Memory at Moundville*
In this paper I examine architectural and mortuary data sets to highlight the importance of social memory in the negotiation of kinship and community identities in the Mississippian polity of Moundville in west-central Alabama. All community members create historical narratives as a means of negotiating and defining their relationships among one another and to the outside world. Communities often commemorate and invoke the past through the creation and manipulation of places and things. These material culture narratives provide the means by which archaeologists can gain insight into the collective memories of ancient peoples.

Wilson, Gregory [132] see *Marcoux, Jon*

Wilson, Jennifer Keeling (Washington State University) and Andrefsky, Jr., William (Washington State University)

[150] *Experimental Flakes in an Archaeological Context: Is it a Good Fit?*
Lithic debitage is one of the most ubiquitous artifact categories found at archaeological sites and therefore has great potential for inferring human technological strategies. Previous experiments have shown that bifacial production and bifacial resharpening results in significant differences in debitage attributes. This study applies experimental results to archaeological assemblages from a chert quarry and camp location in western North America to discriminate production and resharpening behavior from debitage characteristics. Results show that specific contexts of debitage will influence attribute variability related to bifacial production and reduction technologies.

Wilson, Jeremy (Binghamton University) and Miroff, Laurie (Binghamton University)

[142] *A Bayesian Model for the Discrimination of Dart and Arrow Points During the Late Archaic*
Analysis of projectile point variability at the Late Archaic site of Castle Gardens, located in the Allegheny Plateau region of New York, serves as a case study to explore the possibility that the bow-and-arrow was introduced prior to the Middle Woodland. Previous research on projectile point metrics has examined the possibility the bow-and-arrow existed as early as the Late Archaic in the Eastern Woodlands of North America. Using reference data on known dart and arrow points, a Bayesian statistical model is generated to explore the likelihood that Vestal and/or Lamoka served as projectile tips for arrows rather than spears.

Wilson, Philip [185] see *Roop, Tobin W.*

Wilson, Samuel (University of Texas), Creel, Darrell (Texas Archeological Research Laboratory), Hudler, Dale (Texas Archeological Research Laboratory), Schultz, Clay (University of Texas) and Walker, Chet (University of Texas)

[208] *Subsurface Geophysical Research at the Early Caddoan George C. Davis Site in East Texas*
Archaeologists from the University of Texas have carried out remote sensing work at the George C. Davis site (Caddoan Mounds State Historical Site) in the last 5 years, covering over

173,000 sq m with a magnetometer survey, of a combination of magnetometer, resistivity, and ground-penetrating radar. Conditions at the site are nearly ideal for revealing subsurface features such as the details of mound construction and the distribution of approximately 70 recently discovered houses on the 25+ hectare site. We discuss the research methods used, the new discoveries, their implications for Caddoan research, and the broader archaeological implications.

Wimberley, Virginia [192] *see Thompson, Amanda*

Winchell-Sweeney, Susan [215] *see Rush, Laurie*

Winemiller, Terance (Auburn University Montgomery) and McKillop, Heather (Louisiana State University)

[57] *GIS Spatial Analysis of Obsidian from Wild Cane Cay, Belize*

The trading port of Wild Cane Cay was divided into 191 surface collection squares, each measuring 10 X 10 m, with all obsidian collected. A variety of measurements and observations were carried out on the surface obsidian, with the data entered into the GIS GeoMedia by Intergraph. The obsidian was divided into visually sourced groups with a sample chemically identified to source location, following earlier chemical and visual sourcing from excavated material at the site. We discuss the results of our spatial and quantitative analyses with respect to the economy of this island trading port.

Wingard, John D. (Sonoma State University)

[15] *How Many And For How Long?: Assessing The Long-Term Sustainability Of Classic Maya Population In The Copan Valley, Honduras*

Population levels have important implications for reconstructing sociopolitical relations. Ongoing research in the Copan Valley, Honduras has revealed significant levels of elite activity during the Early Classic Period. Based on this, recent investigators have asserted that population levels were higher earlier than was assumed by previous research. The sustainability of higher population levels at this earlier time period is evaluated using results from an agricultural simulation designed to assess the relationship between long-term agricultural sustainability and population in the Copan Valley. The results of this research have implications for our understanding of sociopolitical relations in Early Classic Copan.

Winslow, Diane (Harry Reid Center)

[82] *Firebrand Cave: Gateway To The Sacred Place*

Caves have attracted humans for hundreds of thousands of years, but what has been the root of that attraction? Is it simply the shelter and safety caves can offer, or is it something much deeper and esoteric in nature? Investigations conducted by the Harry Reid Center for Environmental Studies in the Spring of 1997 at Firebrand Cave, enabled archaeologists not only to address these very questions, but to view first hand what can only be termed the primordial sacred place. This paper presents current archaeological findings and illustrates the ritual use of Firebrand Cave by prehistoric people in southern Nevada.

Winter, Marcus (INAH)

[200] *Social Memory in the Creation of Monte Albán*

Two major periods of innovation characterize Monte Albán's long life span of over 1200 years. During the Late and Terminal Preclassic, elements of Monte Albán's foundational history were combined with religious elements, in some cases recalled from Olmec times, to create an initial urban society. Centuries later, following a period of Teotihuacan domination, Monte Albán's Late Classic leaders reinterpreted and renovated institutions and practices from the city's own early flourishing to create a resurgent zapotec society. This paper analyzes and contrasts these two cases.

Winter, Marcus (INAH) [139] *Discussant*

Winterhoff, E. Quent (University of Oregon)

[167] *To'i: Production Analysis of Samoan Basalt Adzes*

Tutuila, American Samoa, represents an intensive production locale for basalt adzes in prehistoric Fiji-West Polynesia. Over the decades, fruitful but sporadic research has provided tantalizing evidence on issues ranging from technology, culture contact and socio-political economics in the region. Regrettably, the documented variation from these previous inquiries

lack a systematic approach: notably missing is a temporal view of technological change in Samoan adze production. This paper summarizes recent analyses conducted on twenty-one manufacturing sites from around the island spanning the last two thousand years. The resulting database is utilized to document the temporal change and its possible mechanisms.

Wise, Karen (Los Angeles County Museum of Natural History) [130] *Discussant*

Wiseman, James (Boston University) [179] *Discussant*

Witt, Thomas (University of Massachusetts at Boston) and Silliman, Stephen (University of Massachusetts at Boston)

[148] *Marketing Survival: Native American Entanglements in Southern New England*

By the mid-18th century, many Native Americans in New England were deeply entrenched in colonial and market economies as farm hands, domestic workers, whalers, soldiers, craft producers, and store customers. Colonialism shaped economic interactions between Natives and settlers and placed considerable constraints on indigenous people, but Native Americans creatively negotiated these material, economic conditions in practical and cultural ways in their daily lives. The Eastern Pequot community of southeastern Connecticut serves as our example, which we will discuss by combining excavation data from a late 18th-century reservation household with transcribed and analyzed account books of a local merchant.

Wobst, H. Martin (U. of Massachusetts-Amherst) [201] *Discussant*

Wolf, Marc (Cancun Archaeological Project), Demarest, Arthur (Vanderbilt University) and Barrientos, Tomas (Universidad del Valle)

[26] *Reconfiguring Classic Period Cancun: Topographic Redefinition of the Gateway of the Western "Ruta Maya"*

Cancun Project results are being reinterpreted based on new maps that take into account the great changes between the site's nature in the two month dry season and its ten month rainy season. The maps correlate its water courses with other evidence to transform our understanding of the site's nature, its initial role as military outpost, its internal hegemonic residential and political structure, and the nature of its collapse. Methodologically, Cancun demonstrates that professional topography and analyses are critical, to every aspect of cultural-historical and theoretical interpretation.

Wolf, Marc [26] see Barrios, Edy

Wolff, Nicholas (Boston University) and Roosevelt, Christopher H. (Boston University)

[176] *Micromorphology of Tumulus Sediments from Lydia, Western Turkey*

The monumental tumuli of Bin Tepe ("A Thousand Mounds"), the royal cemetery of Sardis in western Turkey, comprise one research focus of the Central Lydia Archaeological Survey. Here we discuss preliminary results of the integration of microscopic geoarchaeological techniques in the study of funerary earthworks within the macroscopic framework of regional landscape archaeology. Petrographic analyses of fixed sediment samples from exposed tumulus scarps can provide insight into behavioral patterns relating to mound construction and mortuary practice. These themes in turn are linked to the inherent ritual and political symbolism of constructed landscapes in Bin Tepe.

Wolverton, Steve (University of North Texas), Byers, Johnny (University of North Texas), Welch, Ransley (University of North Texas), Densmore, Julie (University of North Texas) and Ferring, C. Reid (University of North Texas)

Vertebrate Taphonomy in Contrasting Geological Settings of the Late Holocene Upper Trinity River

Taphonomy of bone from two late Holocene sites with distinct depositional histories is examined to relate geoarchaeology to zooarchaeology. The Pecan Valley Site (41TR205) comprises floodplain sediments deposited at a high rate that are high in clay and calcium carbonate. The soil at Pecan Valley is a floodplain mollisol. In contrast, the Chambers Site (41TR114) is in a terrace location with thin, sandy soil on bedrock that is classified as an alfisol—a weakly formed forest soil. Fragmentation, preservation, and other taphonomic variables are examined to evaluate whether or not geoarchaeological context markedly affects taphonomy.

Wolverton, Steve [33] see *Miller, Mickey*; **[4]** see *Densmore, Julie*; **[4]** see *Fullerton, Ben*

Womack, Andrew (College of Wooster), Kardulias, Nick (College of Wooster), Fuleki, Aaron (Denison University) and Acton, James (Independent Scholar)

[5] *Soil Type and Prehistoric Site Location in Knox County, Ohio: A GIS Analysis*

This poster explores the relationship between soil type and site location within Knox County, Ohio, using GIS analysis. By overlaying site maps with soil charts in a GIS database we examine how soil type relates to the type of site (burial, habitation, lithic reduction) in a particular area. From the Archaic through the Late Prehistoric periods, local residents consistently settled on a wide range of soils in the project area, indicating similar exploitation strategies before and after the introduction of horticulture. Additionally, we examine how knowledge of this relationship will help future archaeologists identify Native American sites in the region.

Womack, Andrew C. [5] see *Kardulias, P. Nick*

Wood, Amy [142] see *Schulz, Margaret*

Wood, M. Jared (University of Georgia)

[212] *New Data, New Dilemmas: Communities of the Lower Savannah*

Although a well-traveled thoroughfare throughout its history, the Savannah River Valley and its numerous mound centers have received relatively little archaeological attention. The prehistoric relationships among these communities often have been inferred from scant or nonexistent data. Recent excavations at a cluster of Hollywood Phase (A.D. 1250-1350) mound centers in the south-central portion of the valley begin to shed light on the sociopolitical roles these groups may have occupied. The resulting data and implications afford an opportunity to critically evaluate these polities against traditional models of Mississippian chiefdoms.

Wood, Sunny (CEMML\Fort Hood)

[164] *CRM, Outreach, and Public Archaeology: Fostering Awareness, Appreciation, and Stewardship through Documentary Video*

Taking the first step in creating future stewards of our cultural resources, strong CRM, Outreach, Public Archaeology and ARPA programs must bring awareness to the cultural resources they manage. Videos can provide information and awareness in a broadly appealing, inexpensively reproduced, and easily distributed format. The strengths and weaknesses of documentary video will be discussed and a 13-minute introductory video of the Fort Hood CRM program will be presented and contrasted against other outreach and public archaeology activities on Fort Hood.

Woodfill, Brent (Vanderbilt University)

[189] *Trade and Transit in the Heart of the Great Western Trade Route*

The Upper Pasión kingdom and the region immediately to the south were an area of high traffic from the beginnings of Maya civilization through the collapse. Sporadic and uncontrolled transit typifies the Middle and Late Preclassic, although by the middle of the Early Classic the area was consolidated as part of the Great Western Trade Route, likely under Tikal's auspices. Shifting alliances and a large influx of population in the Late Classic led to largely local control of the trade route after 600 AD, which lasted until the depopulation of the region and abandonment of the route in the Terminal Classic.

Woodfill, Brent [108] see *Spenard, Jon*; **[26]** see *Monterroso, Mirza*

Woods, Alexander D. [95] see *Thomas, Jonathan T.*

Woods, William (University of Kansas)

[140] *Mounds Means More: The 1995 Joint UNM-SIUE Cahokia Field School*

After years of discussions concerning elite residence in the central portion of the Cahokia site, Bill Woods and Robert Santley organized a joint field school to investigate Mound 48, which has the largest summit area of any mound at the site, including Monks Mound. Investigations consisting of a program of topographic surveying, coring, and test excavation occurred during

late spring and summer 1995. These efforts were directed toward determining the timing and nature of the initial construction of the mound and subsequent modifications, the diachronic use of this feature, and its relationship to Monks Mound and the Grand Plaza.

Woods, William I. [15] see *Denevan, William M.*

Woodson, Kyle (Gila River Indian Community-CRM Program/Arizona State University), Raveslout, John (William Self Associates, Inc.), Palacios-Fest, Manuel (Terra Nostra-Earth Science Research) and Phillips, Bruce (EcoPlan Associates, Inc.)

[33] *The Resiliency of Prehistoric Hohokam and Historic Akimel O'odham Societies in the Middle Gila River Valley*

Historic documents and oral histories indicate that the Akimel O'odham in the Gila Crossing District of the Gila River Indian Reservation were able to farm effectively using canal irrigation techniques while contending with potentially deleterious ecological conditions such as alkaline water, flooding, and a major landscape change event. Recent archaeological investigations suggest that the prehistoric Hohokam had similar capabilities to respond to such conditions and high and low frequency landscape changes. This poster will review the evidence for models of salinization and ecological disaster for the Hohokam. The resiliency of Hohokam and Akimel O'odham societies is demonstrated by this research.

Woodson, M. Kyle [33] see *Raveslout, John C.*

Woody, Alanah (Nevada Rock Art Foundation) and Quinlan, Angus (Nevada Rock Art Foundation/Summit EnviroSolutions)

[123] *Lagomarsino Canyon: Partnership for Protection*

Lagomarsino Canyon is one of the most spectacular petroglyph sites in Nevada. Since 2003 Lagomarsino has been the subject of a long-term archaeological inventory and conservation program run by the Nevada Rock Art Foundation. This program requires a special kind of partnership between archaeologists, the public, tribal entities, local community and business leaders, and federal and state agencies because of the scale of the site and its ownership by a rural county. This poster describes the project's challenges and achievements, the documentation methods used, and the research potential of the archaeological data collected by NRAF to date.

Workinger, Andrew [46] see *Whittington, Stephen*; [46] see *Joyce, Arthur*

Worman, F. Scott (University of New Mexico)

[145] *Space, Time and Sustainability: New Evidence and Challenges in the Study of Agrarian Land Use in Islamic Iberia*

Geoarchaeological research in the Lower Alentejo region of Portugal has documented a temporal correlation between widespread soil erosion and dramatic changes in rural population densities during the Islamic period. Recent work extended the spatial scale of the earlier investigation and produced better age estimates for changes in the cultural and physical landscapes. This research illustrates some of the challenges inherent in linking environmental change to human activity. It also demonstrates that different scales of investigation and interpretation can yield different results. Ultimately, the new data may facilitate a more detailed and nuanced understanding of the factors affecting human-environment interactions.

Worthington, Brian [160] see *Colten, Roger*

Wright, Aaron (Washington State University) and Jones, John (Washington State University)

[181] *New Insights into the Low-Frequency Paleoclimatic Regime of the Mesa Verde Region*

A new stratigraphic palynological analysis from southwestern Colorado provides pertinent data on the low-frequency (>20 years) paleoclimatic regime of the Mesa Verde region from A.D. 500 to 1400. Changes in pollen deposition of climatically sensitive taxa make it possible to infer fluctuations in regional temperatures as well as in winter and summer precipitation, all of which likely influenced the region's agricultural paleoproductivity. The results demonstrate a general correspondence between population fluctuations and low-frequency climate changes

in southwestern Colorado with the exception of the Pueblo II period, a time when major demographic changes occurred during relatively stable low-frequency climatic conditions.

Wright, Aaron [90] see *Wichlacz, Caitlin*

Wright, Joshua (Harvard University) and Honeychurch, William (Smithsonian Institution)

[183] *Steppe and Stone: Preliminary Results from the Baga Gazaryn Chuluu Survey*

The summer of 2006 saw the completion of the Baga Gazaryn Chuluu project, four seasons of intensive survey and complementary excavation at the northern edge of the Gobi Desert, Mongolia. A key contribution of this project to the archaeology in Inner Asia is intensive and detailed recording of artifact scatters and all monuments throughout a bounded and continuous area. This paper will present data and preliminary analysis spanning the Epi-Paleolithic to the Early Bronze Age and discuss models of cultural continuity and adaption and the transition to Bronze Age nomadic pastoralism, early bronze production and archaeological landscapes.

Wright, Lori [3] see *Scherer, Andrew*

Wright, Rita (New York University)

[117] *Urbanism, Economies and Climate Change in the Upper Indus*

The earliest evidence for settlement in the Upper Indus dates to 3300 BC when small villages developed along the Ravi and Beas Rivers. Settlement continued until approximately 1800 BC, perhaps later. Survey data from Beas sites and archaeobotanical evidence from excavations at Harappa are presented and tested against a new, regionally specific model for climate change. Combined climatic modeling and settlement data provide reinforcing lines of evidence concerning the complexities of human ecology during the onset and abandonment of urbanism and shifts in human responses to changes in precipitation patterns.

Wright, Rita [24] *Discussant*; [117] see *Schuldenrein, Joseph*; [145] see *Bryson, Reid*

Wrobel, Gabriel (University of Mississippi), Tyler, James (University of Arkansas) and Hardy, Jessica (University of Mississippi)

[202] *Ancient Maya Ceremonial Use of Rockshelters in the Caves Branch River Valley, Belize*

Investigations of rockshelter sites in the Caves Branch River Valley during the 2005 and 2006 fieldseasons show change over time in their use by ancient Maya communities. While diagnostic artifacts, including ceramics and a Lowe point, span the Archaic through Postclassic periods, associated mortuary ritual appears limited to the Protoclassic. Discussion of this context includes approximately 90 primary burials from the Caves Branch Rockshelter site. Intensive Late Classic ritual activity at the rockshelters may involve feasting, as evidenced by large quantities of jute and burnt faunal bone. These largely overlooked sites are clearly an important component to ancient Maya ritual.

Wuellner, Margarita J. (PCR Services Corporation)

[213] *20th Century Cultural Landscapes in Southern California: Agriculture, Recreation and the Modern Metropolis*

The Southern California region has seen extensive change during the twentieth century from the introduction of large-scale irrigation and aqueducts to the regularization of the watershed system and the growth of the Los Angeles metropolitan area. The abundance and variety of plant material made possible by life-giving water combined with romantic ideals were among the conditions that resulted in the transformation of the region into a veritable Garden of Eden. This presentation addresses the role of landscape in the cultural identity of the region from the 1900s to the 1950s, as illustrated in selected vernacular, recreational, and urban examples.

Wulfkuhle, Virginia (Kansas State Historical Society)

[123] *The Kansas Archeology Training Program: An Enduring Partnership*

The Kansas State Historical Society and the Kansas Anthropological Association have been partners in the Kansas Archeology Training Program for more than three decades. KATP components include the annual field school, allowing the public to participate in original research under the direction of professional archeologists; Certification Program, an education and recognition system; weekend field and laboratory sessions; and publications, including *The Kansas Anthropologist*, KAA Newsletter, and *Kansas Preservation*. KAA members have

donated over 151,000 hours of labor to KATP projects, and individuals trained through the program have volunteered on other archeological efforts. Kansas archeology has benefited greatly.

Wurtz, Michelle [164] *see Peter, Duane*

Wurtzburg, Susan (Gender Studies, University of Utah)

[161] *Sayil: Reconsidering the Market Place Hypothesis*

Maya market places are documented in the early historic literature and more fully described in contemporary ethnographic studies. These data sources demonstrate the wide range of social, political, religious, and economic events which may occur at Maya marketing locations. The challenge for archaeologists has been to create testable hypotheses for identifying prehistoric market places. Here, a proposal presented in 1991 is re-examined in the light of contemporary scholarship to consider evidence for the presence of a market place at Sayil, a Terminal Classic Maya center in Yucatan, Mexico.

Wygall, Brian (University of Nevada-Reno) and Goebel, Ted (Texas A&M University)

[199] *The Early Holocene Colonization of Southcentral Alaska*

The colonization of empty landscapes by small-scale foragers has become a significant area of research in Arctic archaeology. Recent excavations in southcentral Alaska revealed two stratigraphically sealed early-middle Holocene occupations. Both assemblages were recovered from overlook positions within the river lowlands near the convergence of three major central Alaska Range drainages, the Susitna, Talkeetna and Chulitna Rivers. These corridors are believed to have been essential migratory pathways linking the interior and southcentral regions of the state. Presented here are preliminary findings regarding ages, stratigraphic sequences, paleoecology and lithic technologies from the Trapper Creek and Susitna River Overlook sites.

Wyllie, Cherra (University of Hartford)

[78] *Painted Processions: the Pictorial Program from Mound 2, El Zapotal, Veracruz, Mexico*

In 1972 Mexican archaeologist Manuel Torres Guzman excavated Mound 2, El Zapotal, a Late Classic funerary complex in the Mixtequilla region of southern Veracruz. Mound 2 contains osteological remains, lifesized terracotta figures, and a mural-covered U-shaped banquette. Paintings offer a window into creation rituals reenacted by Classic Veracruz deity-impersonators. Combined with the sculpture, secondary burials, and architectural features they form part of a larger narrative program. This paper examines the mythological players and ceremonies depicted on the banquette walls.

Wyman, Daniel RK (Bison Historical Services)

[188] *The Politics of Sherds: Interpreting the Development of Interregional Early Classic Maya Interactions at Actuncan, Belize*

Political interactions between lowland Maya polities are a central issue in recent studies of the development of Early Classic Maya politics. The site of Actuncan in the Upper Belize Valley is located near the highest navigable point of the Mopan River making it a central economic and political hub in the Western Belize Valley during the Early Classic (AD250-500) period. Similarities between Early Classic ceramics at the sites of Actuncan and Uaxactún will illustrate that large scale interaction networks helped the lowland Maya develop increasing socio-political complexity through the exchange of materials and information.

Wymer, Dee Anne [126] *see Neusius, Phillip*

Xu, Fanxi (Occidental College and Cotsen Institute of Archaeology, UCLA)

[187] *The Impact beyond the Regional Sphere: Urkesh in China*

The dynamics of an online publication like the Urkesh Global Record is eminently suited to comparative studies. The differentiated categorization applied to the data, the overarching distributional patterns, the narrative synthesis that builds on immediate access to the details – all of this can be checked from substantive and methodological perspectives within archaeological domains wholly foreign to ancient Mesopotamia. The paper will illustrate how that is applicable in the case of Chinese archaeology. It will also present the project's efforts at

"localizing" the major aspects of the Urkesh website for a Chinese audience, with translations and suggestion for further comparative applications.

Yacubic, Matthew (University of California Riverside)

[50] *The Chipped Stone Tool Industries of Blackman Eddy, Belize*

This paper is a diachronic look at the chipped stone tool industries of Blackman Eddy, Belize, using technological, attribute, and use-wear analysis. Working with data collected from previous excavations at the site, models on tool acquisition, production, and consumption were created for the Middle Preclassic, Late Preclassic, and Classic periods. Changes in any of the chipped stone tool industries were compared to architectural developments at the site to determine what effects social change may have had on the various tool industries over time.

Yacubic, Matthew [50] see *Garcia-Des Lauriers, Claudia*

Yaeger, Jason [19] see *Church, Minette*; [202] see *Freiwald, Carolyn*

Yahya, Adel (PACE)

[193] *Preserving World Heritage in Conflict Zone. The Case of Palestine*

Archaeology as a non-renewable resource is a burning issue for the West Bank. I discuss four areas of concern. 1930's estimates of the number of archaeological sites in the West Bank exceed 10,000. Many were destroyed in illicit excavations following political instability after the 1967 Israeli occupation. The new Israeli separation wall in the West Bank has affected more than 4,000 sites. Antiquity laws in both Israel and Palestinian areas work against protection of archaeological sites. Plans for a potential withdrawal of Israeli forces from the West Bank are connected with a threat to remove antiquities with Jewish connotations.

Yamaoka, Takuya (Faculty of Social Sciences and Humanities, Tokyo Metropolitan University)

[209] *The Early Upper Palaeolithic of the Musashino Upland, Tokyo*

This paper presents a current study of the Early Upper Palaeolithic of the Musashino Uplands. The Musashino Uplands is a part of the South Kanto Plain around Tokyo, in east-central Japan. There has been a standard Early Upper Palaeolithic (EUP) chronology of this region since the 1970s, which needs updating to include new information on the Musashino Uplands. This update will include an outline of the site distribution and stratigraphic sequences of the EUP sites and changes in lithic raw material-use during this period. Current issues in the study of the EUP of the Musashino Uplands will also be discussed.

Yarrington, Landon

[125] *Pot Drops and "Conspicuous Consumption" in the Galisteo Landscape*

Small ceramic scatters or "pot drops" are frequently encountered in the Galisteo Basin. Anecdotally, most represent painted vessels, while pot drops of utility ware are infrequent. This is an interesting pattern, since it is often assumed that less formal ceramics would be used for daily domestic tasks, with more formal vessels being reserved for more restricted activities. Such a correlation may indeed be represented in excavated assemblages, making this survey-based evidence more compelling. This poster investigates the hypothesis that the concept of "conspicuous consumption" may explain the distribution of ceramics across the Galisteo landscape.

Yasuda, Yoshinori (International Research Center for Japanese Studies)

[52] *Water and Civilization in China and Cambodia*

I would like to report on the water system of the Yangtze River civilization in relation to the recent results from Cambodia.

Yeatts, Michael [42] see *Swidler, Nina*

Yedlowski, Joseph (Mercyhurst College)

[164] *Multi-Disciplinary Investigation of a Closed Site Locus on North Fort Hood, Coryell County, Texas*

Closed site loci are a cynosure for "hunter-forager" populations providing a micro-niche of climatic and resource diversity. Traditional archaeological excavation coupled with multi-disciplinary research is attempting to elucidate "How" and "Why" these populations exploited one closed site locus on North Fort Hood, Coryell County, Texas.

Yellowman, Sr., Gordon [48] *see Billeck, William*

Yerkes, Richard (Ohio State University), Parkinson, William (Florida State University) and Gyucha, Attila (Békés County Museum, Hungary)

[21] *The Körös Regional Archaeological Project Field School, 2006*

The Körös Regional Archaeological Project operates a field school that allows ten American undergraduate students to participate as researchers during the field season. In 2006, undergraduates conducted independent research projects on ceramic production techniques, stylistic variability, fauna, and prehistoric fortifications. This paper discusses the importance of the field school and the contribution of the student researchers.

Yerkes, Richard [21] *see Gyucha, Attila*

Yesner, David (University of Alaska - Anchorage)

[22] *Island Biogeography and Mammoth Extinction: A Test Case from the Pribilof Islands, Western Alaska*

Mammoth remains from the Qagnax Cave site (5400 C14 yr BP), suggest that megafaunal survival occurred in this remote area of the Bering Sea unoccupied by humans until the late 18th century. Mammoth survival continued against a backdrop of declining island area and habitat shrinkage. Studies of stable isotopes from the mammoth remains suggest that vegetational changes during the early to mid-Holocene may have mediated between shrinking habitat and mammoth survival, thus modifying the strict application of island biogeographical principles. Eventually, however, such principles prevailed, and along with Holocene volcanism, may have resulted in the final extinction of the mammoths.

Yoder, Thomas (SWCA) and Potter, James (SWCA)

[196] *Early Pueblo I Period Pit Structure Architecture: Diversity and Identity In Ridges Basin*
Early Pueblo I period pit structures excavated during the Animas-La Plata project display high levels of stylistic and technical diversity. While some clusters of houses are more homogeneous in highly visible traits, others exhibit similarities in their internal, less visible elements. By teasing out these differences with respect to position on the landscape, an appreciation emerges for the decisions made and agency exhibited by the builders. It is proposed that houses were actively used on this particular landscape to promote integration and distinction and that identity creation was a goal of those constructing, living in, and ultimately destroying these houses.

Yoffee, Norman (University of Michigan)

[53] *Big Comparisons, Archaeological Worlds, Theoretical Agendas*

Andrew Sherratt consistently drew archaeologists' attention to comparative analysis, long-distance interconnections among cultures, and theories appropriate for different scales of analysis. He insisted that local social organizations and social change had meaning only within broad canvases. This paper reviews some of Sherratt's contributions and considers new research projects that flourish as legacies of his insights.

Yoffee, Norman (University of Michigan) [132] *Discussant*

Yonekura, Kaoru (Keio University) and Suzuki, Tetsuya (Keio University)

[209] *Novel Approaches to Lithic Raw Materials in the Upper Paleolithic Age*

In Paleolithic studies, the extensive attributes of lithic raw materials provides a useful key for resolving various problems with regard to material-related activities. In particular, material influences on the manufacturing process, performance of the fabricated tools, techniques of heat alteration, and the formation of use-wear imprints are complemented by concrete data on the essential properties of lithic raw materials. In this study, advanced methods widely used in the field of material science have been applied to archaeological stone tool materials to obtain fundamental and practical data on these materials. Additionally, some test studies based on the objective data are demonstrated.

Yoshida, Bonnie Y. (Grossmont College) and Anderson, Karen (UCSB)

[83] *Health effects of the Tiwanaku expansion: a view from Piñami, Cochabamba Valley, Bolivia*

This paper examines the effects of Tiwanaku influence on the inhabitants of the Cochabamba region during the Middle Horizon. Skeletal remains were uncovered from diverse and well-preserved funerary contexts at the site of Piñami in the Cochabamba Valley, Bolivia. Bioarchaeological analysis of mortuary practices, diet, nutritional status, and activity patterns provide insight into health status and living conditions during this key time period. These findings can then be compared with data from other regions to ascertain the nature of interactions between local populations and the Tiwanaku state.

Yu, Pei-Lin (US Bureau of Reclamation) and Schwab, David (Confederated Tribes of the Salish and Kootenai)

[124] *Indigenous Travel and Technology on the South Fork of the Flathead River, Northwest Montana*

Binford's ethnographic database of hunter gatherers is used to frame an hypothesis about mobility and technology of a hunting-focused people. Lithic and site data as well as case-specific traditional knowledge are used to refine the hypothesis and make it useful for later testing.

Yuan, Jairong (Hunan Institute of Archaeology), Bar-Yosef, Ofer, Li, S. and Boaretto, E.

[20] *Late Pleistocene Occupations in Yuchanyan Cave, Hunan Province, China*

Excavations at Yuchanyan by a joint team from China, USA and Israel exposed the depositional history of this Late Pleistocene cave in southern Hunan Province. Yuchanyan is known for early pottery, rice phytoliths, a rich faunal assemblage and stone artifacts classified as early Neolithic. Current fieldwork confirms the general dating of the prehistoric occupations, clarifies the accumulation of ashes and produced additional series of faunal remains and stone artifacts. Detailed radiocarbon chronology will be available upon completion of the project and together with the anthropogenic deposits, will provide a better understanding of foragers' way of life prior to rice cultivation.

Zaninovic, Josko [145] see Moore, Andrew**Zaragoza Ocaña, Diana (INAH)**

[18] *Huastec Iconography: An Approach*

Based in the designs of three indicators: ceramics, shell gorgets, and sculptures; I'll try to find if they can be compared with some Mayan inscriptions. As we all know the Huastec language is proven to be a Mayan one, but from where and when this Mayan people arrived to the Huastec, it's still problematic, we have to find out, what other symbolic meanings we can track from their material culture. Are the Teenek people the creators of this magnificent iconography or there is a symbiotic relation with other ethnic groups that inhabited the area, this is for us to tell.

Zaro, Gregory (University of Maine)

[145] *Historical Ecology, Agriculture, and the Necessity of Multi-Scalar Thinking*

A considerable portion of our planet's landscapes either currently supports agriculture or did so in the past. As a point of articulation between humans and the environment, agricultural landscapes are particularly important because they offer a means through which archaeologists can assess the long-term impact of human activities on landscape evolution and biodiversity. Farmers clear forests, construct terraces, manipulate hydrology, and alter soil chemistry and morphology. In doing so, entire landscapes may be transformed, which can differentially impact ecosystem properties across time and space. Consequently, the sustainability of such practices must be judged within multiple temporal and spatial scales.

Zavala, Bridget (INAH Durango/ SUNY Binghamton) and Punzo Diaz, Jose Luis (INAH Durango)

[7] *Chalchihuites in the Casas Grandes World*

This poster explores the relationships between the Casas Grandes and the Chalchihuites traditions. This issue was previously explored by Charles DiPeso and Charles Kelley who depicted Durango and Paquimé as nodes in large mercantile system that moved goods from Mesoamerica into the "Southwest". Recent investigations in the Guadiana valley, Durango,

link these northern Mexican archaeological traditions. Though the "pochteca" model has been largely dismissed, we know that these places were connected. This poster presents artifactual, architectural and chronological evidence from current studies in Durango that posit questions on the relationships between these two dynamic prehispanic groups.

Zavala, Gina (Indiana University)

[65] *Sacred Landscapes of the Dominican Republic in the 21st Century*

Caves and flooded caverns in the Dominican Republic were considered sacred spaces by the indigenous Taino population. Current research at Padre Nuestro and Dos Hermanas seeks to enhance the protection and stewardship of these local cultural resources while also serving to better understand the cultural and natural contexts of underwater deposits. Research concerning sacred geographies in the 21st century requires the collaboration of multiple parties. By allying ourselves with local government agencies, businesses, and indigenous communities, archaeologists from Indiana University hope to contribute to productive dialogue during current plans for ecotourism while enhancing knowledge of prehispanic uses of the island.

Zborover, Danny (University of Calgary)

[46] *Integrative Historical Archaeology in the Chontal Highlands of Oaxaca*

The Chontalpa Historical Archaeology Project is designed and shaped by the rich archaeological, historical, and oral records of the Chontal highlands of Oaxaca. By attempting to bridge disciplinary gaps through collaborative efforts and an integrative methodology, data collection and analysis are focused around four potential correspondence levels between these three data sets. This integrative approach does not assume a-priori that any one data set is epistemologically more valid than the others, but rather considers the relative strengths and weaknesses of each, and thus attempts to systematically evaluate interrelated types of information in confirmatory, complementary, and contradictory modes.

Zedeño, Maria Nieves (University of Arizona)

[180] *Bundled Worlds: On the Life and Times of Polythetic Objects from the Northern Plains*

This paper explores the many dimensions of power exercised by ceremonial bundles that have been held by Northern Plains groups since prehistory. Bundles are multifarious but strictly ordered object aggregates which, like "Noah's Ark," embody the ecological, social, and cosmological principles needed to survive in the human and other-than-human worlds. Like persons, objects in a bundle contribute uniquely to the aggregate; at the same time, they are bounded by power relations that may parallel those of the bundle-holding group. Observations are made on the possible connections among bundle curation, social cohesion, and the survival of individual and group identity.

Zeder, Melinda [217] see Miller, Naomi F.

Zeidler, James [34] see Johnson, William

Zeitlin, Judith (University of Massachusetts Boston)

[46] *Contextualizing Archaeological "Facts" and Historical "Realities"*

The once stable epistemological ground that supported unencumbered exchanges between archaeological and historical interpretations has been shaken by postmodern misgivings. Where Oaxaca archaeologists might have deferred to sixteenth and seventeenth written accounts of pre-Columbian events, hermeneutical approaches to these colonial-period texts render more complex readings by examining questions of authorship, intended audience, and the social reproduction of historical memory. Using examples from late postclassic and early colonial Tehuantepec, this paper explores ways in which archaeology and history can continue to serve complementary roles by more fully acknowledging the temporal and social contexts that inscribe both forms of data.

Zeitlin, Judith (University of Massachusetts Boston) [139] Discussant

Zhang, Liangren (University of California, Los Angeles)

[109] *The Rise of Social Inequality in Central Eurasia*

This paper examines the emergence of social inequality in Central Eurasia. Ancient communities were egalitarian internally, but they showed marked differences among them in

economic strength. This paper further suggests that these differences were rooted in the uneven distribution of copper ores and the uneven degree of metal production. Communities in the ore-rich Southern Urals were actively involved in metal production and traded metals with communities in the ore-poor Don and Volga River Valleys. Because of the high value of metals, the former were able to amass greater wealth than the latter.

Zhao, Zhijun (Institute of Archaeology, Chinese Academy of Social Sciences)

[20] *The Origin and Development of Agriculture in China: New Data Provided by Flotation*
Flotation at about 50 archaeological sites from all over China is changing perspectives on early subsistence there. The Jiahu community (8000 BP) relied on fishing/hunting/gathering although domesticated rice remains were found. The earliest domesticated foxtail and broomcorn millet are from Xinglonggou in northeastern China (7500-7700 BP) in a setting influenced by the Keerqin Desert. The Zengpiyan site, South China, indicates that rice farming was not practiced in South China until 6000 BP. Furthermore another independent origin of agriculture in China may be the Pearl River area where the major crops seem to be roots and tubers, such as taro.

Zhao, Zhijun [156] see *Holst, Irene*

Zhou-Wei, Tang [45] see *Suratissa, D.M.*

Zovar, Jennifer (Vanderbilt University)

[137] *Moving up the Mountain: The Pukara de Khonkho in the Context of Other LIP Hilltop Settlements*

Pukaras (Andean hilltop settlements) have traditionally been understood as defensive sites constructed during times of conflict, but critics have also suggested ritual interpretations. While pukaras with massive external walls and few internal structures could be easily explained as either defensive or ritual, the Pukara de Khonkho, in Bolivia's Desaguadero Basin, has signs of significant long term occupation and smaller terrace walls. This paper presents results from recent fieldwork at the Pukara de Khonkho, situating this site within the context of a regional growth in hilltop settlements and suggesting the need for alternative interpretations of different kinds of high altitude sites.