

Excavations at Aguateca and Ceibal revealed evidence of burning at the time of abandonment. At Aguateca, elite structures were burned along with numerous objects left behind at the end of the Late Classic period. At Ceibal, the royal palace of the Terminal Classic period was emptied and then burned. Excavations results from these sites provide important information on the Maya practice of burning and its relation to political change and abandonment.

Iovita, Radu (Roman-Germanic Museum Mainz, Germany) and Shannon McPherron (Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany)

[58] *The Handaxe Reloaded: A Morphometric Reassessment of Acheulian and Middle Paleolithic Handaxes*

Handaxes have always been considered one of the most important index fossils of the Paleolithic. First associated with the Acheulian, they were subsequently found in Middle Paleolithic contexts, leading to speculations of filiation or convergence. In this paper, we explore the relationship between Acheulian and Mousterian handaxes by first examining their historical research context and then tackling the differences from a morphometric point of view. We demonstrate that there is a discontinuity in the presence of handaxes from the LP to the late MP, and that the two kinds of handaxes are subject to different treatments during use and discard.

Isbell, William (SUNY – Binghamton) and Hartmut Tschaunert (Binghamton University)

[145] *Conchopata: Domestic and Political Economy in the Huari Heartland*

Analysis of the spatial distribution of artifact classes from architectural spaces at Conchopata reveals important new insights into domestic and political economies at this small Huari heartland city.

Understanding Middle Horizon interactions based solely on evidence from peripheries will always be incomplete, requiring balance from core perspectives. At this time, Conchopata provides the best available heartland data for a more inclusive view. Our analyses draw on a relational spatial database of the Conchopata Archaeological Project that will soon be available on line.

Iseminger, Bill (Cahokia Mounds) and Mary Vermilion (St. Louis University)

[140] *Pursuing Cahokia's Central Palisade*

Since the mid-1960s, a number of institutions and organizations have revealed various segments of the Palisade around the eastern, southern and western portions of central Cahokia. Recent projects have extended our knowledge of one of the walls forming a north wall heading behind Monks Mound, and probably the fourth of four constructions of the wall. The Palisade is a reflection of other socio-political changes characterizing the Moorehead Moment at Cahokia.

Ishihara, Reiko (Dumbarton Oaks) and Pakal Balam (Museo Kumatzim Jay)

[212] *From Relic to Artifact to Educational Tool: Developing Educational Modules and Building a Local Museum in Tecpan, Chimaltenango, Guatemala*

In public primary education in Guatemala, although multicultural education is highlighted in the newly developed curriculum in line with the Peace Accords, the current status of formalized teaching of local history and cultural identity issues in the classrooms remains minimal. The objectives of the Kumatzim Jay project in Tecpan, Guatemala, consist of building an interactive museum and educational center along with developing educational modules that help make local history and culture relevant to students. To date, the first phase has been implemented, which include artifact analysis and documentation as well as initial development of the modules.

Ishihara, Reiko [196] Second Organizer; [212] First Organizer

Iwaniszewski, Stanislaw (National School of Anthropology and History, Mexico)

[242] *Where the Rain is Mobilized: Mountain Sanctuaries from Central Mexico*

Among the Aztecs, the mountain cult was closely connected to the cult of meteorological phenomena, water and the earth, and both the ritual tools and the entities and events perceived in the sky or in the surrounding landscape were regarded as objects of agency and carriers of tonalli. The ritual places themselves were charged with agency, because their design was made to provide an appropriate scheme for making these ceremonies effective. This, in turn, required the detailed knowledge of the physical world, interpreted in terms of relationships between gods, destinies and ritual acts. The paper discusses the symbolic as well spatial relationship between the sites and the landscape, and gives a special attention to the visibility and inter-relationship between the ritual sites and specific landforms.

[242] First Chair [242] Second Organizer

Izuho, Masami [177] see Nakazawa, Yuichi

Jackson, Edwin (U Southern Mississippi)

[64] *Animals as Symbols, Animals as Resources: Relating the Faunal Record to Ritual and Hegemony in the Mississippian World*

In the Mississippian world, the political economy fueled intensive ceremonial efforts such as mound-building, supported ritual and provided elite with items rarely afforded low status people. Meat and other animal products were a part of the flow of commodities that supported the elite and their activities. Zooarchaeological studies of Mississippian assemblages from sites in the Mid-South demonstrate that no single animal resource distinguishes elite from non-elite diets or meals. Rather, unique combinations of resources and rare items, often imbued with inferred symbolic significance, offer clues as to how animal resources articulated with the complex social setting of Mississippian culture.

Jackson, Sarah (University of Cincinnati) and Lindsay Argo (University of Cincinnati)

[54] *Second Thoughts about Secondary Centers: A Classic Maya Case Study from Say Kah, Belize*

Investigations in Group B of the Classic Maya site of Say Kah, Belize, a small center near La Milpa, raise questions about our understanding of regional site hierarchies and the interrelationships between neighboring residential groups of varying complexity. An ostensibly secondary center, Say Kah displays architectural, ceramic, and mortuary trappings of substantial elite resources, suggesting a need to examine assumptions about status and influence based on settlement hierarchies. The ceramic record provides a useful way to compare sites in the region and assess the meaning of variability in ceramic assemblages in relationship to site function and identity of its occupants.

Jacobson, Lou (Bureau of Land Management)

[75] *Protecting Cultural Landscapes and Managing Multiple Use*

Canyons of the Ancients is a component in the Bureau of Land Management's National Landscape Conservation System, emphasizing the protection of cultural and natural landscapes rather than fragmented ecosystems and individual cultural resource sites. In addition, the Monument was established with the intent of continuing multiple use. Management requires balancing conflicts between valid existing rights for fluid mineral development, protecting a landscape with over 100 sites per square mile, and honoring Native American Tribal affiliation with Monument cultural and natural resources. This presentation will review conflicting management mandates and the process for resolution of these conflicts.

Jacobson, Michael (Public Archaeology Facility Binghamton University)

[167] *The Conflicts of Place: The Application of Military Terrain Analysis on the Landscapes of the Colorado Coalfield War*

The Colorado Coalfield War has been defined as a conflict over labor relations and community in Colorado's coal camps. Such research is helpful in understanding the enduring tensions inherent in class relations. However, this conflict was more than just a strike. Participants identified it as a war and its climax as a massacre. This paper builds on previous landscape analysis of the Ludlow strikers'

colony by applying military terrain analysis to show that participants viewed the strike zone in terms of a violent conflict. Such an analysis is applicable beyond traditional battlefields and enhances an interpretive approach to landscape studies.

Jacobson, Michael [180] see *Versaggi, Nina M.*

Jacomet, Stefanie (IPNA Basel University Switzerland) [132] *Discussant*

Jahnke, Lori (The College of Physicians of Philadelphia) [24] *Changing Scholarly Communication: the Implications of Granting Copyright for Born Digital Objects*
Changing modes of scholarly communication that incorporate digital methodologies prompt the question of whether or not born digital objects should receive copyright under the Library of Congress system. This change in procedure could have a profound impact on the preservation of digital data, the development of standards, and the distribution of databases as born digital objects. Although copyright ostensibly protects the intellectual creator, it can facilitate information monopolies that stifle scholarly communication. This paper provides a critical review of the legal, social, and academic implications of copyright for born digital objects versus pursuing open access models of publication.

Jaillet, Angela (Indiana University of Pennsylvania) [88] *Dealing with Dirt and Doubt: Archaeology Outreach in Agricultural Education*

With increasing efforts to educate the public on the importance of preserving archaeological resources abounding, different avenues of education and public outreach continue to arise. Efforts at reaching students in the education system create an atmosphere of awareness in a broader audience. In the same vein, efforts made by the U.S. Department of Agriculture's Natural Resources Conservation Service targeted education efforts at those dealing directly with the nation's land. Fusing these two concepts, public outreach by archaeologists can be aimed at agricultural classes and organizations in the education system and dispel some animosity amongst the agricultural and archaeological communities.

Jaime-Riveron, Olaf (University Of Kentucky), Dolores Tenorio (Instituto Nacional de Investigaciones Nucleares, Mexico), Oscar Neill Cruz (Unidad de Arqueología, Instituto Hondureño de Antropología e Historia, Honduras), Ranferi Juárez (Unidad de Arqueología, Instituto Hondureño de Antropología e Historia, Honduras) and Thomas Calligaro (Centre de Recherche et de Restauration des Musées, Musée du Louvre-CNRS, France)

[147] *Jade quarries of Mesoamerica used by the Olmecs*
In this paper, we provide results of the use of serpentinite mélange (including rocks such as jadetite, eclogite, omphacite, serpentinite, albite) obtained and used by the Olmecs during the Formative Period of Mesoamerica. We use multiple geochemical techniques, samples obtained from the quarries and samples from artifacts excavated from primary contexts. We use GIS for reconstruction of Ancient trade routes.

Jaime-Riveron, Olaf [229] see *Tenorio, Dolores*; [229] see *Andrieu, Chloé*

Jakes, Kathryn [255] see *Levine, Mary Ann*

Jalbert, Catherine (Memorial University of Newfoundland) [25] *Quarries and Craft-learning: Identifying the Novice*
The prehistoric site of Davidson Cove is located in the Minas Basin of Nova Scotia, Canada. Dated to the Late Woodland period, this is the only known lithic/quarry workshop site in the region. Due to the abundance of material, a quarry can provide an optimal teaching environment for the novice craft-learner; utilizing a 'limitless' resource. Formally known as a reductive act, it can be argued that novices would invariably create more debitage than experts in lithic

production. Considering this, quarry assemblages are often largely ignored due to the amount of waste created, losing the researcher and essentially, losing the novice.

James, Steven (California State University at Fullerton), Patricia C. Martz (California State University, Los Angeles), René L. Vellanoweth (California State University, Los Angeles) and Steven J. Schwartz (Range Sustainability Office, Naval Air Warfare Center, Weapons Division, Point Mugu, CA) [31] *Archaeological Investigations on San Nicolas Island: Overview of Research by California Universities*
Archaeologists from anthropology departments in the University of California and California State University (CSU) system have been conducting archaeological research, training future archaeologists, and assisting the U.S. Navy in managing, evaluating, and protecting prehistoric and historic cultural resources on San Nicolas Island for over half a century. The contributions of these investigations for understanding over 7000 years of human occupation on this small southern Channel Island and the unique educational opportunities that have been provided for college students are discussed. Results of recent research at several sites are examined in light of our current understanding of marine resource exploitation and settlement patterns on the most isolated of the Channel Islands.
[31] *First Chair*

James, Steven [31] *First Organizer*; [31] see *Jones, Gary A.*

James, William D. [161] see *Eckert, Suzanne L.*

Janetski, Joel (Brigham Young University) and Joan Coltrain (University of Utah))

[248] *New Dietary and Temporal Data on Basketmaker II Human Remains from Southeast Utah*
Bone collagen stable carbon and nitrogen isotope values paired with radiometric data from a significant collection of Basketmaker human remains from southeastern Utah provide new insights into the onset of farming in the region. Over ninety samples from Grand Gulch, Cave 7, and other southeastern Utah sites document heavy reliance on maize by several centuries before Christ. This temporal pattern is similar to that found in a comparable study of Basketmaker remains from northeastern Arizona suggesting the rapid northward spread of *zea mays*.
[223] *Discussant*

Janetski, Joel [118] see *Yoder, David T.*

Jansen, Susan (CAIRN (Cave Archaeology Inv. & Research Network)), Carol Diaz-Granados (Washington University), Craig Williams (CAIRN (Cave Archaeology Investigation & Research Network)) [22] *Glimpses into the Past: The Petroglyphs of Lon Odell Memorial Cave*
Lon Odell Memorial Cave, Dade Co, Mo. serves as a veritable time capsule, sealing up in prehistory and opening back up as a sinkhole in 1985, capturing and preserving prehistoric footprints and torch activity. However, recent visits have yielded further evidence of previously overlooked prehistoric activity. Cave Archaeology Investigation & Research Network (CAIRN) has made several visits to the cave and identified two petroglyphs in dark zones of the cave. The images were identified as an Underwater Spirit and a Rayed Circle motifs. We will examine how these images deepen our previous knowledge of rock art in Missouri and the Midwest as well as their context within caves. We will also discuss the rock art recording techniques applied and how these images may represent a special use of the cave in comparison to similar caves.
[62] *Second Chair* [62] *Second Organizer*; [62] see *Campbell, Peter B.*

Janusek, John (Vanderbilt University) [18] *Animistic Ecology and the Creation of Ritual Centers in the Formative South-Central Andes*

Recent research into the Formative Lake Titicaca Basin demonstrates that at any time, there were numerous co-existing centers that anchored far-reaching interaction networks. All known centers served as sites of ritual practice, and as such anchored the overlapping religious ideologies and social identities of extensive communities. Focusing on Khonkho Waknane, I argue that the constructed environments of some centers concentrated power by way of spatial, material, and semiotic references to powerful landscape features and the various living and immanent beings considered to inhabit them. Through potent ceremonial events, these centers sought to create persons with specific ritual attitudes.

[222] *see Ohnstad, Arik*

Janzen, Anneke (UC Santa Cruz) and Naomi Cleghorn (University of Texas at Arlington)

[234] *Hyena Bone Choice and Destruction of Large Fauna*

Previous controlled experiments of carnivore ravaging to skeletal elements has focused on small to medium sized ungulates. Here we report on experimentally controlled captive spotted hyena processing of large ungulates, a common size class in early hominid archaeofaunas. This study used Marean and Spencer's methods to provide a baseline for bone choice and destruction. Hyenas displayed strong patterns of selection and destruction of axial versus appendicular elements and of epiphyseal versus diaphyseal segments. This experimental data set thus provides useful quantifiable data relevant to analysis of assemblages containing larger hoofed animals which may have undergone significant carnivore ravaging.

Jarman, Nicholas (The University of New Mexico), Ariane O. Pinson (University of New Mexico, Maxwell Museum of Anthropology, & Central New Mexico Community College, Albuquerque)

[41] *High Altitude Land Use in the Valles Caldera National Preserve: Recent Findings*

The roles that high altitude (>8000' asl) landscapes played in the subsistence strategies of prehistoric Southwestern foragers and farmers are poorly understood. UNM's Mountain Archaeology and Paleogeography project has conducted landscape scale surveys and test excavations at rock shelters in the Valles Caldera National Preserve which are helping refine the chronology of land use and subsistence in this high altitude region of the Jemez Mountains. Preliminary findings suggest peaks in occupation during the Late Archaic and Protohistoric Periods. In both periods, rock shelters appear to be favored residential locations with open air sites the focus of more logistical use.

Jaúregui, Olga [55] *see Lamuela-Raventos, Rosa M.*

Jeffares, Ben (Victoria University of Wellington, New Zealand)

[194] *Models and Explanations: From General Models to Specific Accounts*

The sciences actively use, and deploy models to understand and explain phenomena. In recent years archaeologists too have started deploying models to make sense of their observations. But how does a general, abstract representation of a process—a model—become an explanation of a unique cultural phenomena? Taking a lead from some philosophical work in geomorphology and biology, I suggest ways in which general models can become localized accounts of contingent cultural phenomenon, and suggest limits on this process.

Jeffra, Caroline (University of Exeter)

[256] *Clumsy, Crude, Well-Made, Fine? Skill and the Learning Process In Light of the Pottery Wheel*

Studies involving Minoan Crete have repeatedly expressed assumptions regarding the relationship between skillfulness and material culture, particularly in ceramics. The earliest use of the pottery wheel focuses this attention, exemplified by the classification of some ceramics as "crude wares". This classification obscures the pottery wheel as a key marker of skills renegotiation. Reevaluating the wheel highlights the changing skills of potters, in terms of

individuals and communities of practice. The application of experimental archaeology and the chaîne opératoire approach can disentangle the resulting questions of skill, production speed and the learning process without imposing hierarchical values on types of pottery.

Jelinek, Lauren (University of Arizona)

[144] *Revisiting San Cayetano de Calabazas*

While the Pimería Alta is dotted with a variety of Spanish colonial installations, smaller sites are often overlooked by researchers and the general public. One such example is San Cayetano de Calabazas, a former Spanish visita that is part of the Tumacácori National Historical Park. A reanalysis of historical and archaeological data from this site has demonstrated that, although it is not as architecturally stunning as other Spanish missions in the region, it possesses a richer history. It was occupied intermittently from the protohistoric period to the early twentieth century and can be seen as a microcosm of Arizona history.

Jenkins, Austin [30] *see Ladwig, Jammí*

Jenkins, Cliff (NRCS)

[249] *Examining Freshwater Shell Midden Rings with Aerial Imagery in the Yazoo Basin, Mississippi*

NRCS is involved in a number of earth moving activities in the Yazoo Basin of northwestern Mississippi. The quantity of projects and often short turnaround time necessitates quick and accurate determinations of the potential presence of archaeological sites within proposed conservation practice areas. Detection of archaeological features from aerial imagery provides one method for efficiently evaluating project areas. One type of archaeological feature, the freshwater shell midden ring, is especially observable in aerial photos. Aerial imagery has proven useful, not only for detecting new shell ring sites, but tools available in GIS have also made it possible to conduct quantitative analysis of site structure.

Jenkins, Dennis

[62] *Distribution, Stratigraphic Association, and Chronology of Late Pleistocene Artifacts, Coprolites, and Paleontological Specimens in the Paisley Caves of South-Central Oregon*

Ancient human DNA has been recovered from coprolites pre-dating the Clovis culture by 1000 years at the Paisley Caves in the Pleistocene Lake Chewaucan basin of south-central Oregon (Northern Great Basin region). Excavations conducted in 2009 recovered unusual numbers of artifacts, coprolites, and paleontological specimens for this site from Late Pleistocene deposits. The spatial, stratigraphic, and chronologic associations of these remains are central to understanding the Paisley culture.

[62] *see Stafford, Thomas W.*

Jenkins, John (Independent researcher)

[89] *Astronomy and the Long Count*

This presentation examines Long Count dates at several Classic Period Maya sites, associated inscriptions, and astronomical alignments occurring on the associated dates. Patterns involving specific astronomical features will be identified and compared with astronomical configurations present on the so-called "zero" date of the 13-Baktun cycle (in 3114 BC) as well as on the 13-Baktun cycle ending (in 2012 AD). Specific texts from Copan, Tikal, and Tortuguero suggest a coherent rationale as to why such configurations were meaningful to the Maya. Archaeoastronomy from two sites involved in the formulation of the Long Count, Izapa and Takalik Abaj, will be examined.

Jenks, Kelly (University of Arizona, Tucson)

[193] *Vecinos en la Frontera: New Mexican Identity in the Pecos River Settlements*

In attempting a vecino archaeology, one is forced to define the term in a practical sense. While the word captures the importance of community in Hispanic identity, Nuevomexicanos long have recognized significant cultural differences among various villages.

Authorities in Santa Fe, for example, tended to view the inhabitants of frontier settlements as degraded owing to their close relations with indigenous neighbors. This paper explores what it means to be vecino in the Pecos River settlements, where daily life was shaped more by interactions with outsiders—whether captive or cousin—than by any relations with the Santa Fe elite.

Jennings, Justin (Royal Ontario Museum)

[145] *Reevaluating the Middle Horizon in Arequipa*

The Middle Horizon (600-1000 AD) was a tumultuous period in Peru. This paper summarizes recent Middle Horizon research in Arequipa and demonstrates how this new research has transformed our understanding of what happened in the region during this period. Instead of being incorporated into the Wari Empire via established Wari centers like Cerro Baul and Pikillacta, Arequipa seems to have been first incorporated into the Wari sphere via the region's long-standing connections to the Nasca region. Wari influence, and with it increased social change and interregional interaction, reached the highlands of Arequipa only in the second half of the period.

[145] *First Organizer*; [188] see *Yepez, Willey*

Jennings, Michael [33] see *Church, Michael K.*

Jennings, Thomas (Texas A&M University) and Charlotte Pevny (Center for the Study of the First Americans, Texas A&M University)

[21] *Foragers or Collectors? A Comparison of Clovis and Folsom Lithic Technological Organization on the Plains and Plains Periphery*

The high-tech forager model (Kelly and Todd 1988) was proposed to generally explain the technological, subsistence, and settlement strategies of Early Paleoindian (Clovis and Folsom) hunter-gatherers. The subsequent 20 years of archaeological research has illustrated the complexities of these Early Paleoindian lithic technologies. In this paper we directly compare Clovis and Folsom technological organization on the Plains and Plains periphery to assess the relative position of each along the collector-forager continuum.

Jensen, Anne (UIC Science LLC)

[79] *Before Birnirk/Thule: Ipiutak and Others in the Barrow Area*

The Barrow area is well-known for the Birnirk and later winter villages and settlements found there, many of which are quite important in the history of Arctic archaeology. Far less attention has been paid to other types of sites, including those which predate the Birnirk/Thule period. The recent startling discovery of an Ipiutak occupation at Nuvuk, Point Barrow, makes it timely to compile and review the current information on such occupations, much of which is scattered in grey literature, with a view toward guiding future research on this earlier period.

[79] *First Chair*

Jensen, Deborah [24] see *Cannon, Mike*

Jensen, Eva (National Park Service) and Mark Slaughter (Bureau of Reclamation)

[200] *Back to the Old Salt Mines*

Three prehistoric salt mines in southern Nevada along the lower Virgin River were excavated by M.R. Harrington in the 1920s and hundreds of artifacts collected. The sites were inundated by Lake Mead in 1938. Artifacts and records were dispersed in repositories across the country. In 2003, declining lake levels brought a reemergence of sites and interest. An interdisciplinary team from National Park Service, Bureau of Reclamation, USGS, and UNLV are mining the archives, excavating ethnographic records, surveying site areas, analyzing artifacts, and dating collections for a modern look at this unique "lost" resource.

Jensen, Ryan [160] see *Balzotti, Chris*

Jerrems, William (Independent)

[120] *Horse Hunting at the End of the Pleistocene: Bridging the Gap Between the New and Old Worlds*

Horse procurement reflects a very long tradition in Eurasia, 450,000 years in Germany, France and England, a tradition that is suspected to have played an important part in the early settlement of the New World. This paper will attempt to compare some horse procurement and butchering strategies of Eurasia with those of America, particularly what is referred to as 'butchered horse teeth.' New evidence suggests that a search of old collections, particularly the collections of several Great Basin locations held by Universities and Museums compared to collections at the British Museum and Museum of Natural History, London, will prove enlightening.

Jeske, Robert (University of Wisconsin Milwaukee) and John Richards (University of Wisconsin Milwaukee)

[70] *A New and Improved Wisconsin Woodland Chronology: Dates from Organic Residues on Ceramics Vessels*

Because many important Wisconsin sites were dug in the early 20th century, few chronometric dates have been available to provide an accurate chronology of the Woodland period. Most syntheses of Wisconsin prehistory rely heavily on cross-dating or analogy with nearby regions for placing local ceramic technologies into a chronological framework. We present more than 120 AMS dates from organic residues adhering to ceramics from Wisconsin sites—many from well-known ceramic types or from prominent archaeological sites—to provide a preliminary chronology for the Woodland period in the region, and provide suggestions for more detailed theoretical and methodological inquiries in the future.

Jia, Peter (University of Sydney), Alison Betts (University of Sydney), Qianjia Chen (Jilin University), Trudy Doelman (University of Sydney) and Xinhua Wu (Institute of Archaeology, Chinese Academy of Social Science)

[155] *East meets West – Late Prehistoric Archaeology in Zhungerer, Xinjiang, China*

Excavation at Luanzanggang (1300-900 BC) has achieved promising results. First, the material culture has been clearly identified and scientifically dated. Second, the analysis of charred seeds recovered through flotation indicates early farming during the Bronze Age on the northern Tianshan slope. We also report the results of starch residue analysis that record the processing of a variety of plants other than staple grains. The obsidian study in northeast China at the first time has used PXRF to test about 500 artifacts and scientifically grouping the different sources in different regions.

Jiang, Ming [151] see *D'Alpoim Guedes, Jade*

Jiao, Tianlong (Bishop Museum) and Chunming Wu (Xiamen University, China)

[155] *Exploring the Cultural and Economic Trends in Neolithic Southeast China*

Newly excavated archaeological materials from Southeast China by an international team demonstrate that the Neolithic cultures in this region underwent tremendous changes over time. Using multidisciplinary approaches, this ongoing collaborative project has found a great amount of materials for studying the transformation of the economy and material cultures in Neolithic Southeast China. Maritime adaptation became increasingly intensified. Seafaring allowed people move and interact with each other in a much broader space. These changes not only provide evidence for studying the social transformations in this region, they also carry significant implications for understanding the origin and early expansions of the proto-Austronesians.

[95] *Discussant*

Jimenez, Mila [18] see *Makowski, Krzysztof*

Jimenez Cano, Nadia [161] see *Speakman, Robert J.*

Jing, Zhichun (The University of British Columbia) and Jigen Tang (Institute of Archaeology, Chinese Academy of Social Sciences)

[155] *Excavations of the Palaces at the Walled Huanbei City in*

Anyang

Palaces were the royal residences as well as the seats of political and religious activities. Excavations at Huanbei, a walled urban center dating to the 13th century B.C., has revealed the largest palace/temple compound ever discovered in Bronze Age China, offering an opportunity to examine the nature of palaces and temples in early complex societies. This paper describes orthogonal physical layouts, the spaces with public or restricted access, architectural elements of the palace buildings. The palace/temple compound is discussed in the contexts of evolving cultural tradition and political ideology to understand how palaces served to embody and legitimize the power of ruling elites in the functioning of the Shang state.

Jing, Zhichun [155] see *Stoltman, James B.*

Joaquin, Joseph [164] see *Rankin, Adrienne G.*

Jodry, Pegi [72] see *Sellet, Frederic*

Joe, Tony [235] see *Marek-Martinez, Ora V.*

Johannesson, Erik (UNC Chapel Hill) and Michelle Machicek (University of Sheffield)

[189] *Examining Identity from Mortuary Contexts: An Assessment of Nomadic Pastoralist Communities from the Central Asian Steppes*
A comprehensive understanding of human identity is essential when attempting to make meaningful reconstructions of past societies. Using mortuary data to reconstruct identities at both an individual and group level presents a particular set of problems given the often static nature of funerary contexts, which may conceal important changes which occur over time. Here we present archaeological evidence from mortuary contexts in Central Asia to critically discuss how identities manifest materially in different ways. The emphasis is on how multiple identities are discernable simultaneously and how identity in the past is intrinsically linked to identities and categories in the present.

Johanson, Erik (The University of Tennessee), David Anderson (The University of Tennessee), Shane Miller (The University of Tennessee), Stephen Yerka, Derek Anderson (University of Arizona), and Christopher Gillam (South Carolina Institute of Archaeology and Anthropology)

[24] *PIDBA: Challenges Related to the Curation and Dissemination of Paleoindian Data at a Hemispheric Scale*

The Paleoindian Database of the Americas (PIDBA), available on-line at <http://pidba.utk.edu>, represents a repository of nearly 30,000 projectile points, attribute data on over 15,000 artifacts, and image data on over 8,000 points from across the Americas. While PIDBA's point data continues to proliferate thanks to the collection and compilation of primary data from dedicated archaeologists, new content has also been added and curated. This includes radiometric and bibliographic databases, and artifact distribution maps. PIDBA's new content fosters more research opportunities, but also presents a challenge for accessibility. New web content and design has addressed issues related to public access.

Johanson, Erik N. [90] see *Miller, D. Shane*

Johnson, Adam (Western Michigan University)

[163] *Collections Management at Western Michigan University: Problems, Plans, and Solutions*

Western Michigan University has amassed a large collection of archaeological artifacts from excavations starting since the 1960s. Over the years, many artifacts have lost their accession numbers, have been misplaced, and have changed storage locations. Consequently, it is not uncommon to uncover an unmarked Jesuit ring in a drawer, a rim sherd in a file cabinet, or a stone tool in a random box. As times have changed, curational standards have also evolved. As a result, WMU, like many other institutions, is in a curation crisis. As stewards of the past, our goal is to preserve these artifacts in perpetuity. It is vital that we insure the best care is taken to preserve archaeological context. The goal of my research is to develop a holistic inventory system and bring WMU's archaeological

collections up to modern curational standards. This poster will outline the difficulties of collections management, the methodology to be employed at WMU, and proposed outcomes/results from the project.

Johnson, Amber (Truman State University)

[119] *Pursuing the Past: Building Theory with Environmental and Ethnographic Frames of Reference*

By 1991 when my graduate career at SMU began, Lewis Binford was actively developing the environmental and ethnographic data sets that were the foundation for his 2001 publication *Constructing Frames of Reference*. As his research assistant from 1994-1997, I participated in the development of the program to calculate environmental variables and the research using them for controlled exploration of variation among hunter-gatherers. Since that time, I have used the knowledge and strategies gained through this research both to develop a theoretical framework to guide global scale comparative archaeological analysis and to teach students to integrate ethnographic and archaeological analysis.

Johnson, Angel [22] see *Johnson, Angela K.*

Johnson, Angela (SHUMLA), Benjamin Dwyer (SHUMLA), Carolyn Boyd (SHUMLA/Texas State University) and Charles Koenig (SHUMLA)

[22] *Lower Pecos Rock Art Recording and Preservation Project*

The Lower Pecos Canyonlands of southwest Texas and northern Mexico houses some of the most complex and compositionally intricate prehistoric rock art in the world. Because of the unique nature and the incomparable richness of this cultural legacy, it is imperative to create a permanent archive and to promote preservation of this resource through education. SHUMLA's Lower Pecos Rock Art Recording and Preservation Project is meeting this need through documentation of rock art sites, creation of a digital library to archive rock art data, establishment of a comprehensive research program, formation of a stewards program, and continuation of hands-on education.

Johnson, Donald

[23] *Geophysical Investigations at an Inca Site in Northwestern Ecuador*

A terraced hill in Nanegal parish about 40 kilometers northwest of Quito was tentatively identified by Dr. Ron Lippi in 1984 as an Inca fortress. In 2002, Lippi was able to begin testing at the site. Geophysical investigations consisting of magnetometry and electrical resistance were conducted on the terraces that were large enough for the surveys to be practical. Ground penetrating radar surveys conducted in 2005 ultimately led to the discovery of an Inca structure. This talk will present the results of the geophysical investigations and discuss what went right and what went wrong with the surveys and their interpretation.

Johnson, Eileen [21] see *Hurst, Stance C.*; [72] see *Ehlers, Katherine B*

Johnson, Jack (University of Washington)

[128] *OSL Dating of El Nino Flood Sediments in the Chao Valley, Peru*

The significance of El Nino events for prehistoric coastal Peruvians remains a subject of ongoing investigation and debate. This poster contributes to this debate by presenting a series of optically stimulated luminescence dates derived from a sequence of fine sediment layers in the Chao Valley. These layers represent about 60 individual El Nino floods spanning the Late Holocene. Dates from about 20 layers are presented and evaluated, and interpretation of periods of El Nino flooding based on sediment accumulation is attempted.

Johnson, James (University of Pittsburgh) and Bryan Hanks (University of Pittsburgh)

[184] *Urbanism and Community in the Middle Bronze Age "Country of Towns": Preliminary Field Results*

Although urbanism in small-scale societies has been well documented, we suggest that 1) issues of scale have often been over-looked and 2) more recent conceptual models such as community may be useful in assessing urbanism in small-scale societies. Based on data collected during pedestrian survey and limited test excavations from the summer of 2009 in the Chelyabinsk Oblast in southern Russia, we suggest that the Middle Bronze Age cultural phenomenon of Sintashta and the related "Country of Towns" can contribute productively to modeling how small-scale societies undergo diachronic processes of social cohesion and breakdown associated with early forms of urbanism.

Johnson, Janet (The State Museum of Pennsylvania)

[59] *Beginnings of Historical Archaeology in Pennsylvania*

The Frontier Forts and Trails Survey conducted under the WPA was a focused effort to merge early historical records and archaeology in documenting colonial and French forts in Pennsylvania. This early effort was instrumental in the preservation of these important sites and the artifacts produced were tangible evidence to which the public could connect. Repositories for these artifacts were often in the communities necessitating current research as to the location and condition of collections, which will permit a concentrated examination and documentation of artifacts which have received minimal attention in the past.

Johnson, Jay [217] see Mehta, Jayur M.

Johnson, John (Santa Barbara Museum of Natural History), G. James West (University of California, Davis) and Nan Deal (Santa Barbara Museum of Natural History)

[56] *La Cueva Escondida: An Unusually Well-Preserved Island Chumash Shell Midden*

A unique shell midden on Santa Cruz Island contains an array of perishable artifacts, as well as floral and faunal remains that are not usually preserved at other sites. The earliest cultural stratum exposed in the eroding bank of the site from Cal AD 1030 to 1230, during the Medieval Climatic Anomaly. Given that the most recent deposits date to the Contact Period, the collections shed light on changing environmental conditions and various aspects of Island Chumash subsistence and over a period of six to eight hundred years prior European contact.

Johnson, John [56] *First Organizer*; [56] see Monroe, Cara ; [81] *First Organizer*; [122] see Lorenz, Joseph G.;

Johnson, Katharine (University of Massachusetts Boston)

[246] *The Relevance of Early Modern Archaeology in Skagafjörður, Iceland*

Recent archaeological excavations in Skagafjörður, Iceland have produced numerous Early Modern (17th-20th century) materials. These materials are often considered commonplace in North American historical archaeology, but are often overlooked in Icelandic archaeology in favor of earlier Viking Age or Medieval deposits. While the artifacts from our excavations have not been fully analyzed yet, their ubiquitous presence indicates that Early Modern deposits need to be recognized as a valuable comparative resource within Icelandic archaeology. Their analysis in conjunction with historical documentation can provide the last chapter in a comprehensive archaeological understanding of Skagafjörður from the Icelandic settlement up through the present.

Johnson, Kent (Arizona State University), Paul Goldstein (University of California San Diego) and Sarah Baitzel (University of California San Diego)

[226] *Multicultural Tiwanaku Enclave Communities in the Moquegua Valley, Peru: A Bioarchaeological Analysis of Odontometric Data* Archaeological data suggest that Tiwanaku enclave communities in the Moquegua Valley of southern Peru were composed of Omo-style and Chen Chen-style Tiwanaku populations. Odontometric data from Omo-style (M70) and Chen Chen-style (M43) sites within the Rio Muerto site complex are subjected to biodistance analysis in order to

investigate the nature and extent of interactions between these contemporaneous Tiwanaku groups. Results are evaluated to assess whether cultural differences between these groups are correlated with phenotypic differences. The present research complements existing literature on Tiwanaku state expansion by applying social identity theory to bioarchaeological data from the Rio Muerto site complex.

Johnson, Kent M. [92] see Hatch, Mallorie A.

Johnson, Phillip (American Samoa Power Authority Archaeology Program)

[147] *Where the Hard Stone is Found: Investigations of Pre-contact Basalt Tool Industries at Tutuila, Amerika Samoa*

Fine-grained basalt artifacts are arguably the most ubiquitous and robust component of the Samoan archaeological record. Yet after eight decades of survey and excavation throughout the archipelago, evidence for sites of basalt procurement and tool manufacture remain limited to the island of Tutuila. Basalt artifacts and sources from Tutuila have featured prominently in Polynesian archaeological research. Technological and elemental analyses have established long-distance inter-island transfer of Tutuila basalt and recent research has focused on intra-island production and distribution. In this paper I discuss the background and current status of research on fine-grained basalt procurement, production, distribution and consumption at Tutuila.

[161] see Bartelink, Eric J.

Johnson, Ryan [258] see Kittel, Michelle

Johnson, Scott (Tulane University) and Grant McCall (Tulane University)

[190] *Fire Hardened Spears: Hardwoods vs. Softwoods, Strength, & Production Studies*

Previous experimentation has suggested that fire-hardening of wooden spears increases the strength of the point and surface hardness of the spear. This paper will build on this experimentation, increasing both the depth and breadth of experimental testing. The previous experiments will be completed with a hardwood to compare to the previous results of a softwood. New tests will be carried out to determine whether or not fire-hardening of wooden spears has any effect on the overall shear-strength of spears. Another test will explore whether or not fire-hardening was a by-product of wooden spear production or an intentional strengthening technique.

Johnson, Tanya [24] see Cannon, Mike

Jolie, Edward (University of New Mexico) and Phil Geib (University of New Mexico)

[118] *Small Seeds, Basketry, and the Broad Spectrum Revolution on the Colorado Plateau*

Understanding of forager subsistence diversification in the millennia preceding plant domestication is hindered by poor chronology and uneven preservation. Using data on human coprolites and basketry we examine the BSR's onset on the Colorado Plateau in the American Southwest. Over 50 new radiocarbon determinations refine the timing of intensive small seed use and clarify the role of basketry technology. Interpreted within the framework of ecological niche construction, these data suggest the co-development of small seed use and innovations in basketry from 10000-9000 BP against a backdrop of increasing experimentation with plant communities in response to climatic and demographic change.

[118] *First Chair* [118] *Second Organizer*

Jolie, Edward [118] see Geib, Phil R.

Jolivet, Stephanie [207] see Taylor, Amanda

Jones, Brian (UMass, Amherst)

[117] *An Exploratory Data Analysis Approach to Artifact Density Correlation*

An aspect of spatial analysis is the assessment of the relationship

between different types or classes of artifacts across a site. Such assessments may, for example, be aimed at correlating the density distribution of different lithic raw materials to provide evidence for the contemporaneity of knapping activity. While complex methods are available for the calculation of three-dimensional spatial correlation, most require specialized statistical or GIS software. This paper proposes a relatively simple exploratory data analysis approach to establishing a measure of three-dimensional spatial correlation between classes of artifacts that can be calculated with any spreadsheet program.

Jones, Catherine (University of Wisconsin-Milwaukee)

[124] *Multiple Internments in the MCIG Human Skeletal Collection*
The MCIG human skeletal collection consists of single internments, multiple internments and burials that have been disturbed by a variety of processes. Consequently a number of provenience units consist of commingled remains. Due to the complex nature of the processes involved in creating these burials, no single analytical model is suited to their collective study. This poster examines these burials in order to construct a case-specific protocol that will facilitate future analysis and determine whether individual remains can be separated and identified within the commingled burials of this collection.

Jones, Daniel [92] see Silverstein, Jay E.

Jones, Douglas (Florida Museum of Natural History), Chester Depratter (South Carolina Institute of Archaeology and Anthropology), and Irvy R. Quitmyer (Florida Museum of Natural History - University of Florida)

[250] *Oxygen Isotope Validation of Annual Macroscopic Shell Growth Increments in Modern and Zooarchaeological Hard Clams (*Mercenaria mercenaria*) from the Litchfield Beach Estuary, South Carolina*

The periodicity of incremental shell growth of hard clams *Mercenaria* spp. has become a powerful tool in estimating the seasonality and anthropogenic impact on zooarchaeological resources. Modern analogues of hard clam seasonal shell formation are well documented throughout its range; however, recent research has shown that changes in the marine environment can significantly and quickly alter the regional pattern of skeletal growth in the organism. This research analyzes the variability of oxygen isotopes in shell carbonate to validate modern and zooarchaeological hard clam seasonal shell growth over a 2200-year period in the Litchfield Beach Estuary, South Carolina.

Jones, Douglas S. [250] see Quitmyer, Irvy

Jones, Emily (Utah State University)

[16] *Contextualizing Rabbit Hunting in Mediterranean Spain: A Comparative Approach*

While in inland France, diets dominated by the wild European rabbit enter the archaeological record around the Pleistocene-Holocene transition, archaeological sites from Mediterranean Spain typically contain rabbit in abundance early in the Upper Paleolithic. In this paper, I compare data from the archaeological site of Cueva de Nerja (Málaga, Spain) with data from several sites in the Dordogne to consider factors (both biogeographic and cultural) that might contribute to rabbit-dominant diets in the Western Mediterranean.

Jones, Eric (Wake Forest University)

[25] *Studying Settlement Abandonment with Event History Analysis: A Case Study of the Haudenosaunee (Iroquois)*

Event history analysis can be used to study the impact of various factors on the probability of events occurring during the lifespan of individuals. These methods can be applied to settlements and important events, such as abandonment. For decades, archaeologists have attempted to determine the primary cause of abandonment at Haudenosaunee villages with no definite conclusions. I use GIS to examine specific environmental, sociopolitical, and demographic characteristics of settlements and event history analysis to evaluate the effect of these factors on settlement duration. The results identify

population size and several environmental causes as significant influences on the probability of abandonment.

Jones, Gary (California State University, Fullerton) and Steven James (California State University, Fullerton)

[31] *Abalone Cove and Other Sites on the Palos Verdes Peninsula: Archaeological Research on the Ninth Channel Island*
Archaeological data from the Channel Islands and coastal sites on the mainland in southern California are providing significant information regarding the peopling of the Americas, intensive marine resource utilization, and the origins of social complexity. Through a partnership with the Palos Verdes Peninsula Land Conservancy, field classes from California State University at Fullerton conducted investigations at Abalone Cove and other sites on the Palos Verdes Peninsula during the past three field seasons. Results of the research are presented, and comparisons with other coastal and island sites are examined in terms of settlement and subsistence patterns.

Jones, George T. [118] see Beck, Charlotte

Jones, James (Indiana Department of Natural Resources) [238]

Discussant

Jones, John (Washington State University), Deborah Pearsall (University of Missouri), Nicholas P. Dunning (University of Cincinnati) and Peter E. Siegel (Montclair State University)

[97] *Human Occupation and Settlement on Trinidad: Pollen Evidence from a Series of Sediment Cores*

Pollen analysis of sediment cores collected near well-dated archaeological sites located throughout Trinidad are beginning to reveal a pattern of human dispersal across the landscape. While some habitats are favored and apparently were occupied for a considerable span, other areas show almost no evidence of past human activities. Reasons for the lack of occupation in what would seem to be a near perfect environment are explored. Factors influencing site selection include resource availability, accessibility to multiple environments and travel limitations. A better understanding of these factors may lead to a predictive model for identifying human settlement in the Caribbean.

Jones, John [84] see Nott, BreAnne M.; [84] see Holstad, Emily; [201] see Benz, Emily J.

Jones, John G. [136] see Drake, Douglas H.

Jones, Recca [38] see Hawkins, Nancy

Jones, Robert [192] see Huntley, Deborah L.

Jones, Sharyn [206] see Quinn, Rhonda L.

Jones, Terry (Cal Poly San Luis Obispo)

[68] *Polynesian Contacts with the New World: A History of Diffusionist Thinking*

To establish background for discussion of recent findings, I will in this paper review the 150-year history of scholarly thinking on the topic of Polynesian contacts with the New World. During the cultural historical era, the possibility of cultural diffusion from Polynesia was considered regularly, but discussion of such contacts disappeared from mainstream scholarly discourse in the second half of the 20th century with the advent of processualism. The empirical evidence for contacts has always been intriguing especially in South America, but it has until recently remained fairly static. Now, compelling new genetic, linguistic, and material evidence is being introduced into a more diverse theoretical milieu.

[31] *Discussant*; [68] *First Organizer*

Jordá, Jesús F. [177] see Aura, J. Emili

Jordan, Alexis (University of Wisconsin Milwaukee)

[184] *A Preliminary Study of Iron Age Glass in Ireland, with Particular Emphasis on the Glass Beads*

This poster will present a preliminary investigation of the glass objects from Irish Iron Age archaeological sites to examine the contexts in which glass appears, the implications of these contexts for our understanding of interactions between Ireland and the rest of Europe, patterns in glass distribution based on site type and geography, and the nature of the organization of glass working in Ireland during this period. The form, style, design, color, and type of these glass pieces will be compared to their site contexts based on examination of curated finds as well as published and unpublished records of find contexts.

Jorgensen, Mia (University at Buffalo)

[169] *The Place Where Men Become Gods: Termination, Dedication or Fill? Exploring Results from the Ceramic Analysis of Plaza One, Teotihuacan*

Cities are alive, pulsating with the breath of their inhabitants. They begin much like we do, empty space. They grow and expand with construction, and someday fall. No city escapes the fate of the life cycle not even "The Place Where Men Become Gods." Perhaps this is why Teotihuacan's beginning and end are as intriguing as mysterious, providing many more questions than it answers. This paper attempts to answer questions related to the city's commencement through an analysis of ceramics from Plaza One, a three temple mound complex that dates to the earliest of the Teotihuacan phases.

Joyce, Arthur (University of Colorado at Boulder), Hal Baillie (University of Colorado at Boulder), Marc Levine (Denver Museum of Nature and Science) and Sarah Barber (University of Central Florida)

[13] *The Acropolis at Río Viejo, Oaxaca, Mexico: Political Implications of its Initial Construction, Use, and Abandonment*

This paper discusses the political significance of the initial construction, use, and abandonment of the acropolis at Río Viejo. Recent excavations provide evidence for construction techniques and the degree of labor mobilization required to build the acropolis; remains of a probable public building were also exposed. The acropolis was constructed as the community's civic-ceremonial core as it grew into an urban center and political seat during the Terminal Formative. The acropolis was burned and abandoned at ca. A.D. 250, however. During the Early Classic, the acropolis was mined for building materials and it was not reoccupied until the Late Classic.

Joyce, Dan [219] see Sasso, Robert F.

Joyce, Rosemary (University California Berkeley)

[260] *Ties that Bind: Cloth, Clothing, and Embodiment in Formative Honduras*

Figurines from northern Honduras dating from 1000 BC to 200 AD represent garments whose details strongly suggest they were woven, twined, or braided textiles. This paper presents results of a detailed study of these microscale icons of garments, based on documentation of four major curated collections in the US and Honduras. Drawing on theorists who have discussed how cloth often serves as a medium to negotiate social relations and thus as an index of social "ties that bind", I explore the active role played by the now irrecoverable textiles of Formative Honduras and their manufacture in early villages and towns.

[65] see Gomez, Esteban M. [194] *Discussant*

Juárez, Ranferi [147] see Jaime-Riveron, Olaf

Junker, Laura (University of Illinois Chicago), Debra Green (University of Illinois Chicago)

[153] *Agricultural Production, Population Dynamics, and Urban Centers in Pre-Colonial Maritime Trading Polities of the Philippines*

Historic sources and archaeological evidence suggest that prehispanic Philippine maritime trading polities were highly "urbanized" (with up to twenty percent of the population in coastal centers), although overall population remained low compared to other regions of complex society development. While mainland Southeast

Asian kingdoms often solved the problem of agricultural support through intensifying wet rice production, island Southeast Asian polities emphasized a strategy of slave-raiding, trade, and labor redistribution within less intensive systems of farming. Recent geoarchaeological research and settlement archaeology in the Tanjay Region documents this connection between economic specialization, forms of labor mobilization, and expanding coastal trade entrepôts.

Kaestle, Frederika (Indiana University–Bloomington), Della Cook (Indiana University, Bloomington) and Jennifer Raff (University of Utah, Salt Lake)

[239] *Migration and the Mississippian Emergence in West-Central Illinois: Ancient DNA Evidence*

The Mississippian Emergence in the Cahokia periphery (~AD1050) has been the focus of research for decades. Questions regarding the relationship between biology and culture, a central theme of anthropological research, arise from scrutiny of this transition. Archaeological analysis suggests that a cultural diffusion from regional centers like Cahokia to peripheral areas took place at the Mississippian Emergence (technology, subsistence strategies, mortuary practice, etc.). We tested the hypothesis that this cultural diffusion was accompanied by migration using standard population genetics and new computer simulation methods to detect signals of gene flow and continuity in Lower Illinois Valley groups spanning this transition.

Kaestle, Frederika [257] see McCormick, Charla; [239] see Millward, Georgia

Kahn, Jennifer (Bishop Museum), André Outecho (New Caledonia), Christophe Sand (New Caledonia), David Baret (New Caledonia) and Jaques Bolé (New Caledonia)

[206] *Coastal Settlement, Interior House Mounds, and Chronological Histories of Gouaro Deva, New Caledonia*

We present data from coastal and inland excavations at Gouaro Deva, west coast of Grande Terre. Our radiocarbon chronology indicates coastal settlement by 1000 B.C. In the interior, initial landscape modification began as early as A.D. 430 and construction of a dense hamlet of house mounds commenced at A.D. 1550. Sub-surface features in the house mounds suggest frequent central post replacement and episodes of mound remodeling and house enlargement. Artifact frequencies and site proxemics suggest varying function for these house mounds. We briefly discuss these results in relation to regional wide settlement histories in New Caledonia.

Kahotea, Des (University of Waikato)

[198] *Archaeology and Maori Knowledge*

Archaeology in its current professional and academic state and its advocacy body New Zealand Archaeological Association in Aotearoa/New Zealand has been formed and shaped by Anglo-American processual archaeology. The emphasis of the primacy of science and the archaeological record did not gel with the traditional Maori cultural knowledge, beliefs and values of Dr Kahotea. To reconcile Maori knowledge and beliefs with the field of archaeology in Aotearoa/New Zealand, recent association and links with Native American and American colleagues, has been an essential contribution towards developing research objectives that incorporate Maori knowledge within the archaeological paradigm.

[63] *Discussant*

Kamiya, Masahiro (Texas A&M University)

[71] *Holocene-Aged Fire-Cracked Rock Feature Variability in Texas' Savannah Regions*

Morphology of hot-rock cookeries—earth ovens in particular—varies with methods of cooking, type and amount of food processed, and available oven-building resources. Specific methods of oven cooking also constrain the size of cooking stones. The size of fire-cracked rock (FCR) features, presence of pit, and presence of oxidized sediment are keys to determining hot-rock cooking techniques associated with given features. In this poster, Holocene-aged ovens with rock heating elements from the eastern half of Texas are

examined in terms of their morphology, overall size, and size of cook stones therein.

Kanne, Katherine (Northwestern University)

[149] *Moving Mounts: Specialization and Trade in Horses in the Bronze Age Carpathian Basin*

The trade routes of the Bronze Age Carpathian Basin were established in part by horses, which became newly important in this period as they both transported goods and were exchanged as valuable commodities. This paper presents new zooarchaeological, osteological, GIS, and stable isotope data to demonstrate how horses were harnessed in the emergence of nascent political institutions. The interconnectivity of the settlements is highlighted by specialization of horse production and training at different settlements along prominent trade routes. Horses emerge here as key resources people actively manipulated in attempts to create and consolidate power.

Kansa, Eric (UC Berkeley, School of Information) and Joshua Wells (Indiana University South Bend)

[24] *"Quantity has a Quality all its Own": Archaeological Practice and the Role of Aggregation in Data Sharing*

Archaeological information on the Web is changing in ways that impact archaeological practice. Technical standards, copyright licensing, and Web services all blur boundaries between disciplines and organizations. They also make data aggregation easier. Consequently, the scope of "archaeological data" may grow beyond traditional field, survey, and collections data. Aggregators can also document how data are combined, navigated, and used. In other fields, aggregation services evolve into primary channels for information retrieval. Because aggregators enjoy increasingly privileged positions in new information environments, this paper explores documented benefits and drawbacks of imminent issues affecting archaeological research opportunities, professional expectations, and ethical challenges.

[24] *First Chair* [24] *Second Organizer*

Kansa, Sarah (The Alexandria Archive Institute) and Eric Kansa (UC Berkeley, School of Information)

[216] *Of Glass Houses and Ground Stone: Open Data and Ground Stone Analyses*

Increasing web access and decreasing storage costs allow researchers to share both published syntheses of their work and the raw data on which their analyses are based. Additionally, contributory "Web 2.0" tools are becoming pervasive, allowing data to be incorporated into community discussions and collaborative works. This paper discusses the potential of web-based data-sharing systems for improving access, reuse and transparency of ground stone data. Discussion centers on Open Context, a web-based system serving the diverse needs of the archaeological sub-disciplines. We discuss the implications to ground stone research of data publication, community input and linking to print publications.

Kantner, John (School for Advanced Research) [19] Discussant

Kantner, John [14] see Doelle, William H.

Kantor, Loni [242] see Nelson, Ben A.

Kardulias, Paul (College of Wooster)

[78] *A Holistic Archaeology: Cross-Cultural Research and World-Systems Analysis*

As Binford demonstrated almost fifty years ago, the construction of viable analogies by which to interpret the material record requires judicious use of cross-cultural comparisons. World-systems analysis (WSA) offers a sound framework within which to explore inter-societal connections and to evaluate the validity of drawing on ethnographic data to understand prehistory. Such a structure provides robust interpretations by linking study of the past and present through principles that characterize humanity through time and over space. Using examples from North American and European ethnographies, in this study I emphasize negotiation as the mechanism by which

individuals interact with social structure.

Kasper, Kimberly (University of Massachusetts-Amherst) and Kevin McBride (University of Connecticut-Storrs)

[117] *The Spatial Significance of Plants*

Archaeological plant remains are rarely evaluated within a spatial framework to reconstruct social-cultural dynamics. This paper demonstrates that plants are valuable, in conjunction with other ecological and cultural data, to gain insight into domestic spaces within a community. A GIS analysis of plant remains recovered from thirteen Historic sites (1675-1930), in conjunction with documentary and paleoecological data, at the Mashantucket Pequot Reservation in Connecticut, documents the changes and continuities of plant strategies. This spatial investigation facilitates an understanding of complexities of households and the variability of decision making of Native Americans within the Reservation system.

[117] *First Chair*

Kastl, Richard [180] see Versaggi, Nina M.

Kato, Hirofumi (Hokkaido University) [63] Discussant

Katz, Paul (PRIAM)

[147] *Formal Extraction Sites on the Southern High Plains of North America*

This paper will contribute to the continuing development of an international inventory of prehistoric mines and quarries by summarizing sites in a specific region of the United States. A variety of materials will be considered, although all will have in common some formal extraction methodology. On the Southern High Plains, this is usually limited to the excavation of subsurface pits. Particular attention will be paid to extraction sites in the Oklahoma and Texas Panhandles.

Katz, Steven (Midwest Archaeological Research Services, Inc.) and Rochelle Lurie (Midwest Archaeological Research Services, Inc.)

[102] *Analysis of the Lithic Assemblage from the New Lenox Site*

The excavations at the New Lenox site yielded a substantial lithic assemblage. Over six hundred tools as well as substantial amounts of debitage recovered from plowzone and feature contexts. The material has been classified using recording scheme developed for Upper Mississippian sites in northern Illinois. Tools from feature context show continuity in the lithic assemblage among the site's components and are compared to similar material from other late prehistoric and protohistoric sites in the Midwest.

Kaufmann, Kira

[70] *Sleuthing Soils: Interpreting Cultural Behavior from Geophysical Data of Effigy Mound Construction in Southeast Wisconsin*

Recent geophysical survey and syntheses of previous data from Effigy Mound sites reveals patterns of construction that inform about cultural behavior during the Late Woodland period. Although similar in physical expression on the landscape, different construction techniques of these effigy mounds have been identified. Patterns seen in the surface shapes of Effigy mounds at these sites may express a shared cultural identity through the visual effect created by construction of the landscape. Whereas, internal construction differences may imply greater diversity in the social organization of the groups who built the mounds or that different groups were utilizing the same locations.

[70] *First Organizer*, [70] *First Chair*

Kay, Marvin (University of Arkansas)

[146] *Kimmswick, Missouri: Summary Evaluation of the Clovis-Mastodon Kill*

First investigated by Albert C. Koch in 1839, the Clovis point discoveries with mastodon remains occurred in 1979 and 1980 when excavated by Russell W. Graham, Illinois State Museum. The Clovis bearing Pleistocene deposits are two stratified pond sediments beneath early Holocene strata containing Early Archaic remains.

Clovis points and other chipped stone artifacts are identified to central Mississippi Valley and immediately adjacent sources that seem to be distinct from those of Clovis and/or Gainey sites to the east of the valley. Mastodon is one of several taxa recovered. The focus of Clovis predation at Kimmswick was not exclusively on big game. More likely is a pattern of broad spectrum foraging in which physiologically stressed mastodon was but one target of opportunity about a small pond or possibly a salt spring.

Keeler, Dustin (University at Buffalo)

[79] *Modelling Settlement Patterns based on the results of Regional Survey in Northern Finland*

During the 2008 and 2009 field seasons a large scale regional survey was conducted in the Yli-Ii region of Northern Finland. The goal of the survey was to locate Neolithic sites that were situated on paleoshorelines that resulted from Isostatic land uplift. This paper presents the results of GIS modeling of settlement patterns based on the results of the survey, information on previously known sites, land uplift curves and the results of viewshed analyses.

[117] *see Zubrow, Ezra B.*

Keene, Deborah (University of Alabama) and C. Fred T. Andrus (University of Alabama)

[250] *An Integrated Approach for Assessing Sedentism in the Georgia Bight*

The authors outline a research plan to test the hypothesis that Mississippian inhabitants of the Georgia Bight were sedentary and relied on horticulture as a significant source of food. To accomplish this we propose an integrated, multi-site strategy. Central to this approach is the development of a "tool kit" of practical ethnobotanical, zooarchaeological, and/or sclerochronological methodologies to determine season of occupation. A cornerstone of the research plan is applying these methods to botanical and shell samples from sites of all sizes and types across the region, which will require collaboration from many archaeologists.

Keene, Joshua (Texas A&M University) and Michael Waters (Texas A&M University, Center for the Study of the First Americans)

[120] *Geoarchaeological Site Formation Processes of a Weakly Developed Vertisol at the Buttermilk Creek Site, TX*

The Buttermilk Creek site (41BL1239) is located in central Texas 200 meters downstream of the Gault site. During the 2006-2009 field seasons, late Quaternary floodplain vertisols at the site yielded a chronologically ordered sequence of artifacts from late prehistoric to Paleoindian (Folsom, Clovis and potential Pre-Clovis). A comparison of debitage and artifact size categories, diagnostic point distribution, calcium carbonate presence, vertic crack maps and OSL dates with depth is used to determine the extent of post-depositional movement of archaeological materials at the site as well as help define the mixing properties of weakly vertic sediments.

Keohoe, Alice (University of Wisconsin-Milwaukee)

[15] *Cahokia in the Early Postclassic American World*

Cahokia, like Chaco, precisely fits the Mesoamerican Postclassic time period, AD 1050-1250. Cahokia --like Mesoamerican cities but unlike Chaco-- is constructed on a rectilinear urban grid with pyramidal mounds around plazas. It most closely resembles its contemporary, Cholula. Cahokia is without precedent and is never replicated in Anglo America, whereas the cities of Mesoamerica offer ample precedents and later examples. Given the time correlation and city form, the most parsimonious historical interpretation is that Cahokians modeled their city on a Mesoamerican ideal ("Tollan") and the collapse of the Early Postclassic Mesoamerican political economy brought down Cahokia, too.

[68] *Discussant*

Keller, Angela (UC Riverside / AECOM Environment) and Christopher Doolittle (AECOM)

[144] *Going to War in America: Examining the Landscape of War at the WWII-era Desert Training Center/California-Arizona Maneuvers*

Area (DTC/C-AMA)

During WWII, some of the largest "battles" ever fought by American troops occurred not in Europe or the Pacific, but in the remote western deserts of the United States. On the unrelenting sands of the DTC/C-AMA, recruits lived on canned rations and limited water while they were relentlessly attacked from land and air. Although the camps of the DTC/C-AMA are amply documented, the actual maneuver areas are little explored. This paper analyses data from a recent survey of one such maneuver area to explore the landscape of war in America.

[144] *First Chair*

Kellner, Corina (Corina M. Kellner) and Katharine A. Compton-Gore (Northern Arizona University)

[122] *Diet, Sociopolitical Complexity, and Empire in Ancient Peru: Tenahaha during the Middle Horizon (AD 500-1000)*

Wari imperial influence, expansion of trade networks, and increasing social interaction among local groups characterized the Middle Horizon in ancient Peru (AD 500-1000). Recent tomb excavations at the site of Tenahaha in the Cotahuasi Valley suggests that the inhabitants participated in the wider social changes occurring during this period, including the development of sociopolitical complexity, without direct Wari influence. Preliminary stable isotope analysis of human bone collagen suggests differential individual access to food resources. Tenahaha provides a unique opportunity to assess the development of local sociopolitical complexity in a relatively autonomous population during a period of tumultuous change.

Kelly, Christina (Gray & Pape, Inc.)

[252] *On the Banks of the Susquehanna River: Sites BRO-212 and BRO-117 in Broome County, New York*

The Susquehanna River meanders for over 400 miles across parts of Pennsylvania, New York, and Maryland before reaching the Chesapeake Bay. Sites BRO-212 and BRO-117, on the east and west banks of the Susquehanna River near the town of Windsor in Broome County, New York, were occupied from the Late Archaic through the Late Woodland time periods. Investigations at these sites provide an opportunity to investigate site distribution, function, material culture, and human adaptations along this major river drainage.

Kelly, John (Washington University), James Brown (Northwestern University) and Mary Beth Trubitt (Arkansas Archaeological Survey)

[140] *The Moorehead Moment: A Brief Overview of a Major Disjuncture in the History of Cahokia*

The terms and concepts we create to characterize various aspects of the past convey a significant amount of information in a very succinct way. The Moorehead Phase, originally defined in 1971, is one example. The participants in this session elaborate on how this construct helps frame a brief episode in the site's history. In laying out what the Moorehead Moment represents, we highlight the essence of Cahokia not in terms of its decline but in terms of its elaboration as part of the larger Mississippian world.

Kelly, John [140] First Organizer; [140] First Chair; [140] see Stahlman, Kathleen F.; [140] see Bailey, Katri S.; [140] see Belknap, Lori

Kelly, Katherine [108] see Vargo, Barbara A.

Kelly, Lucretia (Washington University)

[140] *A Bird's Eye View of Moorehead Phase Ritual at Mound 34, Cahokia*

Large quantities of faunal remains recovered from Cahokia have enabled the delineation of significant patterns of animal use throughout its history. In this paper I present three lines of evidence, zooarchaeological data, archaeological context, and ethnographic and ethnohistoric accounts of American Indians in the mid-continent, to examine what roles several rare bird taxa from Mound 34 may have played in Moorehead Phase ritual activities. These bird remains

contribute to ongoing studies regarding a significant change in symbolism and ideology in the region at the end of the twelfth and beginning of the thirteenth century, referred to as the Moorehead Moment.

Kelly, Robert (University of Wyoming)

[119] *Me and Lew; or, How One Archaeologist Changed the Discipline in Ways he Might Not Know*

Through his students, Binford has influenced the field of archaeology in ways that he might not fully appreciate. Here, I discuss two: the use of wetland resources in the Great Basin and the timing of the colonization of the New World. His approach to archaeology was influential in creating the productive debates that are essential to learning something about the past.

[208] *Discussant*

Kelly, Sophia (Arizona State University)

[17] *Transformations to Gendered Labor Roles with the Rise of a Hohokam Specialized Economy*

Marked increases to the scale and intensity of prehistoric Hohokam pottery production during the Sedentary period imply dramatic shifts to male and female labor roles. This paper uses ethnographic and ceramic sourcing data to model changes to the gendered division of labor in Phoenix Basin pottery production. Foremost, it employs a cross-cultural ethnographic analysis of specialized economies to construct scenarios for a gendered division of labor in craft production. The study then assesses each of these scenarios in the Phoenix Basin with ceramic sourcing data.

[17] *First Chair*, [17] *First Organizer*; [100] *see Watkins, Christopher N.*

Kelly, Tim [59] *see Howe, Mark L.*

Kemp, Brian (Washington State University), Cara Monroe (Washington State University), Phil Geib (University of New Mexico), RG Matson (University of British Columbia) and William Lipe (Washington State University)

[84] *Genetic Analysis of Coprolites from Southeastern Utah*

Here we report our findings on mitochondrial DNA (mtDNA) variation in coprolites found in two nearby rock shelters in Southeast Utah that were occupied asynchronously: Turkey Pen Ruins [a Basketmaker II period population (1600-2100 YBP)] and Old Man Cave [an Archaic period population (6,000-9,000 YBP)]. Combined with previously collected mtDNA from extant populations, these coprolite data allow us to estimate the degree of biological continuity in the northern Southwest over a roughly 9,000 year period. Preliminary results indicate that some lineages present in contemporary Southwestern Native Americans are of great antiquity.

Kemp, Brian [122] *see Lorenz, Joseph G.*; [84] *see Nott, BreAnne M.*; [19] *see Bocinsky, R. Kyle*; [56] *see Monroe, Cara*

Kendall, Bryan (University of Iowa)

[219] *From Woodland Rockshelters to the New Deal: Archaeology of Lost Canyon Wildlife Management Area, Northeast Iowa*

Ongoing archaeological survey has identified an abundance of sites within Lost Canyon Wildlife Management Area in northeastern Iowa. The material record indicates a range of use of the locality from the Archaic to Historic times. Particularly noteworthy are the number of cave and rockshelter deposits, which have been minimally impacted by modern human activities, and a masonry dam constructed by the Civilian Conservation Corps in 1935. The results and outcomes of the project highlight the benefits derived from the collaboration and support of local, state, and federal entities in pursuit of research, conservation, and community outreach.

Kendell, Ashley (California State University, Chico)

[171] *The Crow Creek Massacre: The Role of Gender in Scalping Practices*

The purpose of this presentation is to evaluate the potential for differential treatment between the sexes at the Crow Creek Site. With

over 90% of the Crow Creek villagers falling victim to scalping, the site lends itself to the analysis of observable trends in scalping practices within the archaeological record. The Crow Creek dataset was analyzed using parametric tests, including ANOVA, which verified that there is a statistically significant difference in the mean number of cuts observed on female and male crania, with females displaying a higher mean number of cuts.

Kenmotsu, Nancy (Geo-Marine, Inc.) and Myles Miller (Geo-Marine, Inc.)

[87] *Measuring Diversity in Land Use and Settlement Intensity in the Jornada Mogollon before and after A.D. 1000*

Using macrobotanical data, burned rock technology, and architecture from recent syntheses and excavations in west Texas and southern New Mexico, this paper discusses changes in land use and settlement intensity in the region before and after AD 1000. This robust data set indicates that an intensification of agricultural production in the region began around AD 1000, sharply increasing after AD1150 and, between A.D. 1150 and 1300, was matched by intensive wild plant processing. The underlying factors for these changes—an interplay between climatic, demographic, and social factors—will be explored to suggest their wider implications within the greater Southwest.

Kenmotsu, Nancy A. [33] *see Griffith, Tabitha L.*

Kennedy, James [235] *see Randklev, Charles*

Kennedy, John [228] *see Cooper, Judith R.*

Kennedy, Nedenia (U.S. Army Corps of Engineers, South Pacific Divisi)

[235] *Building Strong in the West: South Pacific Division's Cultural Program*

To comply with the NHPA and related legislation, the Corps has a dynamic cultural and historic preservation program in the Southwest. Its archaeologists and historians undertake and, or, oversee archaeological, historical, and restoration projects to support its navigation, ecosystem restoration, flood damage reduction, military, and emergency projects. These include historic property survey and inventory at sites ranging from Folsom Prison to Early Archaic pit structures, varied ports and harbors, historic acequias, Lower Mississippian mounds post-Katrina, and 1,300 levee miles along the Sacramento River. The Division sustains tribal partnerships and coordination with other interested publics throughout the region.

Kennedy, Ryan (GA Department of Natural Resources) [48] *First Organizer*; [48] *First Chair*

Kennedy, Ryan [48] *see Pezzarossi, Guido*

Kennett, Douglas (University of Oregon) and Brendan Culleton (University of Oregon)

[250] *Testing Behavioral Ecological Models with Isotope Seasonality Studies in Coastal Settings*

In this paper we summarize the use of oxygen isotope analysis of marine and estuarine mollusk shells from prehistoric midden deposits to test models derived from human behavioral ecology, specifically central place foraging theory. Two examples are presented, one from the Pacific tropical lowlands of southwestern Mexico and a second from the Northern Channel Islands of California. We highlight the importance of model formulation and testing and cover several substantive issues related to inferring seasonal shellfish harvesting strategies and settlement use in different environmental and cultural contexts.

[197] *Discussant*

Kennett, Douglas [197] *see Culleton, Brendan J.*

Kennett, James [224] *see West, Allen*

Kent, Jonathan (Metropolitan State College of Denver) [222]
Discussant

Kersel, Morag (Brown University)

[237] *Objects of Desire: Archaeological Artifacts in the Marketplace*
At every stage in the trade in antiquities there are actors and agents who stake a claim to the looted objects and who assign value to the artifacts. For each of these interest groups the ascribed meanings may differ entirely and may even be oppositional in stance. This paper will examine the values attributed to looted artifacts by one of these interest groups – the collector (museum, educational institution or individual). Grounded in ethnographic, criminological and legal theory, this paper is a discussion of the values of looted objects and the competing demands for those contested items from the Middle East.

[237] *Second Organizer*

Kerttula De Echave, Anna (National Science Foundation) [141]
Discussant

Kessler, Nicholas (University of Kansas) and Rolfe Mandel (University of Kansas/Kansas Geological Survey)

[259] *Late-Quaternary Landscape Evolution and Environmental Change in the Red Hills of South-Central Kansas: Implications for Archaeological Research*

This paper presents the results of recent geoarchaeological and paleoecological investigations in Driftwood Creek valley, a typical small stream in the Red Hills of south-central Kansas. Soil-stratigraphic and 14C data were used to determine temporal and spatial patterns of erosion, sedimentation, and landscape stability in the study area. These patterns help explain the distribution of recorded archaeological sites in the valley, and are the basis of a predictive model used to search for buried cultural deposits. Also, late-Quaternary environmental changes that would have affected prehistoric human subsistence are inferred from $\delta^{13}C$ values of soil organic matter preserved in buried soils.

Kettler, Kurtis, Grant McCall (Tulane University), Jonathan Thomas (University of Iowa), Merritt Sanders (Tulane University) and Sherman Horn (Tulane University)

[35] *Later Stone Age Lithic Technology from Erb Tanks: Microlithic Technology and Holocene Specialization in the Central Namib*

This paper discusses the Later Stone Age (LSA) lithic technology from Erb Tanks in the central Namib, Western Namibia. The LSA occupation of Erb Tanks begins in the Middle Holocene, after 8ka, and continues into the period of European colonial contact. This time span includes both the adoption of pastoralism and its historic disruption by colonization. This paper examines the organization of lithic technology during the LSA and explores its variation over time resulting from these historical dynamics. The paper also presents a description of knapped bottle glass pieces and the implications of these for historic-period lithic technology.

Kettler, Kurtis [35] *see Horn, Sherman W.*; [35] *see McCall, Grant S.*

Keyser, James (US Forest Service-Retired)

[171] *Weapons of War: Protohistoric Arms and Accoutrements in Bear Gulch Rock Art*

Central Montana's Bear Gulch has the richest known rock art record of Late Prehistoric and Protohistoric period weapons and warrior accoutrements. Continuing research has identified detailed depictions of ten weapons, seven headdresses, medicine bundles, feather bustles, and more than a dozen heraldic shield designs. All these show that both the symbolism and structure of Historic period Plains Indian warfare were well established in pre-contact times.

Khozhanizayov, Ghairadin [32] *see Brite, Elizabeth Baker*

Kiahtipes, Christopher A. [53] *see Safi, Kristin N.*

Kidder, Tristram [61] *Discussant*; [189] *see Liu, Haiwang*; [251] *see Spivey, S. Margaret*

Kieffer, C. L. (University of New Mexico)

[148] *The Bones From Above: Osteological Analysis of Actun Yaxteel Ahau's Upper Level*

Actun Yaxteel Ahau, a large cave in the Roaring Creek Valley of Belize, was explored by the Western Belize Regional Cave Project in 1998 and 1999. A subsequently discovered upper level passage was mapped and surveyed in the spring of 2009 by archaeologists from California State University, Los Angeles. The survey documented 13 contexts containing osteological remains of at least 15 individuals. The depositions were noteworthy for the paucity of long bones and the prevalence of smaller bones such as those of the hands and feet. Differences and similarities with deposits on the lower level are discussed.

[148] *First Chair*; [148] *Second Organizer*

Kiker, Cody [210] *see Bement, Leland*

Kilby, David (Eastern New Mexico University)

[210] *Toward Understanding the Functions of Clovis Caches*

Uncertainty surrounding the function of caches has been a fundamental impediment to incorporating both the phenomenon of caching and data from cache assemblages into a broader understanding of Clovis technology and land use. The research presented here undertakes comparisons between individual Clovis caches and specific expectations for various cache functions derived from ethnographic and archaeological research. Results indicate that all Clovis caches did not serve the same purpose, but can be assigned to four basic functional categories that reflect both ritual and utilitarian uses. Patterns in the geographic distribution of cache functions suggest regional variation in Clovis land use strategies.

[210] *First Chair* [210] *Second Organizer*

Kilby, David [210] *see Huckell, Bruce B.*

Killick, David (University of Arizona) [126] *Second Chair*

Kilmarx, John [162] *see Neusius, Sarah W.*

Kim, Lynn (University of Texas at San Antonio)

[45] *Modes of Interaction: The Tiwanaku Polity and the Inka Empire in the Charazani Region*

The Tiwanaku and Inka polities employed varying modes of interaction to gain political control in Charazani. To identify the modes of interaction, I examined the variation of ceramic types across sites, ecological zones, and time periods. As a result, I found that the Tiwanaku polity formed colonies in strategic locations and established vertical trade and alliances. Additionally, Charazani locals emulated Tiwanaku style and ideology. In comparison, the Inka Empire created vertical trade and alliances, but not colonies. Instead, the Inka constructed various architectural features and granted a privileged status to the locals, which reinforced Inka political control in Charazani.

Kim, Lynn [45] *see Alconini, Sonia*

Kim, Nam (University of Illinois at Chicago)

[189] *Terrain, Interregional Interaction, and Reciprocal Complexity in Metal Age Northern Vietnam and Southern China*

Recent archaeological investigations performed at the fortified, proto-urban site of Co Loa in northern Vietnam have indicated the emergence of a state-like polity sometime during the closing centuries of the first millennium BC. This paper evaluates the role that geographic terrain and interregional interaction between Metal Age communities of northern Vietnam and southern China may have played in a reciprocal process of social evolution. Specifically, it addresses the apparently simultaneous emergence of political complexity in Dongson and Dian Culture societies, exploring the nature and effects of an interregional exchange network.

Kimsey, Christopher (University of Iowa)

[30] *An Analysis of Personal Items Found at the Old Third Street Cemetery*

The Old Third Street Cemetery located in Dubuque, Iowa is one of oldest Euro-American cemeteries in Iowa. It was the official consecrated cemetery for large parts of Dubuque's Catholic community from the late 1830s until the early 1870s. Excavations in 2007-2008 recovered approximately 600 burials, many with associated grave goods. An analysis of the personal items, primarily clothing items and religious icons (rosaries and medallions), found with the interred help elucidate the levels of social and economic differentiation of mid-eighteenth century Dubuque. Specifically, this study considers how the quality and quantity of graves goods vary across age, sex, and socioeconomic status.

Kimura, Birgitta (University of Florida), Connie Mulligan (University of Florida) and Fiona Marshall (Washington University)

[182] *A 2000 Year Old Mule on the Moroccan Coast?*

Ancient DNA can be used to determine the species of fragmented remains from archaeological sites. Here we report our ancient DNA analysis of a tooth from Grotte des Idoles in Morocco that had been tentatively identified as donkey based on morphology. Our analysis of 171 base pairs of mitochondrial DNA identified a maternal signature of horse, suggesting the specimen may be a mule, i.e. the offspring of a female horse and male donkey. We discuss the advantages of a combined morphological and genetic approach for identification of archaeological remains and insight into the history of the horse in North Africa.

Kimura, Jun [189] see *Sasaki, Randall J*

Kindler, Lutz (Römisch-Germanisches Zentralmuseum), Dimitri De Loecker (Leiden University), Jagich Adam (Leiden University), Sabine Gaudzinski-Windheuser (Römisch-Germanisches Zentralmuseum) and Wil Roebroeks (Leiden University)

[184] *Site Formation Processes and Taphonomic Histories at an Eemian pond at Neumark-Nord 2 (Saxony-Anhalt, Germany)*

The poster reports about current research at an 18,000m² basin in an abandoned open cast mine – Neumark-Nord 2. The Pleistocene infillings of the basin reveal an archive of the last Interglacial on the Northern European Plain – the Eemian. High chronological resolution allows for an accurate reconstruction of the terrestrial stratigraphy and environmental development of this interglacial. In a spatially restricted area along the rim of the basin more than 130,000 faunal remains and Middle Palaeolithic artefacts with outstanding preservation were uncovered. Find distribution and sedimentological investigations provide detailed insights into the site's formation processes and taphonomic histories.

King, Adam (SC Institute of Archaeology and Anthropology) and Alexander Corsci (University of South Carolina)

[115] *Etowah's External Connections as Revealed by Style and Iconography*

In this paper, we explore connections between the Etowah site and other regions from AD 1250 to 1400. To do this, we examine artistic style and imagery found on copper, marine shell, and pottery from Etowah's Mound C. Those connections reveal a corridor extending from northern Georgia through the Nashville Basin and to southeastern Arkansas and the Missouri Bootheel. We view the western terminus of this corridor as the successors, both in terms of art and power, of the Great Early Mississippian center of Cahokia, and we explore the implications of its ties to Etowah.

King, Stacie [196] see *Konwest, Elizabeth R.*

King, Eleanor (Howard University) [42] *First Organizer*; [42] *First Chair*; [42] see *Taylor, Christine S.*

King, Jason (University of New Mexico), Jane E. Buikstra (Arizona State University)

[127] *Liturgic Sequences and Variability in Middle Woodland Floodplain Mounds*

Middle Woodland (ca. 50 cal B.C. – cal A.D. 400) Lower Illinois Valley floodplain mound sites have long been the focus archaeological inquiry. However, the structure of these sites, as well as the internal variability of mounds therein, has remained relatively unexamined at a fine scale. Excavations at the Mound House site (11GE7), Greene County, Illinois, have revealed the structure, orientation, and directionality of floodplain mounds can be understood as liturgic sequences anchored in indigenous ritual and cosmological concepts. In addition to these structural regularities, intra- and inter-site variation demonstrates flexibility in construction rules as well as temporal effects.

King, Kenneth (Blair Mtn. battlefield)

[167] *The Blair Mountain Battlefield, Logan County, WV*

I have been working to preserve the Blair Mountain battlefield since 1991, and have initiated, organized and participated in most of the archaeology that has been undertaken at the site. I have lived most of my life near the battlefield and my grandfather fought on the union miners' side. In this presentation I will be talking about mountaintop removal coal mining and it's affects on the site, preserving the site, and efforts to have it placed on the National Register of Historic Places.

King, Maureen L. [211] see *Edwards, Susan R.*

King, Robert (Bureau of Land Management)

[223] *The Iditarod National Historic Trail: A Unique NLCS Unit in Alaska*

Running from Seward to Nome, over 900 miles, the Iditarod National Historic Trail, America's last great gold rush trail, is one of the nine National Landscape Conservation System units in Alaska. It is a system of around 2,400 miles of trails that served Alaska's wintertime commerce needs during the gold rush period of the early 20th century. This paper examines the history of the Iditarod Trail, including archaeological and archival discoveries. It also reports on new work in managing the trail for today's population involving partnerships projects among the BLM, other owners of trail segments, and various interested groups.

King, Stacie (Indiana University) and Danny A. Zborover (University of Calgary)

[228] *Garrisons, Forts, Hideouts, Rancherías, or Shrines?*

Interdisciplinary Research on Zapotec, Mixe, and Chontal sites in the Sierra Sur of Oaxaca, Mexico

The remote mountains of the Sierra Sur of Oaxaca, Mexico hardly seem ideal places for extensive human occupation, yet Zapotecs, Mixes, and Chontales heavily engineered and inhabited these mountain landscapes for over a millennium. The prevalence and striking diversity of mountain sites force us to reconsider the common archaeological interpretation of mountain peaks as resource-poor, undesirable, marginal, and circumscribed. Bringing together archaeology, ethnohistory, and oral history, we argue that both in the past and the present, mountain peaks have been viewed as sacred, traditional homelands and the heavy social investment in these locations responds to a variety of factors.

[196] *Discussant* [174] *Discussant*

King, Timothy [239] see *Striker, Michael*

King, Violet (Howard University)

[42] *Reconstructing Hermosa: Piecing Together the Past Using Historical Archaeology*

There are only two original buildings left in the ghost town of Hermosa, NM, a small mining town established in 1883 and abandoned by 1920. The hotel, still in situ, and a relocated post office are all that remain to give us clues about the layout of the old town. This poster will detail the steps necessary to begin reconstructing

Hermosa, using information from ground-penetrating radar and excavation as well as photographs, newspaper articles, and other accounts. The aim is to demonstrate a good model for archaeological reconstruction and produce an accurate, preliminary account of the town's layout and organization.

Kingsley, Melanie (Brandeis University)

[54] *Laguna Mendoza: Island Settlement in a Shifting Maya Landscape*

Island settlements in the Maya World, such as Lake Peten Itza in Guatemala or Cozumel in Mexico, are most often discussed in regard to their Postclassic occupation. Laguna Mendoza, a small lake with a scattering of island sites in Southwestern Peten, however, has an unusually long chronology for lowland Maya archaeological sites, stretching from the Preclassic to the Historical Periods (300 B.C.-present). This paper will present preliminary findings from the 2009 field season and demonstrate that the changing use of space at Laguna Mendoza, in contrast to other island settlements, reflects the deep shifting political history of the region.

Kintigh, Keith (Arizona State University) [93] Discussant [12] Discussant

Kipnis, Renato [47] see Strauss, André

Kirakosian, Katie (UMass Amherst) [174] First Organizer; [174] First Chair

Kitagawa, Keiko (University of New Mexico)

[74] *Comparing Oxygen Isotope of Modern Bison Teeth*

Stable isotopic analyses demand that researchers understand modern biochemical processes and patterns to interpret isotopic measurements of past faunal and bioarchaeological materials. Using modern bison teeth, this study attempts to quantify variability in oxygen isotope values among cheekteeth from a single mandible, which is expected to differ for the first molar, and furthermore, compare signals from two main substances that form teeth: enamel and dentin. The main purpose of this study is to underscore biological factors that influence the isotopic measurement, which is a key step that allows researchers to use the data to infer and reconstruct past environmental conditions.

Kitchel, Nathaniel (University of Wyoming)

[21] *The Role of Plant Food Resources in the Northeastern Paleoindian Diet before 10,000 B.P.*

The role of plant foods in the Paleoindian diet before 10,000 B.P. remains speculative with little direct evidence of plant food exploitation known from the archaeological record. Carbonized seeds recovered from a Paleoindian age hearth at the Colebrook site (27CO38), located in Colebrook, New Hampshire provide insights into this poorly understood area of prehistory. The recovery of these seeds allows for the creation of a more robust picture of the role of plant foods in the Paleoindian diet and subsistence practices in general.

Kittel, Michelle (CSU Stanislaus), Catalina López (CSU Stanislaus), Roberto Ramirez (IHAH), Ryan Johnson (CSU Stanislaus) and Santiago Morales (IHAH)

[258] *Hinterland Households: Rural Settlement in The El Paraíso Valley, Western Honduras*

We draw on recent investigations in two rural household groups and an opportunistic test-pitting program in the modern town of El Paraíso to examine the affiliations of Classic period smallholders in the region. While rural settlements near the larger centers of El Cafetal and El Paraíso exhibit the same broad distinctions in site planning, construction styles, and material culture seen at each (local patterns at El Cafetal and Copan Maya patterns at El Paraíso) they are far less pronounced in the rural settlements, suggesting that engagement with these diacritics was significantly different for rural residents.

Klar, Kathryn

[68] *New Linguistic Evidence for Polynesian Contacts*

Since identification four years ago of three words in two southern California Native languages that suggest prehistoric contact with Polynesia, additional information has started to accumulate from both North and South America. In this paper I will discuss three new findings: (1) a word for "sewn-plank canoe" from the western Patagonian language, Alakaluf; (2) an intriguing set of words for "harpoon" or "spear point" from around the southern Pacific basin (North and South America, and Polynesia); (3) the Quechua word *walpa* (meaning chicken). The latter is especially important in light of the recent identification of pre-Columbian Polynesian chicken remains in South America.

Klassen, Sarah (Dartmouth College)

[204] *El Antigual: A Test of Surface Collection Methods*

This poster reports on a research project designed to determine the usefulness of survey data in representing the full occupational sequence and the kinds of activities undertaken at El Antigual, Roatán Island, Honduras. Preliminary surface survey suggests that the site dates to the Late Postclassic period (ca. AD 1200-1519). This idea was tested by comparing ceramics from surface survey against those from subsurface deposits at the site. The research also considers how past and future development on the island has acted to obscure the integrity of surface and subsurface deposits and therefore condition our understanding of chronology on the island.

Klehm, Carla (University of Texas at Austin), Borbola Nyiri

[149] *Countering Centralization and Specialization in the Benta Valley: Ceramic Production, Use, and the (In)Visibility of Hierarchy*

During the Bronze Age, the Benta Valley region increasingly participates in long-distance trade, diversifying its subsistence and technological base as the population expands and aggregates. Although emerging fortified centers control specialization in some economic aspects, localized production, use, and exchange of ceramics provide a counter-case. Rather than centralized specialization, multiple ceramic specialists, broadly spread throughout the valley and not controlled by the hierarchical settlements, confront or at least mitigate these social divisions by emphasizing cultural commonality. Interestingly, social inequality remains indirectly indexed through the socioeconomic behaviors and relationships associated with the everyday ceramic use, which will also be explored.

[149] *First Organizer; [149] First Chair*

Klein, Joel (John Milner Associates Inc) [130] Discussant

Klein, John (Archaeological Research Center of St. Louis)

[2] *Mississippian Beginnings: A Lithic Perspective of the Alexander Jacob Site*

An analysis of lithic artifacts recovered from the Alexander Jacob site (11MS2288) has yielded interesting information about the different material types and stone tools utilized during the habitation. Given the environmental setting and occupational time period of the site, the lithic data exemplifies important characteristics indicative of the commonalities and variability of early Mississippian culture. What can the Alexander Jacob site tell us about this cultural variability? A comparison of contemporaneous sites within the Greater American Bottom attempts to relate the lithic data recovered to site specific conditions, while exploring changing cultural patterns at the beginning of the Mississippian period.

Klimowicz, Arkadiusz (Institute of Prehistory AMU & SUNY at Buffalo)

[186] *Socio-cultural nature of Early Chalcolithic Phenomenon in the Central Anatolia.*

This paper examines the nature of the dynamic socio-cultural transformations in Central Anatolia in the period between the end of the 7th and the first half of the 6th millennium BC which is labeled in Anatolian terminology the Early Chalcolithic (6000-5500 BC). This paper argues that although in a traditional terminology the term Chalcolithic is often homogenous with the Copper Age there are

significant changes which go beyond the introduction of metal. It will be stressed that the essence of transformation in this period is social and economic and also includes visible changes in the settlement pattern. The majority of known Neolithic settlements were abandoned and the new settlements formed new agglomerations with significantly different characters. One of them was located in a vicinity of the older Neolithic occupation while the other was placed in a completely new area. A reason of location of the latter cluster remains unknown and its nature have not yet been investigated. Previously dominant life in larger clustered neighborhood communities had lost their meaning. More autonomous household and the increased competition over resources would have led to a functionally different system and organization of settlement. Hence, the question arises to what extent broken bonds of the Neolithic identity/tradition contributed to cultural, social, economic, and ideological syncretism of early farming communities in the Early Chalcolithic?

Kling, Amber (SUNY at Buffalo), Chad Gifford (Columbia University), Eric Dyrdaahl (The Pennsylvania State University), Matt Schauer (University of Illinois at Chicago) and Oscar Flores [45] *The Pambamarca Archaeological Project Stealth Fortress Study: Creating Classifications for Mountain Forts*

The Pambamarca Fortress Complex is one of the most tightly clustered military installations in the Inca Empire, containing both indigenous and Inca fortifications. Past excavations revealed many interesting cultural aspects about these fortifications, including different construction techniques and layouts, as well as the presence of various artifacts. Recent work focused on gathering data from all fortifications in the area to create site typologies and classification systems for all forts. This will help us better understand all the sites and can aid in identifying different occupation periods or reconstruction phases which could be attributed to culture, or possibly warfare.

Klinge, David (ASC Group, Inc.)

[179] *Rural Industry, Class, and Community in Nineteenth-Century Southwest Ohio: 33CN428, 33CN430, 33CN433, and 33CN460*
During the archaeological investigations for the REX-East pipeline in Southwest Ohio, ASC Group, Inc. identified, evaluated, and conducted data recovery excavations on four historic sites in northern Clinton County. The four farm sites are located in Liberty Township and are clustered around the small village of Port William. Comparing the sites, including evidence of the preservation of outdated construction methodologies and supplemental, non-agricultural cottage industries, brings to light the class structure and community that existed in the region during the second half of the nineteenth century.

Klink, Cynthia J. [162] see Walker, Renee B.

Knappett, Carl (University of Toronto) [113] *First Organizer*; [113] see Rivers, Ray; [145] *Discussant*

Knell, Edward (CSU, Fullerton)

[6] *Organization of Lithic Technology at the C.W. Harris Site, California: Type Site for the Early Holocene San Dieguito Complex*
The C.W. Harris site, the type site of the early Holocene San Dieguito cultural complex in San Diego County, California, is important to the prehistory of southern California and neighboring regions. Originally excavated in the 1930s, the site has been the subject of subsequent research with the data for this analysis excavated in the 1950s and described by Claude Warren and D.L. True. Whereas much of the prior lithic research has focused on typological issues, this analysis describes the organization of lithic technology regarding patterns of lithic procurement, production, use, discard, and transport.

Kneller, Janet (Archaeological Research Center of St. Louis, Inc.) and Sophie Kohn (Archaeological Research Center of St. Louis)

[2] *Utilitarian Pottery at the Alexander Jacob Site (11MS2288) That is*

Better than any Effigy Pot!

[Utilitarian Pottery at the Alexander Jacob Site (11MS2288) That is better than any effigy pot] Pottery from the Alexander Jacob site (11MS2288) is typical of the early Lohman phase in the American Bottom. One of the most common vessel types was shell tempered jars with everted or extruded rims and angles shoulders. Additionally seed jars, Monk's Mound Red bowls, and grog, grit, grit/grog and limestone tempers were also used. This pottery will be compared to other sites in the greater American Bottom area from this time period to ascertain trends in temporal and spatial distribution patterns.

Knipper, Corina [184] see Fisher, Lynn E.; [184] see Harris, Susan K.

Knudson, Ruthann (Knudson Assoc., Calif. Acad. Sciences, Mt St. U)

[51] *Making the Old Ones Real: Ruthann Knudson's Life as an Anthropologist*

Ruthann Knudson's parents taught her to respect all people, that she could do most anything she wanted to, and that she was just one part of the natural world around her. That basis with solid training in anthropology at the University of Minnesota, and Quaternary Studies at Washington State University, has led to a diverse life. Teacher, scholar, Congressional lobbyist, cultural resource manager, interface manager, archeologist, national park Superintendent, technical illustrator, writer, speaker—all labels that fit from time to time. Throughout it all, she has been driven to help unravel the secrets of Paleoindian women's, men's, and children's lives.

[50] *Discussant*

Kobti, Ziad (University of Windsor) and Denton Cockburn (University of Windsor)

[19] *Village Functional Specialization Framework*

The Pueblo did not all perform the same tasks as not everyone had access to the same productive resources. Some resorted to pottery-making, trading these goods for sustenance goods such as maize or meat. Two of the primary methods of exchange were kin-based and trust based. We explore the concept of agent functional specialization. Agents determine how to allocate their time between necessary tasks, with more than just their family's needs to take into account. We extend the trading system in our current model to allow agents to trade these surplus goods for other goods.

Koenig, Charles [22] see Johnson, Angela K.

Koerner, Shannon (University of Tennessee)

[228] *Mississippian Frontiers in the Highlands of Southern Appalachia*
Excavations in Tuckaleechee Cove, bordering the Great Smoky Mountains National Park in Tennessee, provide evidence of Native American settlement in the Southern Appalachian highlands. Pottery studies from Late Prehistoric assemblages indicate long periods of interaction among culturally-distinct peoples from the eastern Tennessee Valley and the highlands of North Carolina. Although the Cove was used for millennia before ca. AD 1300, its use lessened after this time and evidence of Tennessee Valley material culture disappears. A sustained investment in the Cove by more eastern groups after ca. AD 1300 may stem from cultural differences in the use of highland resources.

Kohler, Tim (WSU/SFI/CCAC)

[14] *Making Use of the Strengths of Southwest Archaeology to Understand Social Construction Processes*

Understanding how and why societies can become larger--what has sometimes been called reaching new levels of integration--remains a key goal of any archaeology that tries to connect with evolutionary theory, where how and why these transitions occur are of paramount concern on all scales from cells to societies. Key transitions that can be observed more clearly here than in most other places include the rise of trans-household corporate kin groups, trans-kin-group communities/pueblos, and trans-community confederacies/polities. Empirically calibrated agent-based modeling and evolutionary social

network-based approaches will provide frameworks to study these processes generally, as they play out more specifically in local southwestern histories.

[14] *First Organizer*, [19] *Discussant*; [19] see *Crabtree, Stefani A.*; [19] see *DeFrank, Laura*

Kohn, Luci [215] see *Brugam, Richard B.*

Kohn, Sophie

[37] *Immigration or Innovation at Paquimé, Chihuahua, Mexico*
Hypotheses regarding the origins of the Medio period fluorescence at Paquimé in Chihuahua, Mexico have looked to Mesoamerica and the US Southwest. Paquimé has alternately been described as a Mesoamerican trade outpost or a purely Southwestern site, with varying amounts of migration. The proposed research asks whether Mesoamerican goods, iconography and ideology were imported and/or emulated by Medio period peoples, or whether migrants took up residence in the Casas Grandes region. Dental measurements are used to test the hypothesis that a large scale migration in to Paquimé was responsible for cultural modifications during the Medio period.

[2] see *Kneller, Janet E*

Kohut, Betsy (University at Albany, SUNY)

[20] *A Non-Domestic Lithic Workshop in Barrio Itzmal Ch'en, Mayapán*

Occupational specialization was well-developed at Mayapán, but varied across the city in complex ways. This paper reports investigations of an independent lithic workshop facility in a barrio nearly 2 km from the site center. This type of facility, which is spatially separated from domestic residences, has been rarely documented in Mesoamerica. The structure was fully excavated and the lithic debris was studied with mass and individual flake analysis techniques. Craftspersons at this workshop focused on late-stage production of projectile points and bifaces. Comparisons with a domestic workshop in downtown Mayapán reveal significant differences in debris size and raw material quality.

Kolb, Charles (National Endowment for the Humanities) [126]
Discussant

Kolb, Michael F. [150] see *Hambacher, Michael J.*

Kolb, Mike (Strata Morph Geoexploration, Inc) and Edwin Hajic (GeoArch Research)

[146] *Pre-Clovis, Paleoindian and Early Archaic Landscapes in the Central Mississippi River Valley Region*

The location, preservation, condition and visibility of potential and known early prehistoric cultural deposits in the Central Mississippi River Valley, St. Louis vicinity, largely are a function of terminal Wisconsin and Early Holocene fluvial environments and processes, and subsequent geomorphic processes. Large volumes of valley fill are too young to host such deposits. However, some key suitable landscapes of appropriate age are preserved. These include former shorelines of backflooded tributary valley lakes; outwash terraces (exposed and buried); and, colluvial slopes and eolian deposits on the aforementioned surfaces. Examples will include contexts of some sites presented in other symposium papers.

Koldehoff, Brad (ITARP University of Illinois) and Steven Ahler (University of Kentucky)

[146] *Kimmswick and Modoc in Context*

Last investigated some 30 years ago, the Kimmswick Clovis-Mastodon killsite and the Modoc Rockshelter continue to hold key positions in our understanding of early lifeways in North America. In this paper, Kimmswick and Modoc are placed within a regional context by briefly summarizing recent investigations at a series of early sites in adjacent sections of the Middle Mississippi Valley and interior uplands. Lithic data from these sites demonstrate that, while Dalton mobility patterns are strikingly different from those of Clovis, they are strikingly similar to those of Early Archaic groups. This observation along with others supports the notion that Dalton culture

marks the emergence of a new more settled lifestyle and is not a continuation of the Paleoindian tradition.

Koldehoff, Brad [146] *First Chair*; [146] *First Organizer*; [146] see *Yerkes, Richard W.*; [146] see *Morgan, Brooke M.*

Kolvett, Renee [211] see *Slaughter, Mark C.*

Komšo, Darko [9] see *Tykot, Robert H.*

Konwest, Elizabeth (Indiana University, Bloomington) and Stacie King (Indiana University, Bloomington)

[196] *Moving Towards Public Archaeology in the Nejapa Valley of Oaxaca, Mexico*

Starting any new archaeological project comes complete with difficult challenges and gratifying rewards. This is especially true for a project that seeks to incorporate public archaeology from its very inception. The Proyecto Arqueológico Nejapa y Tavela was initiated in 2007 by Stacie M. King in an area of Oaxaca without previous formal archaeological work. This discussion will explore the various methods we have used to incorporate a public component from the beginning of the project until the present. As this is an ongoing project, we also suggest directions that might be worth further exploration.

Koontz, Rex (University of Houston)

[13] *The Role of the Palma in the Construction and Maintenance of Central Veracruz Elites*

This paper proposes that Classic Veracruz palms manifested elite identities as the inalienable possessions of specific officeholders in a developing courtly system c. A.D. 600-1000. After identifying these objects with political offices surrounding the transfer of rulership, I argue that these possessions were so integral to the offices that changes in form and narrative strategy in the "yoke-hacha-palma" complex may be interpreted as signs of change in elite hierarchies and strategies.

Kornfeld, Marcel (Frison Institute - University of Wyoming) and Mark Miller

[28] *Doing it Wyoming Style: Avocational Archaeologists Out West*
Wyoming and the Rocky Mountain west are natural for outdoor activities where an abundance of artifacts has intrigued the regional population for decades and created an interest in the past. Although some of the earliest archeologists in the area were professionals much archeology over the past century was conducted by avocational archeologists. The formation of the Wyoming Archeological Society in the 1950s organized the avocational community into a state organization with local chapters which conducted the first archeological investigation in the state. Avocationalists have played significant roles, including research, lobbying for legislation, fundraising, and in all aspects of Wyoming Archeological endeavor. This presentation highlights several members of the past and present avocational community.

Kornfeld, Marcel [21] see *Larson, Mary Lou*; [28] *First Organizer*; [38] *First Organizer*

Korosec, Greg [117] see *Zubrow, Ezra B.*

Kosiba, Steven (Monmouth University)

[18] *The Sanctity of Home: Social Crisis and Sacred Things within Inka Households*

Examining the social roles of huacas in the Andes requires a consideration of how the sacred is differentially constituted relative to political claims in specific historical contexts. This paper presents recent excavation data from houses in the heartland of the Inka Empire (Cusco, Perú) in order to examine how sacred power was manifested within domestic settings. Diachronic analysis of excavated objects and offerings from Inka households reveals how dramatic ceremonial practices coincided with moments of historical transition and sociopolitical crisis. In these moments of crisis, we see how claims to sacred power are tied to politicized renderings of ontology.

Kotegawa, Hirokazu

[260] *Indumentaria Olmeca: Una Perspectiva a Través de los Monumentos Escultóricos*

Durante el periodo Preclásico, la indumentaria olmeca manifestó el cambio y la continuación en su representación como consecuencia de las preferencias o normas sociales. Además de estudiar la iconografía de los monumentos escultóricos olmecas procedentes de la costa sur del Golfo de México; en el presente estudio se llevarán a cabo análisis comparativos con otras evidencias arqueológicas, con los cuales se complementarán las interpretaciones para entender cómo la indumentaria jugaba un papel relevante en las actividades sociales. Debido a los datos disponibles, este estudio se enfocará en los significados y funciones de la indumentaria en los grupos de alto rango.

Kovacevich, Brigitte (Southern Methodist University)

[17] *Gender, Craft Production and the State: Problems with "Workshops"*

A certain level of complexity is often assigned to societies where craft production has moved from the household to a secondary location or "workshop" where no domestic activity takes place, emphasizing the male/public vs. female/private dichotomy. The household can be the center of production pre-state, but also after the state emerges, as in Mesoamerica. Household production does not necessarily denote a lower level of sociopolitical or economic development. In state-level societies the household can be the locus of women's and men's work, and provide important information about craft production by all genders and ages.

Kozuch, Laura (University of Illinois), Mike Lewis (University of Illinois) and Stephanie Daniels (University of Illinois)

[217] *The Unknown Cahokia Collections*

Due to decades of neglect and obscurity, Cahokia collections at the University of Illinois dating back to the 1920s made by Warren K. Moorehead and others have gone largely unknown. They include a collection from the Powell Mound destruction in 1930-31 by A.R. Kelly, and 450 boxes from CRM projects between 1959 and 1991, by Charles J. Bareis. Collections are from most areas at the Cahokia site. With funding from the National Endowment for the Humanities, the entire catalog and some photographs are on-line. Descriptions of each excavation project, and descriptions of archived documents are available in Adobe Acrobat files.

Kradin, Nikolay (Russian Academy of Sciences)

[78] *A Macroscopic View*

Anthropological constants bear directly upon the outcome of cross cultural archaeology. Large scale cross-cultural research in anthropology has revealed important constants that archaeologists need to consider. Some of them are: cultures with populations over 400 are mainly sedentary, cultures with writing systems have three or more levels of control, three or more social classes, and non-human powered transportation. The object of this paper is to explore how these constants affect archaeological cross-cultural analysis.

Kramer, Karen (Harvard University)

[119] *Lewis Binford's Interdisciplinary Reach: Deepening the Dialogue between Ethnography, and Human Behavioral and Biological Variability*

Lewis Binford not only fundamentally changed how we think about the archaeological record, but also substantially influenced anthropological approaches to human behavior. In highlighting the importance of ecology to human variation and challenging traditional perspectives on ethnographic analogy, Binford resituated the relevance of forager populations to address new evolutionary questions. In my research among foragers and other traditional populations, this inspired the perspective that humans are interesting because of their breadth of facultative responses not only behaviorally, but also biologically. Rather than focusing on norms of human behavior, biology and demography, Lew taught us how to learn from variation.

Krause, Kari (Natural Resource Group, LLC)

[179] *Introduction to the Archaeology of the Rockies Express Pipeline-East Project*

Extensive Phase I – III archaeological investigations were conducted as part of the Rockies Express Pipeline-East Project (REX-East) project, which extends 639 miles across the central portions of Missouri, Illinois, Indiana, and Ohio. This paper provides an introduction to the REX-East Project and presents an overview of the Section 106 compliance process, including results of the Phase I survey and Phase II testing. This paper also provides a framework for the other papers in this session by reviewing the efforts undertaken by Rockies Express to avoid, minimize and mitigate effects of the project to historic properties identified along the pipeline route.

Krause, Samantha [91] see Reichardt, Stephen C.**Krigbaum, John (Dept of Anth Univ of Florida), Bryan D. Tucker (University of Florida) and Lindsay Lloyd-Smith (University of Cambridge)**

[214] *Isotopic inferences of Holocene Diet and Seasonality at Niah Cave (Sarawak, East Malaysia)*

This paper presents light isotope data derived from serially sampled tooth enamel recovered from Niah Cave in northern Borneo. d13C and d18O values are presented to infer patterns of seasonality and diet. Previous 'bulk' studies using human tooth enamel from this and neighboring sites focused on d13C variability as a product of both 'total' diet and the canopy effect, while d18O values represented broad scale, climate-related trends. Serially sampling enamel along growth layers offers new perspectives of diet and environmental change and permits key questions to be addressed such as the ecological context associated with new modes of food production.

Krigbaum, John [214] see Price, Gypsy C.; [189] see Valentine, Benjamin**Krochmal, Aaron [88] see Schindler, Bill****Kruchten, Jeffery (ITARP- U. of Illinois) and Joseph Galloy (ITARP- University of Illinois)**

[15] *Uncovering the Early Cahokian Residential Zone at East St. Louis*

Although it is sometimes interpreted as part of Cahokia's urban-administrative core, the East St. Louis site was by itself the second largest city in the Mississippian world. Previous investigations have documented monumental features such as mounds, but ITARP's ongoing excavations for a new interstate are yielding novel data about the city's residential neighborhoods. A substantial, previously unrecognized Lohmann-phase occupation reveals that East St. Louis and early Cahokia developed simultaneously, but the rarity of late Mississippian deposits suggests that it collapsed earlier than its mightier neighbor. Other highlights include a female stone figurine and rare evidence for interaction with Plains groups.

Krueger, Bradley (Texas A&M University)

[80] *Anthony Wayne's Last Stand: The Fight for a Mid-19th Century Great Lakes Steamboat*

The Anthony Wayne, a mid-19th century passenger and cargo steamboat, is one of the oldest archaeological examples of a side-wheeler in the Great Lakes. The remains of the steamer were allegedly discovered in the late 1980s by local treasure hunters who wanted to salvage the vessel for personal gain. The resulting court case was the first one heard by the state of Ohio in regard to the stewardship of historic shipwrecks following the passage of federal legislation. After a fierce legal battle, the treasure hunters were denied, and now the Anthony Wayne is the focus of intense archaeological investigation.

Krus, Anthony (Indiana University)

[257] *Mississippian Hoe Use: A Microwear Analysis of Hoes and Hoe Flakes from the Angel Site*

This paper presents the analytical differences in use-wear patterns and polishes on hoes and hoe flakes of Mill Creek and Dover cherts from the Angel Site (12Vg1), a major Mississippian community located near Evansville, Indiana. Multiple hoes and 64 hoe flakes were analyzed from the Angel Site collection at Indiana University's Glenn A. Black Laboratory of Archaeology. The results show differences between the use-wear formation on hoes of each chert type, potentially from the material properties of Mill Creek and Dover chert and/or how the hoes of each chert type were used.

Kruse-Peeples, Melissa (Arizona State University)

[100] *The Prehistoric Food Supply: Evaluating Self-Sufficiency of Perry Mesa Inhabitants*

The subsistence potential of the Perry Mesa landscape has played an important role in explaining regional settlement patterns. Recent survey has documented an extensive and intensified agricultural landscape including terraces, check dams, and rock piles. The soil characteristics, distribution of arable land, and the potential to improve productive potential speaks to the self-sufficiency of Perry Mesa residents during the 13th and 14th centuries. In addition, extensive agave utilization and access to a diversity of wild resources would have buffered inter- and intra-annual agricultural shortfalls. Subsistence limitations and challenges related to soil depletion and spatially variable rainfall are also discussed.

Kruszynski, Robert [56] see *Monroe, Cara*

Kuckelman, Kristin [235] see *Hoffman, Amy*

Kuehn, Steven (ITARP University of Illinois at Urbana-Champaign)

[83] *Faunal Exploitation at Orendorf: A Preliminary Look at the Settlement D and C Assemblages*

An overview of the faunal remains from Settlement D at Orendorf is presented, focusing on the deer, other mammal, fish, and turtle remains with comparisons made between select structures and pit features. The faunal data from Settlement D and Settlement C are also compared. While prior study of some Settlement C fauna has been undertaken, only recently has the entire Orendorf faunal assemblage been subject to a detailed analysis.

Kuhn, Steven (University of Arizona)

[58] *Mode 2.5? Shared Features of Lithic Assemblages from MIS 7* Lithic assemblages from central Europe and southwest Asia dating to MIS 7 do not fit comfortably within conventional definitions of either Lower or Middle Paleolithic. Several shared features cross-cut geographic and taxonomic boundaries, including: heavy reliance on flake tools and comparatively infrequent core tools; relatively simple flake production with little or no "pre-determination"; predominance of local raw materials; and frequent use of heavy retouch and other tactics for extension of artifact use lives. The shared characters are likely to reflect common tendencies in raw material exploitation and provisioning, a foundation from which more complex strategies later evolved.

[58] *First Organizer*, [58] *First Chair*

Kuijt, Ian (University of Notre Dame), Alissa Nauman, and Claire Brown

[185] *Faith on the Water: Documenting the Development Early Christian Island Settlements, Co. Galway, Ireland*

Despite its importance, our understanding of the Early Medieval period (roughly the 5th through 9th century) western Ireland has lagged behind well-established research and scholarly discussions of Christianity's history in continental Europe. Archaeological survey of remote islands along northwestern Connemara in 2008-9 provides a new opportunity to further define the temporal and cultural affiliations of the spread of Christianity through western Ireland. Our survey documented several previously undocumented early Christian settlement sites and cemeteries, offering a tantalizing opportunity to rewrite our understandings of late Iron Age and early Christian period along coastal Ireland.

[185] *First Chair*

Kuijt, Ian [185] see *Quinn, Colin P.*; [185] see *Tynan, Collins P.*; [185] see *McNeill, Casey M.*; [185] see *Lash, Ryan P.*; [185] see *Goodale, Nathan B.*; [185] see *Moore-Shay, Laura*

Kulisheck, Jeremy (Santa Fe National Forest) and J. Michael Bremer (Santa Fe National Forest)

[19] *Pueblo Demographic Change in the Northern Rio Grande after A.D. 1450: Implications for the Village World*

The VEP model (the Village World) contemplates autochthonous demographic change among Pueblo peoples in the Northern Rio Grande. In this area after A.D. 1450, there were three exogenous sources of change not accounted for in the model: the arrival of Athabaskan peoples into the northern Southwest; the entry of Spanish explorers; and the imposition of Spanish colonial rule. Each of these external forces had the potential to divert Pueblo fertility, mortality and identity from their indigenous historical trajectories. This paper explores these diversions by generating expectations as to how they may differ from the trajectories created by the Village World.

Kunz, Michael (Bureau of Land Management - Alaska)

[21] *Clovis Progenitors: Immigrants or Home Grown?*

Recent research has suggested the time range of the Clovis Culture is not quite as ancient as once thought. However even prior to its recent temporal tweaking reliably dated New World complexes that were as old or older than Clovis had been recognized. Two such complexes, Mesa and Nenana are found in Alaska (Eastern Beringia). These two complexes occupy different geographies and are technologically distinct. The Nenana Complex displays some Western Beringian traits while the Mesa is classic High Plains Paleoindian. This paper examines the likelihood that either of these Alaskan Complexes could be a Clovis progenitor.

Kurnick, Sarah (University of Pennsylvania)

[99] *Women in Stone: Understanding the Classic Period Maya Female Ajaws*

The Classic period Maya created a number of monuments depicting politically powerful women. Notably, a handful of these monuments depict not just politically powerful women, but female ajaws, or female divine rulers. This paper will examine the Classic period Maya female ajaws and their representations on monuments – topics that have attracted the attention of only a few archaeologists. In particular, the paper will consider how the female ajaws acquired their authority; how they transferred their authority to their successors; and how they chose to portray themselves on monuments as a means of maintaining their authority during their reigns.

Kurtz, Mark (BioOne) [93] *Discussant*

Kusimba, Chapurukha [121] see *Oka, Rahul C.*

Kuzminsky, Susan (University of California, Santa Barbara), Jon Erlandson (University of Oregon), Phillip Walker (University of California, Santa Barbara), Rebecca Richman (University of California, Santa Barbara), and Sabrina Sholts (University of California, Santa Barbara)

[122] *Biological analysis of the Tuqan Man remains: A 9500-year-old Paleoamerican skeleton from CA-SMI-608, San Miguel Island, California*

We present the results of an osteological analysis of a 9500-year-old male skeleton from San Miguel Island, California. Following careful excavation to document the context and chronology of this rare discovery, skeletal assessments were conducted to establish biological and cultural affiliation with Native American descendents as specified by NAGPRA. Bioarchaeological data were collected from the cranium, dentition, and post-cranial skeleton, and skeletal samples were taken for chemical analyses. Temporal and spatial statistical analyses show that the cranial morphology of this Paleoamerican differs in many respects from modern Native Americans, including prehistoric groups from the northern California

Channel Islands.

Kuzminsky, Susan [122] see *Kuzminsky, Susan C.*

LaBelle, Jason (Colorado State University)

[21] *Hide Scrapers, the Bison Pit, and an Eroding Lithic Scatter: Site Structure of the Lindenmeier Folsom Site, Northern Colorado*
Lindenmeier is the largest known Folsom site in North America, with Paleoindian activity areas spanning 800 m and having yielded abundant points and preforms, end scrapers, graters, and other tools. Recent fieldwork focused on a shallowly buried Folsom component located in the eastern portion of the site. Spatial analysis of the eroding lithic scatter reveals clusters of tools, flakes, and burned bone and lithics. The artifact distribution is argued to represent hide processing and retooling activity areas located adjacent to a small bison kill, adding another important element to the already complex story of the Lindenmeier site.

LaBelle, Jason [256] see *Byerly, Ryan*

Lacombe, Sebastien [184] see *Sterling, Kathleen*

Lacourse, Terri [224] see *Fedje, Daryl W.*

Ladwig, Jammi and Austin Jenkins

[30] *Phytolith Recovery and Analysis from Various Contexts*
In this study, my aim was to recover phytoliths from sediments, ceramic residues, and lithics from North America, specifically from a Midwestern woodland-period site. Using morphometric data collected from the phytolith assemblages present, various taxa were identified and quantified. A thorough analysis of the recovery of phytoliths from the aforementioned contexts and what archaeological knowledge was gained in the process of the study will be presented.

Laffoon, Jason (Leiden University), Menno Hoogland (Leiden University) and Roberto Valcarcel Rojas (Leiden University)
[97] *Exploring Mobility and Origins in Caribbean Contexts: An Isotopic Perspective*

Isotopic analyses of various archaeological material remains permit the direct identification and measurement of past movements of humans, animals, plants, and artifacts. This approach is currently being applied to a number of large prehistoric and historic skeletal assemblages in the circum-Caribbean region to investigate patterns of ancient mobility. Preliminary results from Caribbean contexts indicate the movement of certain animal species and the presence of substantial human migration from diverse geographic regions. We examine these patterns of human mobility in reference to comparative, contextual biological and cultural data.

Lahaye, Christelle [8] see *Guerin, Guillaume*

Lally, Joe (Bureau of Land Management)

[152] *Largo-Gallina Structural Fires*
Structural fires in the Largo-Gallina area are thought to be the result of warfare or other forms of violence. The possibility that some of these fires may be accidental or the result of natural causes is either ignored or summarily dismissed. Gallina sites are often in wooded areas that are prone to lightning strikes. Some Gallina fires may be due to lightning caused wildland fires either during occupation or after abandonment. Fires leave physical evidence of their cause and origin. The application of modern fire protection engineering principles to the archaeological record can assist in determining the cause of ancient fires.

Laluk, Nicholas (White Mountain Apache Tribe - U of A)

[228] *Apache Place-Making in the Chiricahua Mountains of Southeastern Arizona*
Due to the ephemeral nature of historical-period Apache archaeology in the U.S. Southwest much is still to be learned about Apachean lifeways, especially those pertaining to the social processes that underlie various responses to increased Euroamerican interaction.

Material consequences resulting from these interactions are subtle but nonetheless represent a range of social processes, from subsistence to preservation of traditional lifeways. Through the investigation of high altitude Apache sites in Southeastern Arizona utilizing inter-Apache tribal collaborative interpretation of the material record, a better understanding of social investment strategies that underpin decision-making practices and their landscape associations may be highlighted.

LaMotta, Vincent (University of Illinois at Chicago)

[128] *Patterned Cultural Deposition Associated with Postoccupational Histories of Architectural Spaces at Homol'ovi*
Excavations within architectural spaces in the fourteenth-century Homol'ovi villages of northern Arizona have revealed stratigraphically complex and seemingly purposeful cultural deposits in terminal- and post-occupational contexts—on top of the final occupation surface and features of a room, or within its postoccupational fill. Repetitious patterning across contexts and villages indicates common elements to the behaviors involved. This presentation explores variation in the structure, context, and chronology of such deposits at Homol'ovi, and draws on historical sources and general principles of space use to begin building method and theory for discerning the purposes behind, and social units responsible for, their construction.

Lamuela-Raventos, Rosa (UB), Cristina Andres-Lacueva (UB), Olga Jaúregui (SCT-UB), Rosa Guasch

[55] *Chemical Analysis of Old Egyptian Wine Residues*
Ancient Egyptian wine residues were analyzed to verify and characterize the residue inside the amphorae. Owing to special characteristics of these samples, dryness and the small quantity available for analysis, it was necessary to have a very sensitive and highly specific analytical method by LC/MS/MS to detect tartaric acid at trace levels in the residues. Moreover, alkaline fusion was carried out in the deposit residue of dark color to identify syringic acid derived from malvidin as a red wine marker. Malvidin glycoside, the main anthocyanin that gives young wines their red color, polymerizes with aging into more stable pigments.

Landa, Olga (Zona Arqueologica de Monte Alban, INAH)

[103] *Yucundaa, el Proyecto Arqueológico: INvestigaciones Recientes*
En el corazón de la Mixteca Alta Oaxaca, se encuentra el pueblo de San Pedro y San Pablo Teposcolula, cercano se encuentra el asentamiento prehispánico llamado Yucundaa. Brevemente mostraremos avances en las investigaciones recientes llevadas durante la quinta y sexta temporada de campo del Proyecto Arqueológico, la temporada 2008 fue extensa y productiva. La temporada 2009 fue importante para delimitar fechamientos con análisis de materiales, además las excavaciones en los sitios sujetos descubrió la visión del desarrollo cultural de la Mixteca en el periodo Postclásico hasta la Colonia.

Landeros, Juan (CSULA) and Eden Chavez (California State University, Los Angeles)

[148] *Concepts Related to Human Sacrifice in Contemporary Zapotec Ethnography*
The sudden and mysterious death of a young man in Southern California set off a heated discussion within the Zapotec community over the cause of death. The discussion underscored a widely held belief that a "jealous" Earth required a human offering for the successful completion of large scale community construction projects. The victim is "chosen" by the community council and the death accomplished through witchcraft. Caves are frequently said to be involved in the many varieties of this type of sorcery. Our findings shed light on this poorly documented aspect of cave ritual.

Landeros, Juan [148] see *Chavez, Eden*

Landon, Amanda (Washington University in St. Louis)

[235] *A Paleoethnobotanical Study of Three Pueblo Period Sites*
Three Pueblo II period archaeological sites in southwestern Utah,

42WS1191, 42WS3119, and 42WS4145, were excavated during field schools from 1996 to 2006. The purpose of the excavations was to illuminate temporal and spatial relationships between archaeological sites in the region through lithic, ceramic, faunal, paleoethnobotanical, and other analyses. Paleoethnobotanical samples from each of the sites were analyzed in the Paleoethnobotany Lab at Washington University in St. Louis to improve understanding of diet and seasonality within the greater cultural context of the area. This paper presents the results of the macrobotanical analysis and considers the implications of the data.

Landon, David [48] see *Way, Michael A.*

Lange, Frederick (LSA Associates)

[191] *Looking Back, Looking Forward: Forty-Five Years of Archaeology in Greater Nicoya*

This paper draws its themes from the chapter, entitled "Gracias por la Oportunidad", that I was asked to prepare for a volume to be published by the University of Costa Rica. For that chapter I divided the text into Part I: Initiatives and Results (Ecological Orientation, Cultural Resources Management, Guanacaste Archaic, Deepening the Chronology, Geomorphological Studies, Coastal-Inland Relationships, INAA Studies of Ceramics and Jade) and Part II: Projects That Would Grab My Attention If I Were Starting Over Again (Plate Tectonics and Coastal Archaeology, Early Occupation of Off-Shore Islands, Protohistoric Disease Vectors, Broadening Opportunities for Local archaeologists).

[65] *Discussant*

Lange, Richard (Arizona State Museum, University of Arizona)

[40] *KIVA at 75 Years: Couldn't Have Done It Without You!*

The Kiva was established 75 years ago by Rev. Victor L. Stoner, and Kiva has grown up to be the premier journal of Southwestern anthropology, archaeology, and history. Kiva was and is only made possible by the strong and dedicated support of the Arizona Archaeological and Historical Society, an organization dominated by avocationalists with some professionals. This poster looks at how Kiva has served these diverse audiences.

Langenwalter, Paul [81] see *Bowser, Brenda J.*

Lansing, Stephen [153] *Discussant*

Lapham, Heather (Southern Illinois University Carbondale)

[52] *Spanish Subsistence at Fort San Juan*

Deep within the interior of Spanish La Florida, in what is today western North Carolina, Captain Juan Pardo commanded his men to build Fort San Juan adjacent to Joara, one of the largest Native American towns in the upper Catawba River Valley. The fort, which survived for eighteen months, was burned to the ground in 1568. Using zooarchaeological data from recent excavations at the fort and adjacent village, known collectively as the Berry site, this paper investigates Spanish subsistence practices to further explore the intercultural relationships that developed between the soldiers and their native neighbors.

Lapham, Heather A. [26] see *Forsythe, Lauren A;* [217] see *Malpiedi, Jennifer T.*

Lapp, Jennifer (University at Buffalo)

[202] *Proyecto La Flor*

The excavations in La Flor, department of Rivas, Nicaragua, yielded numerous artifacts; these included ceramics, lithics, human remains and shells. The most significant discovery during the excavations, were a dozen shell mounds. These mounds are found along a river that flows to the Pacific Ocean. The location of La Flor aided its pre-Columbian inhabitants in the procurement and dispersal of shells for the potential purpose of trade along the Gran Nicoya Peninsula and possibly farther. This poster discusses the settlement pattern of the site as well as the utilization of the artifacts encountered there.

[202] *First Organizer;* [202] *First Chair*

Larson, Mary (University of Wyoming), Marcel Kornfeld (Frison Institute, University of Wyoming) and Pablo Massineo (CONICET – Argentina and University of Wyoming)

[21] *Early Paleoindian Occupation of a Rockshelter: Two Moon, Bighorn Mountains*

Fluted point use in rockshelters is rare in North America with the integrity of the points discovered in question. That Two Moon Shelter was occupied during the fluted point horizon is unquestionable, however, the nature of that use is unclear. Does the 10+ cm thick component represent one or multiple occupations? What was the nature of that occupation or those occupations? To begin unraveling the Two Moon deposit, fine scale excavation techniques make possible the examination of vertical artifact and ebbolis frequencies, backplots, positional data, and thin sectioning of the excavated area to provide preliminary answers to these and other questions.

Lasell, Rebecca [75] see *Eaton, Marietta*

Lash, Ryan (University of Notre Dame), Eric Carlson (University of Montana, Missoula), Ian Kuijt (University of Notre Dame), John O'Neill (University College, Dublin), Michael Gibbons (Westwalk, Clifden, Ireland)

[185] *Sacred and Secular Space: the Early Christian Landscape of Inis Airc, Co. Galway, Ireland*

Combining traditional recording techniques with GPS mapping and geophysical survey technology, field-work conducted at Inis Airc, Co. Galway, has allowed researchers to partially re-construct the Early Christian landscape of this deserted island. The remains of three and possibly four separate burial grounds, a leacht, several monuments, a mill pound, a monastic cashel and clochan – along with ethnographic evidence for an enduring cult of St. Leo – suggest not only that the Early Christian occupation was more extensive and complex than heretofore recognized, but also that its material remains continued to play a crucial role in island life throughout the following centuries.

Lash, Ryan [235] see *Reed, Charles A.*

Lassen, Robert (University of Tennessee)

[210] *Caches and Their Implications for Clovis in the Southeast*

The lack of Clovis caches in the southeastern United States poses a unique problem for Paleoindian archaeology. Two explanations for caching have been proposed by Collins and Meltzer, and both have implications for the Clovis habitation of the Southeast. From Collins' theory, one can draw the conclusion that the landscape of the Southeast was relatively unknown to people from the Clovis period. On the other hand, Meltzer's theory would imply that people from the Clovis period would have been comparatively more established in the Southeast. Both scenarios are compared to recent models tracing settlement patterns during the Clovis period.

Lattanzi, Gregory (New Jersey State Museum)

[59] *The First Stimulus Package: The WPA and the New Jersey Indian Site Survey*

Between 1936 and 1941 the Indian Site Survey, a Works Projects Administration relief program, identified numerous sites and conducted archaeological investigations throughout the state of New Jersey. These excavations were sponsored by the New Jersey State Museum and directed by Dr. Dorothy Cross. This massive project, not only identified hundreds of amazing sites, but also excavated one of the most significant prehistoric settlements in the Middle Atlantic region - the Abbott Farm National Historic Landmark. This paper looks at the Indian Site Survey program and how it provided a more comprehensive picture of New Jersey's prehistoric past.

Lau, George (Univ Of East Anglia)

[145] *Middle Horizon Interaction in Peru's North Central Highlands: Regional and Diachronic Variability*

This presentation reviews the sequence and variability of interregional interaction in Peru's Ancash Department. Over four centuries, local groups interacted in myriad, often ambivalent, ways with different regional powers. Although there is evidence of Wari contact before

imperial expansion, trade interaction surged during the early Middle Horizon, followed by new exchange patterns and stylistic emulation. Direct Wari control seems unlikely, but Wari keyed in on resources of the Callejón de Huaylas and the adjoining Cordillera Negra, while apparently avoiding east of the Cordillera Blanca. Current data suggest that religion and prestige economies were the principal factors for intensified interaction.

Laumbach, Karl (Human Systems Research, Inc.) and Toni Laumbach (New Mexico Farm and Ranch Heritage Museum)

[192] *Post Mimbres Relationships on the Cañada Alamosa Frontier*
Located west of the Rio Grande in southwestern New Mexico, the Cañada Alamosa is the extreme northeastern corner of Mimbres affiliated pueblos. Research on the Cañada Alamosa has revealed that the post-Mimbres world was a time of integration and assimilation with long time northern pueblo neighbors. Integration was followed by aggregation of small sites into one community, a pattern repeated across west central New Mexico at the beginning of the 13th century. During the 13th century new migrants from the north settle near the aggregated community, possibly creating tension that ultimately encouraged the abandonment of the canyon by Mimbres descendents.

Laumbach, Karl [192] see *Ferguson, Jeffrey R.*

Laumbach, Toni [192] see *Laumbach, Karl Wayne*; [192] see *Ferguson, Jeffrey R.*

Laurence, Andrew (Texas A&M University)

[71] *Microfossil Research Pertaining to Plant Processing Tools from Central Texas*

Thousands of burned-rock middens and earth ovens from the central Texas savannah have been unearthed, only a few of which yielded charred plant remains, particularly geophytes in the Liliaceae family, along with agave and sotol crowns. This poster reports on a search for geophyte microfossils-starch grains, phytoliths, fibers-on groundstone and battered-edge tools from sandy-sediment sites embedded in an otherwise limestone dominated region as direct evidence of prehistoric hunter-gatherer plant utilization. It also illustrates microfossil reference collections from fresh samples of commonly utilized geophyte taxa in central Texas.

Laval, Eric [23] see *Sepulveda, Marcela A.*

Law, Heather [48] see *Pezzarossi, Guido*

Lawler, Andrew (Science Magazine) [141] *Discussant*

Lazcano Arce, J. Carlos [221] see *Serra, Mari C.*

Lazrus, Paula Kay (St. John's University) [227] *First Organizer*; [227] *First Chair*

Le Canh, Nam [153] see *Buckley, Brendan M*

Le Guillou, Yanik [104] see *Clottes, Jean*

Leason, Becket [21] see *Sanchez Miranda, Guadalupe*

LeBeau, Albert

[171] *Fortified Plains Villages: Evidence for Prehistoric Warfare on the Plains?*

Prehistoric Warfare has been a topic of great interest in the recent past. Questions arose if there was evidence of war before European contact, or if in fact the Indigenous tribes were the peaceful, innocent children as thought by the clergy. This paper looks at a specific region along the Missouri River in central South Dakota and south central North Dakota. This area is known as the middle Missouri. Archaeological evidence has shown that there were "earth works" that closely resembled fortification ditches of the old world. This lead archaeologist to question if in fact there was pre-contact warfare on

the Great Plains. This paper addresses environmental factors that may lead to war, it also address social factors that may lead to war. This paper looks at the research on why people go to war and applies to this geographical area. Finally this paper looks archaeological evidence and historical evidence and concludes that in fact there was warfare occurring on the Great Plains prior to contact with the European hoards.

LeBlanc, Steven (Harvard University) and Michele Morgan (Peabody Museum, Harvard University)

[235] *Intraindividual Seasonal Variation in Basketmaker II Diet Revealed by Stable Carbon and Nitrogen Isotope Analyses of Human Hair*

It is now generally agreed that Basketmaker II populations of the northern American Southwest obtained significant calories from corn. To date this interpretation has reflected an average overall assessment of diet. Using the innovative technique of multiple sampling along individual strands of human hair, we provide stable isotope evidence for considerable intraindividual seasonal variation in both eastern and western Basketmaker II diet over the annual procurement cycle. We report hair keratin stable carbon and nitrogen isotope data from 30 individuals from three Basketmaker sites, Kinboko Cave and White Dog Cave in Arizona, and South Cave in Falls Creek, Colorado.

LeBlanc, Steven [37] see *Snow, Meradeth*

Lech, Veronica (Idaho State University), Bruce Finney (Idaho State University), Herbert Maschner (CAMAS, Idaho State University) and Nicole Misarti (CAMAS, Idaho State University)

[27] *Archaeofauna Identification Using Stable Isotopes*

Many zooarchaeologists experience difficulty differentiating between certain skeletal elements of particular species. In Sanak Island assemblages Steller sea lion and walrus were of particular difficulty. As Steller sea lion and walrus feed on very different food sources we conducted analysis of the $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ of these questionable elements in order to help in the identification of these species. Not only were we successful but we were also able to determine intra-species feeding habits that differentiated through time. Analysis of carbon and nitrogen values should aid in the taxonomic identification of indeterminate specimens the future.

Leclerc, Mathieu (Université de Montréal) and Adrian Burke

[60] *Chert Distribution among Saint Lawrence Iroquoians sites in southern Quebec: A Glance through X-rays Goggles*

Several potential sources of Appalachian cherts found on archaeological sites throughout Northeastern North America have been identified to date. Unfortunately, these cherts greatly resemble each other, both microscopically and macroscopically, making it unproductive to distinguish them using petrography and necessitating a regional database of geochemical signatures for each chert source. In this presentation, signatures obtained from prehistoric quarries are compared to Saint-Lawrence Iroquoians artefacts, providing a new understanding of late prehistoric raw material procurement, distribution, and exchange patterns in Southern Quebec. Results show that the visual identification routinely executed by archaeologists can often be misleading.

Lee, David (Southern Methodist University) and Stanley Guenter (Southern Methodist University)

[77] *Ballgame Panels from El Perú-Waka' in Regional Perspective*

Carved stone stair blocks unearthed at Waka's main palace depict scenes of the ballgame. While fragmentary, four stones reset in the Terminal Classic recall a Seventh-century Waka'-Calakmul alliance. This panel falls into a subgroup of representations showing the ballgame being played against stairs, or a backdrop of stairs. Examining the incidence of these scenes from other Maya sites, the authors consider the social and political context of these representations. In initial creation and later reuse, these panels served as markers of political power, legitimacy, and alliance; they perhaps also represent ritual interactions with ancestors and the

invocation of supernatural power.

Lee, Gyoung-Ah (University of Oregon) [132] discussant

Lee, Jane (MoDOT)

[187] *More than Just Four Walls and a Roof: The Archaeology of Two Turn of the Century Residences from the Hyde Park Neighborhood of St. Louis, Missouri*

During the winter of 2006, the Missouri Department of Transportation carried out an archaeological investigation of two residential lots in the Hyde Park neighborhood of North St. Louis. At the turn of the century, these lots contained two separate dwellings, which exhibited disparate patterns of housing. One lot contained a single-family home that had been consistently occupied by one family, while the other lot contained a tenement building that had been occupied by a variety of families and individuals. The findings from this investigation illuminate the realities of life in urban St. Louis households at the turn of the century.

[187] *Second Chair*

Lee, Jane [187] see Greenwood, Brianne

Lee, Lori [26] see Proebsting, Eric L.

Lees, William (University of West Florida) [3] Discussant

Leftwich, Brent (UC Santa Barbara)

[6] *Working from Home: The Case for Permanent Year-Round Settlements in the Sierra Nevada*

Traditionally, late prehistoric settlement patterns in the north-central Sierra Nevada have been defined by seasonal migration. Recent research along the North Fork of the Mokelumne River indicates permanent year round settlements nestled in river valleys and canyons cut through the high Sierra. Using central place foraging theory I conclude that acorns were processed where they are consumed. Using quantitative methods and GIS to compare mortar depth, elevation, site type, and dominant vegetation, a pattern emerges which indicates that acorn processing is almost exclusively conducted at larger sites which represent year round villages.

Legge, Anthony [9] see Moore, Andrew M T

Lekson, Stephen (University of Colorado)

[14] *The End of History and the Last SW Archaeologist*

Science vs history vs heritage preservation in SW archaeology. An aging cohort of SW archaeologists trained as scientists are trying to accommodate more humanist, historical developments in the larger field of archaeology. Heritage preservation in the SW—both Native and non—may trump both. Is rapprochement possible? Is rapprochement desirable? Our teapot-tempests were spun off larger changes in social and philosophical climates. There is, indeed, a world beyond our region: can we use SW data on continental scales and, more importantly, in a global comparative archaeology to address questions perhaps transcending academic and identity politics?

[192] *Discussant*

Lekson, Stephen [192] see Ferguson, Jeffrey R.; [40] see Neuzil, Anna A.

Lelgemann, Achim (Universidad de San Luis Potosi)

[57] *The Tomb of Tezcatlipoca: A Late Classic High Status Burial at La Quemada, Zacatecas*

Archaeological research at the Late Classic site of La Quemada, Zacatecas, uncovered the burial of a young adult male in a pyramid belonging to the architectural compound called The Citadel. Offerings, body treatment, and the orientation of the structure suggest strong analogies to the cult of a deity revered by Postclassic central Mexican Nahuas as Tezcatlipoca. The paper presents the bio-anthropological and artifactual evidence and discusses their implications for religious beliefs and migration dynamics in Classic to

Postclassic Northern Mesoamerica.

[57] *see Nicolau Romero, Armando*

Lelièvre, Michelle (University of Chicago)

[219] *Before, During and After the Mission: Results from The Maligomish Archaeology Project's 2007-08 Field Season*

The Maligomish Archaeology Project is an inter-disciplinary research program developed collaboratively by the author and the Pictou Landing First Nation, a Mi'kmaw community located in northeastern Nova Scotia. Maligomish is a 20 ha island in the Northumberland Strait, which has been a Catholic mission site since the mid-18th century. This research report will summarize the results of a systematic surface survey, an excavation of the shell midden located on Maligomish's south coast, and ethnohistorical research - all of which has allowed for a better understanding of how settlement patterns and resource use have changed on the island during the past 2500 years.

Lemke, Ashley (University of Michigan), Benjamin Wells (Mercyhurst College), Jessi Halligan (Texas A&M University) and Justin Halteman (Harvard University)

[73] *Modeling Submerged Landscapes: Predicting Human Habitation and Archaeological Recovery in the Gulf of Mexico*

GIS predictive modeling is a critical component of our interdisciplinary investigations of the submerged Pleistocene landscape in the Gulf of Mexico. This expedition seeks to locate inundated geographic features and archaeological sites. A GIS predictive model was constructed to establish prime locations for future research among the several hundred targets previously identified during survey. This model integrates submerged geophysical data with known cultural and environmental variables to examine the likelihood of human habitation and archaeological recovery. Given the logistical expense of underwater archaeology, the ability of this model to narrow research areas in an informed manner highlights its methodological significance.

Lemmen, Carsten (GKSS-Forschungszentrum Geesthacht)

[61] *Intercomparison of European and North American Regional Transitions to Farming in a Mathematical Model of Socio-technological Adaptation*

The introduction of agriculture into Europe and Northern America required space provided by cutting forests. The regional trajectories of technology, subsistence base and demography characterizing this cultural and morphological---also climate-relevant---transition are hindcasted with a numerical model for simulating global land use and technology evolution; within this framework, hypotheses about the different timing of the regional transitions to agriculture and intercontinental lags are tested: I assess the explanatory power of bioclimatic factors, such as biogeography and (abrupt) climate changes, as well as of cultural factors, like the influence of nearby founder regions and the importance of migration and trade.

Lengyel, Stacey (Illinois State Museum / Statistical Research, Inc.)

[26] *Recent Archaeomagnetic Research in the US Midcontinent*
Archaeomagnetic dating uses changes in the earth's magnetic field through time to date certain archaeological features. Typically, these features are constructed into clay- and silt-rich soils and are fired to relatively high temperatures. Ongoing research in the US Midcontinent has focused on collecting samples from independently dated archaeological features such as fired mound floors, earth ovens and hearths in order to refine the existing archaeomagnetic dating curve for this region. New samples have been recovered from sites in Illinois and Tennessee and help to strengthen the curve between roughly AD 800 and 1400.

Lenik, Stephan (Syracuse University)

[97] *French Jesuits and Plantation Landscapes in the West Indies*

During the 17th and 18th centuries, French Jesuits in the West Indies owned plantations using enslaved labor, rather than coerced Amerindian labor as was common on missions in North and South

America. This resulted from the lack of a native population to submit to a mission system, as well as the need for economic self-sufficiency. In managing these enterprises missionaries operated within the guides of their spiritual ideals and restrictive laws prohibiting excessive profit-making. This paper explores the spatial organization of French Jesuit West Indian properties, particularly a property at Grand Bay in southern Dominica where the Jesuits operated a church and plantation from 1748 to 1763.

Lensink, Stephen and Joseph A. Tiffany

[72] *Dating the Origins of the Central Plains Tradition*

This paper proposes a new chronology for the Nebraska Phase of the Central Plains Tradition. Recalibration of radiocarbon dates coupled with cross dating of Nebraska phase materials from well-understood sequences elsewhere—Oneota sites; Cahokia; and Steed-Kisker settlements—leads to a proposed revision of the Nebraska phase occupation span of A.D. 1250–1400. The ceramic evidence includes (1) the absence or near absence of Initial variant ceramics in Nebraska phase assemblages and *visa versa*, (2) complete absence of Stirling phase Ramey vessels in the Nebraska phase, and (3) low numbers of seed jars and bowls post-dating the Stirling phase.

Leon, Xochitl (Universidad Nacional Autónoma de México)

[254] *Costumbreras Funerarias y Entierros en Sur de Veracruz Desde el Formativo Hasta el Posclásico*

Se presentara un balance y revisión de los entierros prehispánicos encontrados en sitios arqueológicos del sur de Veracruz, los cuales abarcan desde el periodo Formativo hasta el Posclásico. La información en que se fundamenta la investigación incluye los trabajos de Valenzuela y Drucker entre 1930 y 1940 hasta los registros de entierros mas recientes. El objetivo es recopilar y analizar el universo actual de datos para lograr un primer acercamiento de las costumbres funerarias en sur de Veracruz, lo cual puede aportar información diacrónica y preliminar sobre posibles patrones de enterramiento.

Leon Estrada, Xochitl Del Alba [254] see *Limón Boyce, Morrison*

Leonardt, Sabrina [22] see *Scheinson, Vivian G.*

Lepofsky, Dana [198] see *Welch, John R.*; [39] see *Smith, Lisa M.*

Lepper, Bradley (Ohio Historical Society)

[176] *The Ceremonial Landscape Of The Newark Earthworks*

The Newark Earthworks complex is the largest architectural composition in the Hopewellian world, yet it is located on the far northern periphery of the so-called Hopewell heartland. This site long has been neglected in studies of the Hopewell culture largely because it was presumed to be nearly completely obliterated by the growth of the City of Newark. Ironically, the two major geometric enclosures at Newark are the best surviving examples of this class of earthwork. A combination of archival research and archaeological excavations at surviving elements reveal a surprisingly complete picture of an integrated ceremonial landscape.

Lerner, Harry (Université Laval)

[200] *Raw Material Intra-Type Variability as a Factor in Use-wear Formation: An Example From the Late Archaic of Northwestern New Mexico.*

This poster presents some background to and interim results of an experimental use-wear study that focuses specifically on intra-type raw material variability. This study employs both digital image analysis (ClemexVision) and GIS analysis (Ildrisi) to measure differences in use-wear patterns and rates of formation. Archaeological tools from the Late Archaic of northwestern New Mexico exhibit very similar use-wear patterns to those generated experimentally. With a better understanding of how variability between and within individual raw material types affects use-wear formation, it will become possible to infer with greater confidence not only tool function but duration of use as well.

Lerner, Shereen (Mesa College)

[50] *A New Millennium*

Y2K, 9/11, war, the euro, and the election of President Obama are some of the major events that transformed the world since 2000. What has this most recent decade brought to archaeology and how has it been portrayed in the media? Indiana Jones returned to the movies, television offered several archaeology-based series, and the Internet provided more opportunities to learn about archaeology. Archaeology continues to be portrayed as a sexy, exciting profession with mystery and intrigue. Is the media more accurate than in the past? How has the Internet affected the public's ability to learn more about the past? Is misinformation rampant or is the public gaining a greater appreciation of the past through these various outlets?

Leroy, Ines [123] see *Woods, William*

Leslie, Katie [36] see *Holt, Julie Zimmermann*

LeTourneau, Philippe (University of New Mexico), Jeffrey Ferguson (Archaeometry Group, University of Missouri Research Reactor) and Virginia McLemore (New Mexico Bureau of Geology & Mineral Resources)

[144] *Alameda Spring, a Newly Characterized Obsidian Source in West-Central New Mexico*

All of the major sources of archaeological tool-quality obsidian in the American Southwest have been located and sampled, yet unassigned artifact samples continue to appear in small numbers. Recent research in western and southern New Mexico has identified at least four chemical signatures without a known geologic source. We have recently identified one of these sources 20 km south of Magdalena, NM that accounts for as much as six percent of the artifact assemblages in sites 45 kilometers south of the source area. Pending additional work in the geologically complex source area, we have tentatively named this source Alameda Spring.

Levi, Laura (The University of Texas at San Antonio)

[54] *Laboring and Pooling: the Relational Bases of Family Life in the Maya Late Classic*

From lineage to household to house, discussions of ancient Maya family life have followed a trajectory that parallels major discourses in the wider discipline. The burgeoning new literature on kinship would suggest that relational perspectives are a logical next step in our efforts to understand the processes animating domestic practices. Relying upon archaeological, ethnohistoric, and ethnographic evidence, this paper will explore the value of emphasizing how social, symbolic and material relations converge in the creation of differences among family groups.

Levin, Maureece (University of Oregon)

[74] *Breadfruit Storage Pits in Pohnpei, Micronesia: Construction and Use*

Breadfruit, an important crop throughout much of the Pacific Islands, is often fermented and stored in pits. On the island of Pohnpei in eastern Micronesia, this practice, which played a key role in the prehistoric and historic prestige economy, has taken place since at least 400 AD. This poster presents the results of the 2008 excavation of a breadfruit storage pit and compares layout and soil profiles to other archaeological breadfruit storage pits on the island. The soil profiles of the pits indicate the way in which the pits were constructed. Differentials in design may point to varying functions, e.g. communal pits vs. small family pits, changes throughout time, and regional variation on the island. This information aids in understanding prehistoric arboriculture systems and food storage on Pohnpei.

Levine, Abigail (University of California, Los Angeles)

[110] *In the Line of Fire: Examining Evidence for Site Burning in the Andean Altiplan*

Recent research at the site of Taraco, an early regional center in the northern Lake Titicaca Basin of Peru, has exposed a sequence of construction periods and land use shifts from at least 1300 BC. Excavations identified three types of burning consistent with three

distinct activity patterns. Of particular significance is a site-wide burning episode that marks the end of Taraco as an economic and political center. These results present the earliest documented evidence for raiding in the northern Titicaca Basin, and suggest important criteria for differentiating among various types of thermal features found in the Andes and elsewhere.

Levine, Abigail [121] see *Brum, Misty CM*

Levine, Marc (Denver Museum of Nature & Science)

[221] *Examining the Symbolic Dimensions of Obsidian Exchange in Postclassic Oaxaca, Mexico*

Current interpretations of obsidian exchange in Mesoamerica tend to focus on political and economic factors, while largely ignoring its social and symbolic dimensions. Few studies include indigenous perspectives of exchange or consider the manner in which decision making regarding trade was socioculturally embedded. Drawing on a case study of obsidian exchange in Postclassic Oaxaca, this paper attempts to redress these issues by examining obsidian's symbolic referents, including its association to prestigious centers, the sacred landscape and venerated deities.

[221] *First Organizer*; [221] *First Chair*

Levine, Marc [13] see *Joyce, Arthur A.*

Levine, Mary Ann (Franklin and Marshall College), Christel Baldia (Archaeological Textile Consulting), John Picard (Franklin and Marshall College), Kathryn Jakes (Ohio State University) and Mary Ann Levine (Franklin and Marshall College)

[255] *The Fabric of Empire in a Native World: An Analysis of Trade Cloth Recovered from 18th Century Otstonwakin*

The residents of Otstonwakin, an 18th century multinational Native American village in Pennsylvania, were involved in extensive trade networks which resulted in the incorporation, modification, and selective adoption of a variety of European-manufactured goods and technologies. Although current excavations (2007-2009) have revealed that the residents of Otstonwakin refashioned European brass objects and manufactured lead artifacts, this paper reports on our analysis of preserved European textile fragments recovered by WPA archaeologists in the 1930s. Through the analysis of the fabric fragments, sewing thread, and metallic lace we explore the material and social negotiation of colonial identity on the Pennsylvania frontier.

Lev-Tov, Justin [154] see *Van Galder, Sarah J.*

Levy, Janet (UNC at Charlotte) [159] *Discussant* [227] *Second Chair* [227] *Second Organizer*

Lewarch, Dennis (Suquamish Tribe), Leonard A. Forsman (Suquamish Tribe) and Stephanie E. Trudel (Suquamish Tribe)

[203] *The Suquamish Tribe Cultural Resources Sensitivity Model of Kitsap County, Washington: A Culturally-Informed Planning Tool*

The Suquamish Tribe developed a GIS-based cultural resources sensitivity model of Kitsap County, in the Central Puget Sound region of Western Washington, using environmental data, estimated transportation cost surfaces, recorded traditional cultural places, oral history information, and analysis of previously recorded archaeological sites in the Puget Sound region. Cultural data, such as accounts of Tribal "pullers" on contemporary canoe journeys, augmented environmental datasets. Tribal staff worked with federal, state, and local agencies to create an array of documents and GIS layers for regional and local planners making land use and permitting decisions, and agency staff conducting Tribal consultation.

Lewis, Brandon

[23] *The Challenges of Incorporating Archaeometry into Archaeological Field Programs*

The integration of archaeometry within the field of archaeology has produced a truly interdisciplinary profession. While advances in the physical and biological sciences have generated numerous interpretive benefits within archaeology, a comprehensive integration

of these varying techniques has proved challenging. These difficulties are compounded when offering archaeological field programs. Although challenging, it is incumbent upon the instructor to provide broad-based and holistic instruction for students pursuing careers in archaeology. This presentation examines the organizational, institutional, and logistical challenges of offering comprehensive student field training at institutions of higher education.

Lewis, Brandon [112] see *Sinclair, Chloe*

Lewis, Mike [217] see *Kozuch, Laura*

Lewis, Quentin (University of Massachusetts, Amherst)

[117] *Unequal Variables: GIS and Spatialities of Inequality*

In this paper, I explore the possibilities of using GIS to study spatialities of inequality. Much GIS usage in archaeology typically focuses on modeling environmental variables and presuming equal access to strategic resources, but the ethnographic and historical records are filled with fragmented and bifurcated spatialities, and archaeological sites resulting from these cultural processes may not conform to expected variables. Using examples from 18th and 19th century New England, I outline some potential variables and processes to suggest further research into spatialities of inequality, and advocate for more socially conscious Geographic Information Systems.

Li, Feng (Columbia University) and Zhonghe Liang (Institute of Archaeology, Chinese Academy of Social Sciences)

[155] *The Guicheng Project and Its Preliminary Results 2007-2009*

The Guicheng Project is the collaboration between Columbia University and the Institute of Archaeology, CASS, and Shandong Provincial Institute of Archaeology. In three years, we have systematically surveyed the 7.5 square km Bronze-Age city in eastern Shandong. The fieldwork was divided into three parts: intensive coring, systematic surface sampling, and test excavation. However, this paper will focus on discussing works in the last two parts.

Li, Min (UCLA), Hui Fang (Shandong University) and Tongxiu Zheng (Shandong Provincial Institute of Archaeology)

[155] *Archaeological Landscapes of the Wen-Si River Valley: Surveying the Hinterland of the Qufu Lu City*

The 1977-78 survey and excavation of the Lu city in Qufu represents a classic in the archaeological studies of early cities. An international collaborative research project is developed to investigate the hinterland of this Bronze Age city and the historical transformation of cultural landscape around it. This paper discusses the archaeological foundations and presents results from the preliminary field research. We will discuss the challenges and promises of landscape archaeology in a region characterized by both cultural continuity and political rupture.

Li, Yongxian [155] see *Lu, Hongliang*

Li, Zhipeng [155] see *Campbell, Roderick B.*

Liang, Zhonghe [155] see *Li, Feng*

Liardet, Frances (Cardiff University)

[256] *Tricky Passes and Winding Trails: Learning to Make Ancient Glass Bottles, and What this Can Teach Us about Artefacts in Archaeology*

This paper describes my apprenticeship in the making of a group of glass alabastra originally manufactured in the Eastern Mediterranean around 500 BCE. These vessels were made by forming molten glass around a clay core. Central to the project was the idea that a craft tradition is primarily an extended process of skill teaching and learning. I will discuss the development of gestures, tools and materials which constituted my skill learning; the productive tension between my learning, my teacher's skill, and the demands of archaeological artefact reconstruction; and how my experience relates to typology studies and research into technological change.

Libbon, Jonathan (Indiana University of Pennsylvania)

[233] *Geophysical Investigations Along the Allegheny Portage Railroad*

The Staple Bend Tunnel was a key link in the 394 mile Portage Railroad that connected Pittsburgh to Philadelphia in the early 19th century. Through the use of geophysical methods it is possible to determine lost elements of the Portage Railroad. In this project I used ground penetrating radar to investigate previously identified anomalies by the western portal, along with, newly identified structures in the vicinity. Ground truthing was used to test the anomalies identified, as well as determine if they represent cultural or natural features.

Liebmann, Matt (Harvard University)

[1] *The Archaeology of Apostasy and Counterfactual History*

This paper presents the results of a long-term investigation of a relatively understudied phenomenon in archaeology, revitalization movements. Conducted in collaboration with the Pueblo of Jemez between 2001-2009, this research project set out to examine the archaeology of the Pueblo Revolt of 1680 in northern New Mexico, probing the material expressions of nativism and nativism. The results raise various theoretical and methodological questions regarding how archaeologists deal with causality and historical contingency. In an attempt to address these issues, this paper explores the viability of counterfactual reasoning in archaeological interpretation.

[66] *Discussant*

Lillios, Katina (University of Iowa)

[106] *The Role of Museum Guards in the History of Portuguese Archaeology*

Museum guards have a distinctive - though rarely investigated - role in mediating between official state bureaucracies (including museum directors), the public, and the treasured remains of a nation's past. My paper focuses on the guards of the largest repository of archaeological patrimony in Portugal, the Museu Nacional de Arqueologia, between the museum's foundation in 1893 and 1929, when its first director, Dr. Leite de Vasconcellos, retired. Archival research reveals that museum guards played a surprisingly active role in excavations in this early period of Portuguese archaeology, despite the fact that they were rigorously disciplined in their behaviors.

[106] *First Chair*

Lima, Lúgia Trombetta [142] see Silva, Francini Medeiros

Limón Boyce, Morrison (Dirección de Salvamento Arqueológico, INAH), Omar Campos Lara (INAH) and Xochitl Del Alba Leon Estrada (UNAM)

[254] *Recent Research in the Northern Gulf Lowlands*

During the last 1 ½ years I have directed research in the Northern parts of Puebla and Veracruz, Mexico, a region loosely referred to as "Huasteca Meridional." This work is a byproduct of the supervision of seismic surveys undertaken by PEMEX (Mexican Petroleum Company). We have intensively surveyed more than 1,300 square kilometers, in a region where almost no previous systematic surveys have been undertaken. We have registered over 350 archaeological sites, made numerous surface collections, and constructed detailed maps of formal architecture. Preliminary information will be presented regarding settlement patterns, chronology and possible links with other regions.

Limp, Fred (University of Arkansas) [93] Discussant; [12] Discussant

Lincoln, Thomas (Bureau of Reclamation), Bill Chada (Bureau of Reclamation, Nebraska-Kansas Area Office) and Jennifer Huang (Bureau of Reclamation, Snake River Area Office)

[72] *Use of Light Detection and Ranging (LiDAR) Technology to Document the Condition of Historic-Era Rock Carvings and Petroglyphs in Threshing Machine Canyon, Kansas*

Threshing Machine Canyon was the site of significant activity throughout the 19th Century. Many visitors carved names and dates into the canyon's limestone walls. Reconnaissance survey and recordation was completed in 1994. Over the past 15 years the Bureau of Reclamation has noted vandalism, removal, and erosion of the inscriptions and glyphs. Reclamation is using LiDAR technology to create highly detailed 3-dimensional imagery of the inscriptions and glyphs to document their condition at a very fine scale, and pinpoint those panels that need intervention and treatment to retard erosion or reduce vandalism.

Lincoln-Babb, Lorrie (BIOARCH, L. L. C.) and Chris R. Loendorf (Gila River Indian Community)

[158] *Ritualistic Mortuary Performances During the Late Archaic in the Southwest: There's No Place Like Home*

Patterns in mortuary performances occur among Late Archaic or pre-ceramic sites within the Greater Southwest. Common attributes of these rituals include interment locations, offering types, grave construction, and body position. Evidence also suggests families may have been interred in the same location. Head orientation variability is suggestive of belief differences from later prehistoric populations. Data from Archaic period sites in central and southern Arizona, west Texas, and Northern Mexico are presented. The consistent nature of funeral rituals across this area is suggestive of a widely held mortuary system that emphasized kinship and may have played a role in land tenure.

Lindeman, Michael (Desert Archaeology), Gary Huckleberry, and Henry Wallace

[44] *The Martinez Hill to A-Mountain Irrigation Community*

The identification of Hohokam canals in the Santa Cruz River floodplain suggests the possibility that villages in the Tucson Basin may have been integrated into social and economic groups based, at least in part, on the construction and maintenance of irrigation canals and the attendant sharing of water for agriculture. Four Hohokam villages are known along the Martinez Hill to A-Mountain reach of the Santa Cruz. Canals beginning at Martinez Hill would have watered the floodplain shared by the villages. The system to manage irrigation would have encompassed all of the settlements, transcending traditional village boundaries.

Linderman, Mike (Indiana State Museum and Historic Sites)

[257] *Stabilization of Mounds A and G at Angel Site*

Angel Mounds State Historic Site was listed on the Endangered List of NHL's due to massive erosion of Mound A and erosion at the Ohio River/ Angel Slough connection point. A plan was formalized in 1999 to deal with Ohio River erosion and in 2001 stabilization of the mounds began. The discussion will focus mainly on the work done on Mound A, the most severely deteriorated earthen structure on the site, detailing the initial consultation with Cahokia, Kinkaid, NPS and USDA to the final repair work that eventually removed Angel Site from the dreaded list.

Lindsay, Ian (Purdue University)

[175] *Holding Down the Fort: Magnetic Survey in the Investigation of Political Dynamics at a Late Bronze Age Fortress Settlement, Tsaghkahovit, Armenia*

Geophysical archaeology is gaining popularity in the US as researchers increasingly find advantages in efficient, non-destructive means of investigating ancient human behavior. In the Caucasus, where the social dynamics of nomadic groups have long been debated, magnetic gradiometry is proving an invaluable aid to identifying thin deposits from short-term occupations that often escape detection by traditional archaeological reconnaissance. This paper discusses a magnetic survey at a LBA fortress in Armenia, revealing for the first time the spatial organization and surprisingly ephemeral nature of LBA domestic architecture and forcing us to rethink how sedentary fortress elites exercised their authority over mobile subjects.

Linduff, Katheryn (University of Pittsburgh) [95] Discussant

Lipe, William (Washington State University), Donna Glowacki (University of Notre Dame) and Thomas Windes (University Of New Mexico)

[84] *Dynamics of 13th Century Depopulation of the Northern San Juan: The View from Cedar Mesa*

Chronological evidence from across the Northern San Juan culture area reveals spatial and temporal patterns of population growth and decline in the 13th century A.D. Depopulation proceeded roughly from west to east, with areas such as Cedar Mesa declining while parts of the Central Mesa Verde area continued to grow. This is consistent with the seriation results described by Curewitz and Matson. These spatio-temporal population trends are discussed in relation to environmental change, warfare, aggregation, and the socio-cultural restructuring of Central Mesa Verde communities.

[84] *First Chair* [130] *Second Organizer*

Lipe, William [84] *see Speller, Camilla F.*; [84] *see Kemp, Brian M.*

Lipo, Carl (California State University Long Beach), Jelmer Eerkens (University of California Davis) and Sachiko Sakai (University of California Santa Barbara)

[161] *Ceramic technology diffusion among prehistoric mobile populations of the California deserts*

Relative to sedentary and agricultural societies we know very little about pottery among smaller-scale and residentially mobile societies. With luminescence dating, we are able segregate the earliest pottery from later sherds allowing us to examine introduction of the technology, providing greater detail on the types of pots that were initially made and the functions they served. Using luminescence dates from multiple assemblages across the deserts of California and cultural transmission models that account for the diffusion of innovations in prehistoric settings, we explore how material technologies are transmitted across time and space within small-scale hunting and gathering groups.

Lipo, Carl [251] *see Hunt, Timothy D.*

Lippert, Dorothy (National Museum of Natural History)

[7] *Memory and Longing in the Practice of Repatriation*
Native people, like many "persons of color," are identified as having culture in ways that the non-colorful don't. This seems to have created a longing on the part of anthropologists to possess, and benefit from proximity to, Native culture. Objects and human remains present in collections serve as souvenirs of non-Native control over cultured peoples. Resistance to repatriation reveals a sense of nostalgia for the pre-NAGPRA era when the (good) Indians participated in archaeology only as sources of data. This is actually an Imperialist Nostalgia, resulting in the passage of repatriation laws that have irrevocably changed the discipline.

[7] *First Chair First Organizer*

Lippi, Ron [23] *see Gudino, Alejandra Mariana*

Lippi, Ronald (University of Wisconsin--Marathon) [23] *First Moderator*

Little, Nicole [161] *see Speakman, Robert J.*

Littman, Robert [92] *see Silverstein, Jay E.*

Liu, Haiwang (Henan Provincial Institute of Archaeology), Ling-yu Hung (Washington University in St. Louis), Tristram Kidder (Washington University in St. Louis) and Yuqin Song (Peking University)

[189] *Excavations at Sanyangzhuang: A Deeply Buried Han Dynasty site in Henan Province*

The Sanyangzhuang site is a Han Dynasty agricultural community that was buried by Yellow River flooding in the first century C.E. Because of the circumstances of flooding, the site is exceptionally well preserved and provides a glimpse into settlement patterns and

agrarian practices in Wang Mang/early Eastern Han times. In this paper we discuss the excavations of four house compounds and adjacent agricultural fields in 2005 and more recent geoarchaeological research on flooding at the site and its relation to Yellow River floodplain evolution.

Liu, Li and Xingcan Chen (Chinese Academy of Archaeology, Institute of Archaeology)

[155] *From Macro to Micro: the Sino-Australian Yiluo Region Project*
The Yiluo collaborative archaeology project has employed multiple approaches ranging from full-coverage regional survey, site excavation, experimental study, to archaeobotanic analyses. The data generated over the last 12 years has enabled us to evaluate the development of complex societies over 6000 years of prehistory in this region, including changing subsistence strategies and the processes of state formation. Our current research questions are related to the transition from mobile hunting-gathering society to sedentary villages, and preliminary results from residue and usewear analyses have provide much insights to these issues.

Livingood, Patrick (University of Oklahoma)

[26] *Digital Image Analysis of Shell Temper from the Moon Site (3Po488), Arkansas*

This poster will present the methods and results from a pilot study using digital image analysis to measure shell-temper size and abundance on sherds from the Moon Site (3Po488) in Arkansas. This technique gathers data on temper that was previously only available through petrographic thin-section analysis and gathers it in minutes instead of hours for fractions of a penny per sample.

Livingood, Patrick [59] *see Regnier, Amanda L.*

Lizama Aranda, Lilia (Universidad Autonoma Metropolitana Mexico), Harlen Tzuc Salinas (Universidad Autónoma de Yucatán) and Julio Cesar Hoil Gutiérrez (Centro de Investigaciones y Estudios Superiores en Antropología Social, Unidad Peninsular, CIESAS)

[212] *Exposing Tangible Heritage in Correlation with a System of Values and Concepts within Mexican Archaeologies*
Mexican local concepts on which cultural heritage gets valued and why are oriented within global-age economics. Cases of archaeological sites will be discussed which are categorized within a staircase of economical importance based on political, social, and technological features. We will also present concepts concerning local populations' desires to help protect and promote a site for their own benefit. We suggest the importance of having a set of balanced values and concepts. We should educate ourselves and communicate about different perspectives of heritage to professionals and engage them with multiple publics in an effort to achieve development in developing countries.

Lizarralde, Marina (Washington University in Saint Louis) and Lee Arco (Washington University in Saint Louis)

[26] *Analysis of the Tetrahedron Deposit at Jaketown*

The 1951 excavations at Jaketown discovered a dense deposit at the base of Mound A composed of fragmented and intact pyramid-shaped fired-earthen objects associated with the site's Early Woodland component. Few examples of these tetrahedrons exist in the Lower Mississippi Valley archaeological record. Recent fieldwork at Jaketown in 2009 encountered this tetrahedron deposit and identified a fire pit feature filled with the objects in a distinct behavioral context. This poster presents the results of subsequent analyses of the composition, chronology, and function of these unique fired-earthen artifacts.

Lloyd, Timothy (John Milner Associates, Inc.)

[179] *Data Recovery of 12FR336, a Multi-Component Prehistoric Site along the Whitewater River in Southeastern Indiana*

JMA's data recovery of Site 12FR336 resulted in the excavation of 106 postmolds and 74 pit and hearth features. The pit and hearth features were encountered at all levels within the sub-plowzone to a

depth of 130 cm below surface (cmbs). All postmolds were located with the first 50 cmbs. Radiocarbon dates indicate that the near-surface features date to the Late Woodland, while the lower features date to the Late Archaic. The relative dearth of artifacts associated with the pit and hearth features is noteworthy and may be the result of alluvial scouring. Based on the artifact assemblage, including archeobotanical and zoo-archeological remains, Site 12FR336 appears to represent a series of short-term seasonal occupations, some of which may have been ceremonial in nature.

Lloyd-Smith, Lindsay [214] see *Krigbaum, John*

Lockhart, Jami J. [73] see *Ernenwein, Eileen G.*

Lockhart, Jamie, Juliet Morrow (Arkansas Archeological Survey) and Shaun McGaha (Arkansas Archeological Survey)

[217] *Archaeogeophysical surveying at the Prehistoric Old Town Ridge Site (3CG41) in Northeastern Arkansas*

This presentation highlights results of geophysical surveying at the Old Town Ridge (3CG41) site, located in northeastern Arkansas, 40 kilometers east of the Mississippi River. The site was occupied at approximately 1300 A.D. Artifacts signify ancient prestige, and suggest association with the Southeastern Ceremonial Complex. Aerial photographs indicate an eighteen-acre area of intensive use bounded on the north by a relict river channel. Magnetometry has revealed numerous anomalies that are consistent with aligned structures and other features. The imagery also reveals perimeter earthworks and a possible palisade. These data provide pinpointed locations for testing, and primary data regarding intrasite organization.

Lockwood, Christopher (University of Washington), Britton Shepardson (a pō - The Rapa Nui Youth Involvement Program)

[259] *Assessing Kohala Field System Land Use through Geochemistry*

The Kohala Field System, a dryland zone used intensively by sweet potato farmers c. AD 1400-1800, has been a key area for studying the evolution of Hawaiian agriculture. This paper reviews efforts to track variation in soil nutrient levels across the landscape and to relate this variation to differential land use. Particular attention is paid to the impacts of prehistoric pigs and historic cattle upon the landscape.

Loebel, Thomas (University of Illinois-Chicago)

[90] *Microwear, Great Lakes Paleoindians, and the Perishable Record*

Most of what we know or think we know about the Eastern Fluted Point Tradition comes through the analysis of lithic assemblages. While most Eastern fluted point sites lack preserved organic remains, stone tools recovered from them often contain evidence of the perishable record, primarily in the form of optically distinctive use-wear polishes preserved on their surfaces. High-powered microwear provides an avenue to circumvent the poor organic record and gain insights into soft technology and adaptations of Late Pleistocene hunter-gatherers. In this paper I discuss results of recent microwear studies conducted at the Hawk's Nest, Gainey, Nobles Pond, and Shawnee-Minisink sites.

[224] see *Ellis, Christopher J.*; [210] see *Hill, Matthew G.*

Loendorf, Chris R. [158] see *Lincoln-Babb, Lorrie*

Logan, Melissa (PaleoResearch Institute, Inc.) and Linda Scott Cummings (PaleoResearch Institute, Inc.)

[55] *Organic Residue Analysis: Finding Evidence of Foods Using FTIR*

Application of infrared spectroscopy in archaeology for examining organic residues on/in ceramics, FCR, as well as other types of artifacts and sediments can yield an abundance of information on past lifeways, including subsistence, technology, and religion. FTIR has experienced a resurgence for identifying organic substances over the past few decades. Innovative use of this technology in

archaeology to recognize materials such as plant or animal fats, plant waxes, esters, proteins, and carbohydrates expands current databases by offering new information beyond that which can be obtained from existing methods of analysis.

[10] *Discussant*

Logan, Melissa [123] see *Cecil, Leslie G.*; [4] see *Puseman, Kathryn*

Lohse, Jon (Center for Archaeological Studies), C. Andrew Hemmings (Mercyhurst College), and Michael B. Collins (Gault School for Archeological Research)

[210] *Putting the Specialization Back in Clovis: What Some Caches Reveal about Skill and the Organization of Production in the Terminal Pleistocene*

Recent opinion regarding Clovis as big-game hunters has turned to the view that they were generalists, rather than the specialists archaeologists have long envisioned, who pursued megafaunal prey along with a number of other species. This question, whether or not Clovis diet was specialized, obscures the role of specialization in making possible the pursuit and exploitation of large herbivores. Using metric and technological data from Clovis caches, this paper advances a model for embedded specialization as an economic or craft undertaking that describes how some Clovis toolkits were manufactured.

Lohse, Jon [210] see *Hemmings, C. Andrew*

Lombera Hermida, Arturo [205] see *Miller, Alexandra E.*

Longacre, William (University of Arizona)

[119] *Binford in the Southwest*

Lewis R. Binford had a profound impact on Southwestern Archaeology beginning in the early 1960s. Beyond encouraging the "Ceramic Sociology" of that era, he also promoted early examples of sampling, both surface and subsurface, computer assisted sophisticated quantitative analyses and more all directed toward Archaeology as Anthropology. His influence continues today amidst many new directions in both method and theory.

Longman, Adam M. [186] see *Rice, Erin M.*

Longstaffe, Fred J. [138] see *Surette, Flannery K.*

Longstaffe, Matthew (Trent University) and Gyles Iannone (Trent University)

[54] *The View From Below: Community Response to Dramatic Political and Social Transformation at the Ancient Maya City-State of Minanha, Belize*

Over the span of its history, the community at the ancient Maya city-state of Minanha, Belize, underwent dramatic changes in its political and social environment, marked by the establishment of a royal court during the Late Classic period (AD 675-810). A community-based archaeological study aims to clarify the role, and function Minanha's commoner population maintained in relation to this royal court and to explain community response to the dramatic social, and political processes that led to its establishment, and eventual decline.

Looper, Matthew (California State Univ-Chico) [260] *First Organizer*; [260] *First Chair*

Loorya, Alyssa (Gray & Pape) and Michael Matts (Gray & Pape)

[252] *Millennium Public Outreach and Education Project*

The Millennium Pipeline Project traverses a large portion of New York State. As part of the CRM process, Gray & Pape, Inc., in conjunction with the New York State Office of Parks, Recreation, and Historic Preservation, proposed developing a public outreach and educational web site and curriculum package. The archaeological project uncovered several prehistoric and historic sites. Using detailed examples, an overview of the public outreach/educational project and its goals will be presented.

Lopez, Marko (Instituto Nacional de Cultura)

188] *Kasapatac-Kakallinca: A Tiwanaku Site in the Middle Chile Drainage, Arequipa*

Although Tiwanaku presence has been documented in Moquegua and northern Chile, its impact on the neighboring region of Arequipa remains relatively unexplored. There is convincing evidence that points to Tiwanaku influence, either direct or indirect, at sites such as Sachaca, Alatal, Pillo and Sonqonata, all located near the modern site of Arequipa. We present our analysis of ceramics from the site of Kasapatac Kakallinca, which sheds light on the precise relationship between Tiwanaku and contemporaneous local ceramic traditions, and my explain why Tiwanaku expanded outside of the Titicaca Basin into the Arequipa region.

López, Catalina [258] see *Kittel, Michelle*

Lopez Corral, Aurelio (Penn State University)

[156] *Land Tenure and Agricultural Production among Commoner Households in Late Postclassic Tepeaca, Mexico*

This paper examines the relationship between household agricultural production and the land tenure system in Late Postclassic Tepeaca. Ethnohistorical accounts show that elites owned all land while commoners were landless, but were allowed to work small parcels of a noble's estate and in return paid tribute in produce and service. Because agriculture depended on rainfall water, and may have been affected by volatile climatic conditions, productivity was probably low having few possibilities for surplus generation. This work explores the alternative economic strategies taken by commoners to buffer risk and agricultural failure, including reciprocity and intermittent or part-time craft production.

López Luján, Leonardo (Museo del Templo Mayor, INAH), Alejandra Aguirre Molina (Museo del Templo Mayor, INAH), Belem Zúñiga-Arellano (Museo del Templo Mayor, INAH), Norma Valentín (Museo del Templo Mayor, INAH) and Ximena Chávez Balderas (Museo del Templo Mayor, INAH)
[64] *Apanohuayan, The Place for Crossing the Water: Faunal Remains West of the Earth Goddess Tlaltecuhlli monolith in Tenochtitlan*

The objective of the seventh field season of the Proyecto Templo Mayor is to explore the ritual space located at the base of the main pyramid in Tenochtitlan. This paper analyzes the faunal remains recovered inside a series of superimposed entrances that hypothetically lead to the tomb of a Mexica sovereign. Identification of the zoological species and the areas of origin will shed light on the regions that were within the sphere of access to the Mexica empire. Discussion will focus on evidence of the capture/collection, transport, captivity, death, cultural modifications, and symbolism of the animals buried in this context.

Lopez Varela, Sandra (U. Aut. Estado de Morelos) [227]
Discussant

López-Hurtado, Luis (University of Pittsburgh)

[98] *Factional Competition and Religion at the site of Panquilma, Peruvian Central Coast*

Anthropological focus has been focusing in on the way that interested individuals or groups acquired and maintained ruling positions, and on the role that ideology played in this process. Recent research at the site of Panquilma evaluated the importance of ideology in the development of hierarchy at a site located in a region where, according to ethnohistoric documents, hierarchy was based in the religious ascendance of one of the most important pilgrimage centers of the Andes: Pachacamac. Evidence recovered at Panquilma is pointing towards a scenario where factional competition and religious activities were pivotal in the development of hierarchy at Panquilma.

López-Jiménez, Alejandro [235] see *Arroyo-Cabrales, Joaquin*

Lopinot, Neal (Missouri State University) and Gina Powell (Missouri State University)

[172] *Harvesting the Forests and Fields: A Summary of the*

Archaeobotanical Record for the Avenue of the Saints

The results of archaeobotanical analyses for 11 sites dating from Early Archaic through Late Woodland times will be summarized. Data for Archaic sites are scant, but the record for the Middle and Late Woodland periods near the northeast Missouri-southeast Iowa border is especially rich. Human-plant relationships generally coincide with those further to the south near the confluence of the Mississippi, Missouri, and Illinois rivers, although perhaps with less emphasis on starchy-seed production. Maize was a relatively late introduction and apparently a minor crop prior to Oneota occupation of the area.

[146] see *Ray, Jack H.*

Lopiparo, Jeanne (Rhodes College) and Geraldina Tercero (University of South Florida)

[65] *Re-Centering Currusté: Parks, Patrimony, Pedagogy, and the Public*

The development of Currusté as a national park is part of recent IHAH efforts to expand the definitions and accessibility of Honduran cultural patrimony. This multifaceted project has created simultaneous needs for intensive research, pedagogy, and public engagement to interpret and make relevant the history of regional research. Archaeological investigations have provided interpretations for extensive museological plans dedicated to themes of pedagogical and public interest. Collaborative efforts created detailed contextual reconstructions of the life-history of Currusté within its broader context, while foregrounding processes of knowledge creation to understand what archaeology might tell us about a pluralistic Honduran past and present.

[65] *Second Organizer*

LORE-LPB Team [135] see *Batista Martinez, Raquel*; [135] see *Ahrens, Corrie L.*

Lorenz, Joseph (Central Washington University), Brian Kemp (Washington State University), and John Johnson (Santa Barbara Museum of Natural History)

[122] *The Genetic Structure of California Indians: Using mtDNA to Analyze Relationships Across the Americas*

The mitochondrial genome is most widely studied segment of DNA in the human species. Due to its properties of inheritance mtDNA provides an insight into the maternal ancestry of individuals that is not possible with autosomal markers. It is most likely to be retrieved from postmortem tissue and hence mtDNA from past populations can be compared directly with that from modern populations. Using sequence variation in the control region of the mtDNA we have begun to construct a picture of how populations in Southern California fit into the broader picture of worldwide mitochondrial relationships.

Lorenzini, Michele (Southern Illinois University - Edwardsville), Gregory Vogel (Southern Illinois University - Edwardsville), Julie Holt (Southern Illinois University - Edwardsville)

[162] *Engaging Undergraduates in Archaeology: Curriculum and Beyond at SIUE*

The goal of the Anthropology Department at Southern Illinois University Edwardsville is to produce excellent undergraduates. Students learn anthropology best by actually doing it. All SIUE undergraduates complete a year-long senior assignment as the capstone to their undergraduate education. Most anthropology students conduct original research for their projects. Archaeology students, in particular, have been very successful winning grants to support their projects, winning student paper competitions, and publishing their research. This poster examines SIUE's archaeology curriculum, culminating in the senior project, as well as funding and other resources that enable us to produce high quality graduates who are already experienced archaeologists.

Loring, Stephen (Arctic Studies Center, Smithsonian Institution) and Derek Wilton (Memorial University)

[90] *Another "Ghost of Courageous Adventurers": a Ramah Chert Fluted Projectile Point from the Champlain Sea Beaches of northern*

Vermont

A fluted projectile point found in Fairfax County, Vermont approximately 70 years ago has been determined to be manufactured from Ramah chert from northern Labrador. Using laser ablation inductively coupled plasma mass spectrometry we analyzed the fluted point along with Ramah chert quarry samples, and a suite of other fine-grained quartzites found in northeastern North American archaeological assemblages. The acquisition of Ramah chert by Paleoindians from Vermont would have necessitated a round-trip journey of 3000 miles along a recently deglaciated coastline further supporting an interpretation that some northeastern Paleoindian groups had perfected an Inuit-like arctic maritime adaptation.

Losey, Robert (University of Alberta) and Tatiana Nomokonova (University of Alberta)

[16] *Hunter-gatherers of Middle Holocene Lake Baikal, Siberia: Biocultural Discontinuity, Climate Change, and the Zooarchaeological Record*

At the southern margin of the eastern Siberian taiga is Lake Baikal, one of the world's largest lakes. The western Baikal region, our research area, consists of a mosaic of forest-steppe, boreal, alpine, littoral, and marine-like environments. One of the most intriguing features of its Middle Holocene archaeology is a gap and biocultural discontinuity in the region's mortuary record 6-7000 years ago. This transition appears to co-occur with a period of significant climate and environmental change. These sets of changes are examined here from the perspective of human subsistence patterns based on recent research on the region's zooarchaeological record.

Lothrop, Jonathan (New York State Museum), Arthur Spiess (Maine Historic Preservation Commission) and James Bradley (Archlink)

[224] *The Younger Dryas and Late Pleistocene Occupations of the New England-Maritimes*

This paper examines potential effects of the Younger Dryas (YD) on Paleoindian populations in the New England-Maritimes region (NEM). Unlike some regions to the south and west, human colonization of the NEM roughly coincides with, rather than predates, the onset of the YD. Archaeological data show no evidence of a cultural break or population decline at the start of the YD, but rather, ongoing adaptation to changing environments of the NEM during and after colonization. Provenience of sites and isolated point finds suggests Paleoindians did not occupy the northernmost reaches of the NEM until roughly midway through the YD.

Loubser, Johannes (Stratum Unlimited, LLC)

[104] *Mental States Are Locations: A Cognitive Interpretation of Rock Art and Built Structures*

Rock art and built structures from South Africa are interpreted in terms of statements made by direct descendants of those long-departed people who created the art and structures. The finding that most of our abstract ideas, including religious ones, are for the most part formulated in terms of concrete bodily sensations and experiences, help archaeologists interpret how culturally agreed-upon body movements and associated concepts determine the placement and form of rock art and house shape.

Louderback, Lisbeth (University of Washington)

[118] *Development of Grinding Stone Technology in the Great Basin*

The intense use of small seeds was a crucial turning point in human dietary history. Around 8,000 years ago, the Great Basin went through its own version of a "broad spectrum revolution", one that included technological change and small seed processing. O'Connell et al. (1982) have predicted that widespread aridity resulted in reductions of high-ranked foods and the adoption of small seeds in the diet. This hypothesis was tested by examining the development of grinding stone technology. I analyzed ages and abundances of stones in three regions of the Great Basin, comparing them to patterns in the paleoenvironmental record.

Loughlin, Michael (University of Kentucky)

[254] *The Classic Period in the El Mesón Area of the Eastern Lower Papaloapan Basin*

During the Early Classic period, settlements in the El Mesón area of the Eastern Lower Papaloapan Basin broke from Tres Zapotes' political control. This shift was accompanied by a boom in population and the establishment of new civic-ceremonial complexes. In this paper I examine this change, placing particular emphasis on shifts in the local settlement pattern and political and economic organization. I argue that with the decline of Tres Zapotes, the location of the El Mesón area, within an important trade corridor, provided an opportunity for local political leaders to establish the area as an independent political and economic entity.

[133] *Discussant* [133] *First Chair*

Love, Daniel P. [86] *see Matovich, Jeanette*

Lovett-Graff, Bennett (University Press of Colorado) [93] *First Organizer*, [93] *First Chair*

Lovis, William (Michigan State University), Gerald Urquhart (Michigan State University), John Hart (New York State Museum) and Robert Feranec (New York State Museum)

[4] *Alkali Processing of Maize and Resultant d13C Values on Systematic Experimental Carbonized Residue C3 Food Mixes*

Experimental carbonized residues composed of maize (*Zea mays* ssp. *mays*), a C4 plant, and C3 resources demonstrate that a single threshold d13C value will not necessarily identify maize in a residue. Other experiments using green kernels, whole wet hominy, and meal indicate it is the mobilization of carbon from maize and C3 resources that determines d13C values; maize can be under- or over-represented in d13C values based on the form cooked. Ethnographic evidence demonstrates that dried maize kernels were commonly processed with alkali to create hominy. Here we present the results of d13C determinations on whole kernel maize cooked with alkali, and compare these results against those for other forms of maize.

Lowe, Kelsey [217] *see Mehta, Jayur M.*

Lowe, Lynne [88] *see Sellen, Adam T.*

Lozada, Maria (University of Chicago)

[188] *Mortuary Landscapes in the Vitor Valley of Southern Peru*

The location and structure of cemeteries represent key means by which to understand the social structure and/or ideological perceptions regarding death and life in past societies. Human occupation in the Vitor Valley stretches over 4000 years, spanning the Formative Period until the modern era, allowing archaeologists to interpret how mortuary behavior adapted over time to various cultural, physical and socio-political changes. We explore the relationship between residential areas and cemeteries diachronically from the Ramadas Tradition (Formative) to the modern period. We argue that mortuary practices remained remarkably uniform over time despite dramatic changes in the cultural and physical landscape.

[188] *First Organizer*, [188] *First Chair*

Lu, Hongliang (Sichuan University), Amanda Henck (University of Washington), James Taylor (University of Washington) and Yongxian Li (Sichuan University)

[155] *Archaeological Research at a Han Dynasty Settlement in Jiuzhaigou National Park, Sichuan*

Starting in 2007, Sichuan University and the University of Washington, Department of Anthropology, have been conducting archaeological survey in the highlands of Northwest Sichuan. After discovery in 2007, excavations began at the Han Dynasty settlement of Ashaonao. Here we report our preliminary findings, among which are the first investigations of Han Dynasty residential structures in this region and Neolithic strata underlying the Han remains. The Han structure and construction technologies of this building show strong connections with settlements known from Northwest China (Gansu).

Lu, Xueming [155] *see Peterson, Christian E.*

Lucas, Steve (Nez Perce National Forest) [43] *Cultural Resource Management Along the Salmon River - Frank Church River of No Return Wilderness*

Nearly 40 years have elapsed since the first and last significant effort to document cultural properties along Idaho's Salmon River, within the Frank Church River of No Return Wilderness. The archaeologically rich corridor represents the longest un-dammed river system in the Inland Northwestern United States. The Nez Perce National Forest, in cooperation with Rain Shadow Research, Inc., have spent the last five years recording and monitoring numerous sites situated along 30 miles of the "River of No Return," in addition to surveying hundreds of acres within this remote, and federally designated wilderness area of central Idaho.

Lucero, Lisa (University of Illinois at Urbana-Champaign)

[153] *Climate Change and Classic Maya Political Decisions*
Setting in motion the events that led to the disappearance of Classic Maya kings by the A.D. 900's in the southern Maya lowlands was a long-term drought. Maya kings implemented short-term tactics that only exacerbated problems. These political decisions ultimately resulted in people abandoning rulers and centers because of the lack of water due to the drying up of massive reservoirs. If rulers had employed long-term solutions, would they have been enough to prevent their demise? This question is crucial in view of current concerns on climate change and similar short-term political decisions.
[153] *First Organizer*, [153] *First Chair*

Luchsinger, Heidi [47] *see* *Gutierrez, Maria A.*

Luhman, Hope (The Louis Berger Group, Inc.)

[180] *The Who, wot, Where, When & hw: Considering the Possibilities 4 Public Outreach in CRM*
Understanding the audience, organizing information, the venue, timing, and presentation offer challenges to achieving effective public outreach in a cultural resource management (CRM) context. This paper offers perspectives on where CRM might rethink and expand standard approaches while finding new ways to incorporate the evolving technological toolkit for reaching intended audiences.
[180] *First Organizer*, [180] *First Chair*

Luin, Luis (Aj-Ts'ib), Arthur A. Demarest (Vanderbilt University) and Brent Savoie (Primeros Pasos)

[212] *Maya Archaeology as an Instrument of Regional Education, Empowerment and Indigenous Development: Taking it to a Higher Level*
Maya archaeology has been slow in incorporating meaningful large scale outreach goals, especially given the fact that the "Indiana Jones" appeal of this subfield provides extraordinary visibility which can be used for ethical ends. In Guatemala the projects described here were planned from the beginning on a regional scale with creation of locally controlled parks, intercommunity collaboration, education, and indigenous empowerment as principal, not secondary goals. The battle with political and racist obstacles was won, but the reluctance of archaeologists themselves remains. Yet the success of these projects demonstrates that such research designs are a moral imperative in Maya archaeology.

Luke, Christina (Boston University)

[65] *Smart Power and Cultural Diplomacy in Honduras: Heritage and People-to-People Exchanges*
The intersection of foreign affairs and cultural diplomacy represents an increasing important arm of "smart power," the merging of hard and soft power in U.S. foreign policy. Much of the rhetoric associated with U.S. diplomacy in Honduras places heritage at the center of "people-to-people" exchanges, the programming meant to promote "mutual understanding" across national boundaries aimed at winning "hearts and minds." How such programming plays-out is dictated by the official governmental management of heritage, increasingly a material-focused heritage. Archaeologists balance the spheres of upper-echelon governmentality, long-term local community networks, and sustainable development projects within the mosaic of U.S.

foreign relations.

Lukowski, Susan (Washington State University) and Colin Grier (Washington State University)

[203] *Investigating Patterns of Resource Consumption in a Northwest Coast Plankhouse*
Household archaeology attempts to understand how households were ordered and how the house itself structures activities. Excavations in House 2 at the Dionisio Point site in the Southern Gulf Islands of British Columbia, Canada, produced a large set of artifacts and fauna. The artifact assemblage reflecting production activities has been analyzed previously. Here, faunal data within the house are examined spatially and quantitatively, revealing patterns of differential consumption of various faunal taxa. Comparison of production and consumption assemblages provides a basis for drawing inferences regarding the nature of cooperation, ownership, and status within a plankhouse.

Luksha, Victoria (Graduate Student, University of Montana)

[163] *Artifact Conservation: A Cost-Effective, Mildly Invasive Method*
The information recovered from organic artifacts is greatly reduced every hour it is exposed to the air. Traditional active conservation methods have saved many artifacts by using modern chemical additives or resins. These approaches are widely accepted and supported. It is important to consider the invasive nature of these compounds and the cost in storing, using, and disposing of these chemicals. This is a preliminary study involving methods and materials that are cost-effective and using common materials like paraffin to attain better preservation while saving the basic structure of the artifact for later molecular testing.

Lunagomez Reyes, Roberto (Universidad Nacional Autonoma de Mexico)

[254] *Medias Aguas, Veracruz: Datos e Interpretaciones*
En esta ponencia se presentarán los datos recientes de los distintos estudios y materiales arqueológicos del Proyecto Arqueológico Medias Aguas-PAMA. El reconocimiento de superficie, el mapeo y las excavaciones en la región de Medias Aguas, Veracruz iniciaron en el año de 1999 y continuaron durante los años 2000, 2003 y 2004. Los estudios realizados incluyen información sobre la lítica pulida, la lítica pulida-obsidiana, hachas y figurillas cerámicas, la restauración de vasijas cerámicas, arquitectura, sistema de enterramientos y el patrón de asentamiento prehispánico desde el periodo Preclásico Inferior (1,500 a.C.) hasta el periodo Clásico Terminal (1,000 d. C.).

Lundeen, Benjamin [235] *see* *Randklev, Charles*

Lunn, Anna

[59] *Archaeological Investigations at the Slayden Site (40HS1), Humphreys County, Tennessee*
The Slayden site (40HS1), located on the bluff of the Duck River in Humphreys County, Tennessee, was excavated in the 1930s as part of the New Deal programs. The site is characterized by a burial area, seven residential mounds, and a main village area and plaza. Field notes, maps, and photographs from the 1930s provided the basis for reconstructing site excavations, while artifacts were analyzed for temporal affiliation. Ceramic analysis and comparison to nearby sites indicate that the primary occupation was probably after A.D. 1000, though earlier components are also present.

Lupo, Karen D. [53] *see* *Safi, Kristin N.*

Lurie, Rochelle (Midwest Archaeological Research Services, Inc.) and Kathleen L. Ehrhardt (Illinois State Museum)

[102] *Setting the Stage: Historic and Archaeological Context for the New Lenox Site*
New Lenox is one of only a handful of archaeological sites in Northern Illinois with Upper Mississippian occupations containing European trade goods. Radiocarbon dates, along with artifacts recovered from discrete features, allow us to identify Langford, Oneota, and protohistoric occupations. In this paper, we review what

little can actually be said with confidence about these types of occupations in the region over the late prehistoric/early protohistoric period, and evaluate the new findings from New Lenox in terms of their potential contributions to longstanding questions of ethnic identity, settlement, and the onset of European influence in the area.

Lurie, Rochelle [102] *First Organizer*; [102] *Second Chair* [102] *see Katz, Steven A.*

Lusteck, Robert (Rhodes College)

[55] *Small Things Forgotten: Recovery of Phytoliths from Food Residues*

One of the benefits of working with phytoliths is their resistance to alteration by curation. Unlike chemical residues, phytoliths are not damaged by time, or altered by glues or storage methods. As long as pot sherds are not assiduously scrubbed, food residues that accumulate on the inside surfaces of ceramics are likely to remain in place and provide enough material for phytolith analysis. Phytoliths also can be derived from archaeological reference samples, like charred corn cupules or cobs. In this paper, I discuss the value of phytolith research on prehistoric maize specimens from the central and southeastern U.S.

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

[91] *Wetlands Agricultural Research*

We have now completed two decades of wetland studies in Blue Creek and Programme for Belize. In this time we have applied multiple paleoecological and geoarchaeological methods to understand wetland morphology, formation, physical and biological properties, functions, evolution, and human use. The last decade of research has focused on the human use potential, through excavations and mapping in the wetlands of Blue Creek and PfB. Herein we summarize the progress and findings of this research involving over forty excavations, and the most recent results of the 2009 field season, and their implications for interpreting other wetland sites across Northern Belize.

Lycett, Mark (University of Chicago) [255] *Discussant*

Lycett, Stephen (University of Kent)

[205] *Stone Tools and Hominin Dispersal: A Cladistic Analysis of Acheulean Handaxes*

Based on broad dating patterns, it has been suggested that the appearance of Acheulean handaxe technologies outside of Africa was the result of hominin dispersals, yet independent tests of this hypothesis remain rare. Here, this hypothesis is tested using an intercontinental dataset of Acheulean handaxes and a biological phylogenetic method (maximum parsimony). The analyses produce a cladogram consistent with phylogeographic predictions derived from the African Acheulean dispersal hypothesis. Moreover, a bootstrap analysis provides evidence that this pattern is statistically robust, and the maximum parsimony tree is also shown to be significantly different from a tree constrained by stone raw materials.

Lyman, R. (University of Missouri Co)

[207] *Taphonomy, Pathology, and Paleoecology of the "Big Elk" from Terminal Pleistocene Sediments at Marmes Rockshelter (45FR50)*

Human remains thought to be of Pleistocene/Holocene age discovered in 1968 at Marmes Rockshelter (45FR50) in southeastern Washington were associated with remains of what at the time were believed to be remains of a butchered elk (*Cervus elaphus*) that were significantly larger than modern elk. Recent analysis of these elk remains reveals a skeletally mature individual with no evidence of butchering but clear indications of carnivore gnawing. The elk had two types of pathologies, and was of a size only slightly larger than some modern elk. The elk is about 9500 C14 years old.

[207] *First Chair*

Lynch, Elizabeth (University of Wyoming)

[117] *Bedrocks Metates along the Chaquaqua Drainage: Building an*

Conceptual Framework for Prehistoric Landscape Knowledge

The canyons and tributaries of the Purgatoire River in Southeastern Colorado reveal evidence of continuous occupation of indigenous peoples for thousands of years. Evidence abounds for habitation by plains hunter gatherers, horticulturalists and possibly ancestral woodland culture groups. A unique feature of this regional system is the presence of bedrock metates occurring in varied site contexts. This paper addresses the problem of how prehistoric peoples in this region may have incorporated bedrock metates within their socio-cultural view of the landscape by through the use of Photogrammetry and GIS to explore the regional typology and distribution of these features.

Lynch, Joshua [99] *see Morton, Shawn G.*

Lynch, Shaun and Thomas Rocek (University of Delaware)

[87] *The Dunlap-Salazar Site Lithic Sources, and Highland Pithouse Period Mobility in the Jornada Mogollon of South-Central New Mexico*

This paper examines mobility at the Dunlap-Salazar pithouse site in Lincoln County, New Mexico, ca. 550-850 cal. A.D. We use the relative percentage of local vs. non-local raw materials and of high quality chert as measures of lithic procurement strategies, and thus indirectly mobility. Comparing these values against earlier (Archaic) and later (Pueblo) occupations across the Formative boundary, we find that like pueblo period patterns, Dunlap-Salazar occupants used high percentages of local materials and limited quantities of chert. However, preliminary results suggest that the chert abundance may decrease over the course of the site's occupation, suggesting shifting patterns over time.

Lynott, Mark (National Park Service)

[176] *Ditches, Walls, Mounds and Monuments: What Do We Really Know About Ohio Hopewell Earthen Enclosures?*

For two centuries scholars have hypothesized about the purpose of the numerous prehistoric geometric earthen enclosure sites in southern Ohio. In recent decades, archaeologists have begun to examine the chronology and methods of construction associated with these great earthen monuments. Geophysical and geoarchaeological studies provide new data that offer more refined interpretations about these unique earthen monuments. Assumptions about the potential contemporaneity of various sites, and the role that borrow pits, ditches and surface scraping may have played in wall construction may need to be reconsidered.

[176] *First Chair* [176] *Second Organizer*

Lyon, Edwin (Tulane University) [59] *Discussant*

Lyons, Kevin (Kalispel Tribe of Indians)

[207] *An Analysis of Kalispel Ethno-historic Village Catchments in the Lower Pend Oreille Valley, Northeastern Washington*

Kalispel community histories provide rich contextual information on where and what people did to meet their provisioning needs. Viewed through the prism of cultural ecology these data provide measurable and rational expectations for the cultural uses of the watershed. Most striking is the intersection between place name and historic cover type data that jointly indicate a higher density of winter village packing than is typically expected and a near equal weighting of cover types selected for optimal winter encampment selection. These anecdotal data can be argued to serve as a proxy for cultural adaptation to a mesic forest environment.

Lyons, Kevin [207] *see Hicks, Brent*

Lyons, Patrick (Arizona State Museum)

[76] *Digital Curation at the Arizona State Museum*

Founded in 1893, the Arizona State Museum (ASM) at the University of Arizona is the oldest and largest anthropological museum in the U.S. Southwest and the country's largest non-federal archaeological repository. Technology has played an increasingly critical role in ASM's ability to store and retrieve artifacts, information, and images. In this paper, ASM's approaches to problems of permanence,

funding, standards, and access are examined in the context of its mission as a repository, the agency that issues archaeological permits, and an institution that serves students, professional archaeologists, and the public through teaching, access to collections for research, and public programming.

[76] *First Organizer*

Lyle, Whitney (Texas State University) and Kent Reilly (Texas State University)

[260] *Wrapped in the Clothing of the Sacred*

Rulership in Mesoamerica was publicly legitimized through elaborate ritual activity. Archaeological, and iconographic investigations have produced convincing evidence that certain stone monuments carrying elite imagery were often wrapped or bundled when not actively in ritual use. A close investigation of several Olmec monuments, that depict elite individuals, reveals that the concept of the sacred bundle was incorporated into their elite costuming. Items of elite dress were conceived of as framing devices associated with maize symbolism. These symbolic expressions identified the wearers as both sacred themselves, and as conduits through which that sacredness could be manifested in ritual space.

Mabry, Jonathan (Tucson Historic Preservation Office)

[44] *Paleoclimatic and Environmental Contexts for Early Agriculture and Water Control in the Desert Borderlands, Southwestern U.S. and Northwestern Mexico*

Following a middle Holocene population decline in the desert borderlands, the earliest radiocarbon-dated Middle Archaic occupations in the region coincide with the onset of a relatively wet interval at the beginning of the late Holocene, which created favorable conditions for both foragers and the first farmers in the region. The Middle Archaic population increase, the arrival and spread of maize, and the local development of water control techniques are discussed in the context of this wet interval that may have been due to intensification of ENSO cycles, and a related increase in the frequency and magnitudes of winter Pacific storms.

Mac Pherron, Shannon [8] *see Turq, Alain*

Macdonald, Danielle (University of Toronto)

[186] *Use-wear Analysis of Microlithic Tools using Three-Dimensional Microscopy*

With the development of new microscopy technologies, the field of lithic use-wear studies is undergoing an exciting stage of transformation and revitalization. New methodologies such as three-dimensional microscopy allow for quantification of wear features and produce high resolution images. This paper will discuss the results of use-wear analysis using three-dimensional microscopy on a collection of Epipalaeolithic microliths from the Near East. Results of use-wear analysis on a sample of these microliths will be presented, with a focus on the applications of new use-wear methodologies for lithic analysis.

MacDonell, George (Bureau of Land Management - Carlsbad FO) and Lynn Robinson (Bureau of Land Management)

[87] *Ongoing Research at Jornada Mogollon Village Sites of Southeastern New Mexico*

Located on the periphery of the Southwest and Plains culture areas, the Mescalero Sands of southeastern New Mexico is a marginal environment. However, several Late Formative villages of apparent residential stability (possibly horticulturally based) are found in this region where highly mobile foraging might be more expected. To date, very little investigation of these sites has occurred despite their great research potential. Analysis of existing data sets and new fieldwork projects are being conducted at these important sites through the Permian Basin Memorandum of Agreement, an alternative form of off-site cultural mitigation for energy projects in Southeastern New Mexico.

MacFadden, Bruce [26] *see Church, Krista*

MacFarland, Kathryn (University of Arizona)

[240] *Laterality and Directionality in Pottery Painting and Coiling*
In this project, the consistency of the directionality (clockwise versus counterclockwise) of painted lines and coiled bases on whole vessels was studied to determine tolerance within an open or closed cultural learning framework (Wallaert-Pêtre 2001:485). An experiment was carried out which linked directionality on pots with the laterality of the potter in an open system. These results were then compared with data from archaeological pots from sites in the Point of Pines area, Arizona (AZ W:10:50). Analyses of ceramic structure and design were used to extrapolate artistic tolerance with degrees of variation within and between types.

Machicek, Michelle [189] *see Johannesson, Erik G.*

Machiran, Anthony (Southeast Missouri State University) and Robin Machiran (Archaeological Research Center of St. Louis, Inc)

[2] *An Early American Frontier Farmstead in the American Bottom*
The Squire site (11Ms2244), located in the Six Mile Prairie area of Madison County, Illinois is the farmstead of an influential, early Frontier era family. Material remains recovered included four bayonets dating to the War of 1812, gun parts, glass beads, horse gear, fine ceramics, Spanish coins and material the Squires collected and reused from the earlier Mississippian occupation. A deep summer kitchen and/or smoke house, unique to the area, was located near the house. It is likely the residence was a gathering point for the local militia as well as a local trading factory.

Machiran, Robin (Archaeological Research Center of St. Louis, Inc.)

[2] *The Alexander Jacob Site: A Review of the Findings at a Early Mississippian Site in the American Bottom*

The Alexander Jacob site (11MS2288), located in Granite City, Illinois, is a unique, single component site occupied during the early Lohman phase of the Mississippian Period. Located on an American Bottom terrace, the village is laid out in a horseshoe shape with a central plaza opening to the south and an associated mound. The community had over 20 houses including one large structure measuring approximately 18 x 13 meters. Alexander Jacob represents early Mississippian habitation in the American Bottom and the findings shed light on the changes taking place as the Mississippian culture takes hold in the area.

[2] *First Organizer*; [2] *First Chair*; [2] *see Machiran, Anthony*

Macias, Juan Ignacio (Universidad Autonoma de Zacatecas)

[57] *An Evaluation of the Defensive Capacities of the Prehispanic Settlements at the Northern Basin of the Río Verde-San Pedro*

The results of an analysis applied to twenty-four sites located in the basin of the Río Verde-San Pedro are presented. The purpose of the analysis is to determine how the settlement systems in this region were affected by the emergence of new settlement systems during the Epiclassic period. It is proposed that if the Epiclassic was a period of conflict, then the settlements will show defensive capacities. The results revealed to what extent the sites were defensible, as well as the feasibility of GIS applications for understanding social behavior in the past.

Mackay, Alex [182] *see Steele, Teresa E.*; [182] *see Schwartz, Steve*

Mackey, Carol (California State University Northridge)

[67] *Late Period Spondylus Usage: Examples from Chimú and Inka Tombs*

Although there is clear evidence of continued Spondylus use in Chimú and Inka tombs on Peru's north coast, a significant change occurred during the Moche period. While elite individuals in earlier Moche burials wore necklaces or pectorals made from Spondylus beads, in late Moche, whole as well as cut shells were also included in burial offerings. Data from several late north coast sites provide further evidence for the persistence of whole Spondylus as well as

possible reasons for the shift in mortuary patterns.

Mackie, Quentin [224] *see Fedje, Daryl W.*

MacKinnon, Michael (University of Winnipeg)

[64] *"Tails" of Romanization: Animals and Inequality in the Roman Mediterranean Context*

Using zooarchaeological evidence, this paper examines "romanization" as it relates to dietary, economic, and social changes concerning animals and animal resources, with particular focus on the Roman Mediterranean context. Topics addressed include: (1) the connection of pork to Roman cultural identities; (2) improvements to animal breeds; (3) butchery and marketing changes that resulted from greater urbanization in many areas during Roman times; (4) the role of pets (especially toy breeds of dogs) and wild animals in displays of wealth, identity, and inequality among individuals; (5) cases for persistence in dietary practices and/or husbandry schemes, despite "romanized" contact, presence or control.

MacWilliams, A. C. [248] *see Hard, Robert J.*

Madsen, David B. [118] *see Beck, Charlotte*

Maggard, Greg (University of Kentucky)

[138] *Redefining Paiján: Changes in Late Pleistocene-Early Holocene Lithic Technology in Northern Perú*

The Paiján complex (ca. 10,800-9,000 B.P.) of northern Perú is best known for the distinctive 'needle-nose' projectile points that define the technology. Although it has been recognized that a range of stemmed point forms are commonly present on Paiján sites, this variability is generally subsumed within a single Paiján "type". Recent analysis of 161 points from the lower Jequetepeque Valley suggests that the Paiján "type" actually consists of several distinct forms with different and overlapping temporal relationships. These types correspond to Early and Late phases within the Paiján complex and are indicative of changing technology and mobility strategies.

[146] *Discussant*

Magnoni, Aline (Tulane University), Bruce Dahlin (Ancient Maya Environmental Studies Center) and Scott Hutson (University of Kentucky)

[178] *Living in the City: Settlement Patterns and the Urban Experience at Classic Period Chunchucmil, Yucatán, Mexico*

The prehispanic Maya city of Chunchucmil grew to become the most densely settled city of the Maya area during the middle of the Classic Period (A.D. 400-650), despite being located in an agriculturally marginal environment. Here we will describe the settlement patterns of this densely settled urban site focusing on the characteristics, composition, and variability of residential groups to illustrate how so many people lived here and may have experienced the urban environment. Chunchucmil's residential groups with a patio group layout and enclosed by stone boundary walls, which housed the city's basic social units, provide us with rich details of domestic life.

Mahar, Ginessa (American Museum of Natural History) and Elliot Blair (UC Berkeley)

[154] *Diet, Gender, and Colonialism: The Impact of the Spanish Mission System on Patterns of Consumption in the Coastal Southeast*

Two important archaeological observations have been made regarding colonial impacts on Native foodways during the Spanish Mission period (1587-1763) in La Florida: paleoethnobotanical and bioarchaeological data indicate a significant increase in the consumption of maize by Indians within the Mission system, while zooarchaeological data indicate considerable continuity in diets from the precontact era. In this paper we re-examine this evidence of change and continuity in colonial diets in Spanish Florida from the perspective of gender, particularly examining the dietary stable isotope data from the region that suggests that the colonial system may have affected and transformed gendered patterns of consumption.

Mahar, Ginessa [154] *see Mahar, Ginessa J.*

Mahoney, Maureen

[106] *Political Differentiation in Denmark during the Roman Iron Age* Beginning ca. 300 BC, the Free German society in Denmark experienced increased political differentiation. At roughly the same time, the Free Germans constructed new types of settlements and began trading with the Romans. While I doubt that these three phenomena were unrelated, it is unclear whether the Romans caused the Free German chieftains. In this paper, I determine the proximity of the new type of settlement to the imported Roman goods that are in graves or bogs. According to my analysis, the Romans had contact with the Free Germans, but they did not cause the construction of the Free Germans' highly stratified society.

Makowski, Krzysztof (Pontifical Catholic University of Peru), Gabriela Oré (Pontificia Universidad Católica del Perú), and Mila Jimenez (Pontificia Universidad Católica del Perú)

[18] *New Lights on the Pachacamac Oracular Center in the Inca Time*

The excavations and the ground penetrating radar (GPR) survey in Pachacamac during the 2005-2009 seasons of the Proyecto-Escuela de Campo PUCP "Lomas de Lurin" allowed us to find and date the main entrances on the Second Wall that lead to the pyramids with ramp sector, to date the N-S street and the First Wall, and also to define the character of Inca occupation in the external space demarcated by the Third Wall. The results suggest a new understanding of the development of Pachacamac's spatial layout throughout the late periods, and invite a reconsideration of the date and possible functions of the pyramids with ramp.

Malainey, Mary (Brandon University), Phillip J. Innes (Brandon University) and Timothy J. Figol (Brandon University)

[55] *Taking a Second Look: Results of the Re-analysis of Archaeological Lipid Residues from North America and Beyond* Lipid residues previously extracted from a variety of archaeological materials, primarily from the Great Plains and adjacent regions, are reexamined. Residues identified on the basis of fatty acid composition alone are reanalyzed using gas chromatography (GC) and mass spectrometry (MS). The value of the reanalysis is assessed with respect to occurrence of biomarkers, the nature and extent to which identifications could be clarified and the impact on site interpretations. These results form the basis of recommendations for the utilization of GC, high temperature GC and GC-MS and compound specific analysis with GC-C-IRMS in situations where time and money may be limited.

Malainey, Mary [87] *see Boggess, Douglas H M*

Maldonado, Blanca (Colegio De Michoacan, Mexico)

[156] *The "Chaîne opératoire" of Mesoamerican Metallurgy* The analysis of technology is best approached by a theoretical perspective that regards it as an integral and active component of human systems. As a research method, the "chaîne opératoire" approach seems consistent with, and complementary to an evolutionary perspective which emphasizes both ecological and behavioral aspects of technology, and takes into account the social and political foundations of technological practices. It also offers a way to link specific crafts to the technologies of which they are part. This paper provides an overview of mining and metallurgy in Mesoamerica, presented within the framework of the "chaîne opératoire" or operational sequence.

Maldonado, Doris (UC Berkeley)

[65] *Repositioning and Expanding Inclusive Narratives in Honduran Archaeological Practice and Interpretation: Participatory Archaeology at Currusté*

Recent work at the site of Currusté in Northwestern Honduras has provided an opportunity to participate collaboratively with various stakeholding communities. Under Dr. Dario Euraque's leadership, the Instituto Hondureño de Antropología e Historia (IHAH) has pursued

the inclusion of narratives and projects promoting the multiethnic and multilingual Honduran past for an equally diverse Honduran present. Participatory research at Currusté complements IHAH goals by including educational components, activities, and workshops for apprentice archaeologists, while interviews and discussions with community members focused on gaining insight and understanding about relevant narratives that resonate with the daily lives and lived experiences of Hondurans today.

[66] *Discussant*

Maldonado, Ronald [235] *see* *Marek-Martinez, Ora V.*

Malpiedi, Jennifer (Southern Illinois University Carbondale), Heather Millis (TRC Environmental Corporation) and Heather A. Lapham (Southern Illinois University Carbondale)

[217] *Fishing Along the Outer Banks: Ichthyofauna from the Broad Reach Site*

Recent excavations at the Middle to Late Woodland period (ca. A.D. 200-1500) Broad Reach site (31CR218) in coastal North Carolina revealed an extensive habitation site along with almost 50,000 animal remains from shell middens and pit features. Located along Bogue Sound, the site is protected from the Atlantic Ocean by one of the Outer Banks barrier islands. Fishes dominate the faunal assemblage, indicating the importance of marine resources to coastal diets and lifeways. We examine fish exploitation and fishing techniques to better understand the importance of the Outer Banks in the development of marine adaptation by the coastal inhabitants of North Carolina.

Malville, John (University of Colorado) and Nancy Malville (University of Colorado)

[89] *The High Communities of Chimney Rock: Ceremony, Trade, and Astronomy*

Chimney Rock is unique among Chacoan outliers because it was not reoccupied after abandonment around AD 1130. Both indigenous and Chacoan communities are clearly represented in the archaeological record. Our hypothesis is that the High Mesa community was a ritual and trade center prior to the AD 1076 Chaco intrusion and that the local community accepted Chacoans and willingly shared the sacred space of the upper mesa. Trade of meat products may have alerted Chacoans to the lunar standstills that appeared between the chimneys. Pre-Chacoan ceremonialism is indicated by the fire pit on the upper mesa as well as by the large number of locally-made feather holders.

Malville, Nancy [89] *see* *Malville, John McKim*

Manahan, T. Kam [160] *see* *Stockton, Trent*

Mandel, Rolfe (Kansas Geological Survey), Jack Hofman (University of Kansas), and Steven Holen (Denver Museum of Nature and Science)

[259] *Geoarchaeology of Stratified Early Paleoindian Cultural Deposits at the Kanorado Locality, Northwestern Kansas*

Evidence for Early Paleoindian occupation on the Central High Plains is rare, and sites with both stratified Clovis and Folsom cultural deposits are even less common. However, recent excavations at the Kanorado locality in northwestern Kansas indicate there are buried Clovis-age and Folsom campsites in the valley of upper Middle Beaver Creek, an intermittent stream, or draw, cut into the High Plains surface. The Early Paleoindian cultural deposits are buried in alluvium beneath a low terrace. This paper presents the results of geoarchaeological research that has focused on the soil-stratigraphy, geochronology, and paleoenvironmental record at Kanorado.

[231] *Discussant*

Mandel, Rolfe [146] *see* *Ray, Jack H.*; [259] *see* *Kessler, Nicholas V.*; *see* *Gottsfeld, Andrew*

Mann, Rob (Louisiana State University) and David Chicoine (Louisiana State University)

[114] *Intrusions: Incidental or Indicative Cultural Phenomena?*

From issues of cultural heritage and taphonomy, to how and why sites are abandoned and reused, intrusiveness pervades archaeological practice. This paper introduces the concept of intrusiveness as it relates to archaeology. Archaeologists have come to see intrusive phenomena less as irksome, destructive events, and more as a potentially informative form of cultural activity that may provide insights into the use, abandonment, and reuse of cultural landscapes over long periods of time. Prehistoric and historic case studies from the lower Mississippi and Andean regions will be explored with the objective of further theorizing intrusiveness and defining its heuristic value.

[114] *First Chair* [114] *Second Organizer*

Manne, Tiina (University of Arizona) and Nuno Bicho (FCHS, Universidade do Algarve, Portugal)

[16] *Never Too Much of a Good Thing: Continuation of Subsistence Patterns during the Upper Paleolithic in southwestern Portugal* 25, 000 years ago in southwestern Portugal, humans were exploiting a wide variety of terrestrial and marine resources in addition to intensively processing large game for their bone grease. The Upper Paleolithic site of Vale Boi, located near to the most southwesterly point of continental Europe, indicates that these patterns, beginning in the Gravettian, continued largely in the same fashion throughout the Solutrean and into the Magdalenian. Though no increasing trend of diversification or intensification can be discerned, the exploitation of small, fast-moving game, along with the labor-intensive processing of large game, may suggest behavioral efforts to alleviate resource stress.

[16] *First Organizer*, [16] *First Chair*

Mannheim, Bruce (University of Michigan) and Guillermo Salas Carreño (University of Michigan)

[18] *Understanding the Andean Sacred: A Dozen Principles* Scholars commonly make two moves in interpreting the Inka sacred: (1) they assume that the ritual practices of state elites are coterminous with ritual practices more broadly; and (2) they assume that ritual practices can best be understood by constructing an analogue theology (or "cosmology")—a logically integrated set of beliefs—despite the absence in Inka and modern Quechua societies of theological institutions. We propose instead a set of principles through which Inka and modern Andean practices of the sacred can be better understood through a "bottoms up", non-cosmological approach. These principles can be tested archaeologically, historically, and ethnographically.

Mans, Jimmy (Leiden University)

[47] *The Contemporary Archaeology of Trio Movements*

Over the last decade a group of Trio living in the larger village of Kwamarasamutu in the south of Suriname has been fissioning into small villages along the uninhabited middle Corentyne. This process is accompanied by renegotiating ties and identities. The material dimensions of one of these small villages are studied. Its inhabitants and their fluid connections with the material village are subsequently historicised within the time span of a century. The archaeological and ethnographic stasis of place on the one hand and the anthropological and ethnohistorical contextualisation of the villagers on the other broach Trio dynamics from a multi-scalar perspective.

Manzanilla, Linda (U Nacional Autonoma de Mexico)

[96] *Craft Activity and Administrative Devices at Teotihuacan, Central Mexico*

Ancient cities housed a large population of craftsmen, masons, priests, emissaries, guards, and people unrelated to the production of foodstuff. In the ancient Near East administrative devices (seals, sealings, bullae, clay tablets, tokens) are evident in the archaeological record, as are storerooms and storage loci. In Classic Mesoamerica, huge urban developments such as Teotihuacan, housed multiethnic populations devoted predominantly to craft activities as well as to the large-scale movement of sumptuary and allochthonous goods. Unfortunately no centralized storage facilities

have been recognized in the site. Even though there are no evident administrative devices such as the Postclassic codexes (the *Matricula de Tributos*, for example) clay roundels ("tejos") and trinkets are numerous and may represent administrative objects related to the craftsmen themselves. This paper will review the relevant data from the Teopanazco barrio center at Teotihuacan.

[96] *First Organizer*

Marceaux, Paul (University of Texas-Austin)

[120] *The Hasinai Caddo of East Texas: Ceramics and Social Organization*

In a recent effort to compile information related to Caddo archaeology, I have examined in detail ceramic collections from various historic Native American Caddo sites and Spanish missions in east Texas. My presentation will discuss the efforts to determine if and how specific attributes of ceramic style and technology correlate with sites in the presumed locations of the Hasinai Caddo as indicated by the historical records. It will also demonstrate how relatively user-friendly database software and tools associated with Geographic Information Systems (GIS) can be used to help answer questions regarding the relationships between material culture and social organization.

Marchegay, Sophie (INAH Tamaulipas, México)

[260] *Body Modification and Ornamentation Depicted in Formative Period Huastec Figurines*

By the time of Spanish conquest, the Huastec people were renowned for their rich and complex manners of modifying, clothing, and ornamenting their bodies. Practices of body modification and adorning appear to have been ancient in this region. During the Formative period, anthropomorphic clay figurines – almost always feminine – are shown naked and with artificial cranial deformation, scarification, and body painting. Various ornaments, including a large variety of headdresses and jewelry, are also featured. In this paper I examine these bodily practices evident in Late Formative clay figurines that hail from recent excavations along the southern coast of Tamaulipas.

Marcone, Giancarlo (University of Pittsburgh)

[114] *Pachacamac Temples and Archaeologists' Intervention*

The Pachacamac site in coastal Peru has been a permanent presence in Peruvian and Andean archaeology. Since the pioneer work of Max Uhle at the end of the XIX century, the site has undergone archaeological interventions. Several of these interventions left physical vestiges at the site and transformed Pachacamac's Landscape, mixing with the archaeological site and actively changing perspectives about the past. Using specific examples of past interventions at the site, I seek to show how these interventions contribute to create a "story" of the site that does not necessarily match prehistory. Furthermore, I will argue that sites as important as Pachacamac require an archaeology of the archaeologists interventions that have influenced it. Such an endeavor will help us understand how history and heritage were (and are) re-built or manipulated by scholars to construct perceptions of the past that serve their own scholarly or political interests.

Marcone Flores, Giancarlo [226] see Marsteller, Sara J.

Marcus, Joyce (University of Michigan) [178] Discussant

Marek-Martinez, Ora (University of California, Berkeley), Ronald Maldonado (Navajo Nation Cultural Resources Compliance Section), Taft Blackhorse (Navajo Nation Chaco Sites Protection Program), Timothy Begay (Navajo Nation Traditional Culture Program) and Tony Joe (Navajo Nation Traditional Culture Program)

[235] *Nihinaazázi—Our Ancestors: Perspectives on Cultural Affiliation from the Navajo Nation Historic Preservation Department*

For many years, the Navajo Nation has asserted its cultural affiliation with prehistoric cultures of the American Southwest. This relationship is confirmed in centuries of traditional history and more than 100

years of anthropological literature. In addition, several programs of the Navajo Nation Historic Preservation Department have added to this literature. The cultural affiliation asserted here is not exclusive, and it is confirmed by archaeological, genetic/biological, and linguistic evidence. However, in most cases this claim has not been recognized in the historic preservation and academic communities. In recent years, the Navajo Nation Historic Preservation Department has worked to strengthen this claim through research and consultation with knowledgeable individuals. This forum seeks to give the people of the Navajo Nation a voice and an opportunity to speak of their experiences and of the difficulties they encounter.

Margaris, Amy (Oberlin College)

[162] *Where Do We Go From Here? The Pursuit of an Archaeological Studies Major at Oberlin College and its Afterlife*

Oberlin College is a small liberal arts institution in northeast Ohio that offers undergraduate majors in both Anthropology and Archaeological Studies. The Archaeology major is highly interdisciplinary. Students design their own curriculum in close consultation with a faculty advisor from Anthropology, Art, Classics, or Religion, and graduates of the program have obtained higher degrees in all of these fields. Students must participate in a field school (Oberlin offers opportunities in Italy's Sangro Valley and Kodiak, Alaska) and complete a senior capstone project to graduate. These requirements help majors gain practical experience and disciplinary focus, and add verticality to their coursework.

Margus, Drago (Krka National Park, Croatia)

[9] *Evidence for Marine Shellfish Exploitation at Danilo Bitinj and Pokrovnik*

18 species of marine shellfish were recovered in the excavations at Danilo Bitinj and Pokrovnik, a considerable increase on previous estimates. All of them may still be found in the Adriatic Sea today. Of the >26,000 identified specimens, 80% were from the lagoon cockle (*Cerastoderma glaucum* [Cardium]). Other species included mussel (*Mytilus galloprovincialis*), oyster (*Ostrea edulis*), Noah's Ark shell (*Arca noae*) and European thorny oyster (*Spondylus gaederopus*). Most were probably collected from the nearby inlet of Morinj and Prukljan Lake. The shellfish were eaten, often after cooking, and also used for ornaments.

Marinova-Wolff, Elena [157] see Riehl, Simone

Marken, Damien (Southern Methodist University) and Jennifer Piehl

[77] *Reconstructing Divergent Identities within El Peru-Waka'*

As a significant milestone in human history, the rise of cities has witnessed extensive archaeological inquiry. Current research has emphasized the plural nature of urban identities, moving beyond conceptions of homogenous urban populations. This paper will present analyses of materials from nearly 200 test excavations in the 10km² surrounding the Classic Maya center of El Peru-Waka'. Comparisons of these data with more intensive investigations within the center suggest that divergent social groups inhabited distinct areas both within and outside the urban core. Although preliminary, this research advances understanding of the multi-vocal nature of Classic Maya cities and internal polity make-up.

Markoe, Glenn [160] see Comer, Douglas C.

Marks, Ted [35] see Thomas, Jonathan T.

Marley, Andrew (College of Wooster)

[30] *Evaluating Prehistoric Subsistence Patterns using Microwear Analysis of Flint Tools from Rock Shelters in Central Ohio*

Microwear analysis of stone tools is used to compare subsistence patterns at rock shelters in north-central Ohio dating from Archaic to Late Prehistoric. This study utilizes experimental procedures to create a body of data with which to compare artifacts from rock shelters in the Killbuck drainage. Several trials utilizing various combinations of use-materials and use-actions were conducted to provide data by

which to analyze excavated artifacts. The tools are examined under low to medium magnifications (40X-200X) using a metallurgical microscope, and qualitatively analyzed for micropolishes, edge damage and striations to determine degree of change in subsistence patterns over time.

Márquez Morfín, Lourdes [241] see *Hernandez Espinoza, Patricia O.*

Marquez-Morfín, Lourdes (Escuela Nacional de Antropología e Historia INAH) and Rebecca Storey (University of Houston)

[241] *Paleodemography is Hard but Worth It!*

Population scientists concerned with long-term trends in demographic profiles ought to be interested in skeletal samples from ancient societies, because they are the only possible source of information. Paleodemography is a slippery research area that must deal with fundamental methodological and technical problems. The goal of this presentation is to evaluate some methodological approaches that are best for doing Paleodemography. The Rostock Manifesto is one of the best; focused on adult aging problems and provided several new techniques to estimate the demographic profile for a target, archaeologically-excavated sample.

Marshall, Brooks M. [213] see *Baker, Larry L.*

Marshall, Fiona [182] see *Kimura, Birgitta K.*

Marshall, Joel (Glenn A. Black Laboratory of Archaeology, Indiana), Tammie L. Gerke (Glenn A. Black Laboratory of Archaeology, Indiana University) and Timothy E. Baumann (Glenn A. Black Laboratory of Archaeology, Indiana University)

[257] *Sun Circles and Science: Current Research on Negative Painted Pottery at the Angel Site*

Negative Painted Pottery is a unique late prehistoric pottery type found in four varieties within the Lower Ohio River Valley, the Nashville Basin, and the Missouri Bootheel. Vessel forms are primarily plates and carafe-necked water bottles with common designs of filled bounded triangle areas and Southeastern Ceremonial Complex motifs of a cross-in-circle and the sun circle. Most scholars suggest that these vessels were ritual wares used for special ceremonies or feasts. Utilizing GIS and various analytical techniques (e.g., Residue Analysis, XRF), current research is attempting to address the method of manufacture, function, and the spatial/temporal patterns of this pottery type.

Marshall, John [33] see *Carpenter, Tina M.*

Marshall, Maureen (University of Chicago) and Ruzan Mkrtchyan (Erebuni Museum, Republic of Armenia)

[101] *The Practice of Violence: A Bioarchaeological Investigation of Trauma in the Late Bronze and Iron I periods in the South Caucasus* Violence, militarism, and warrior identities play significant—often fundamental—roles in many narratives of the emergence of socio-political complexity. The material culture, fortress architecture, and destruction levels found in the South Caucasus during the Late Bronze Age (1500-1200 B.C.) and the Iron I (1200-850 B.C.) periods all seem stress the prominence of interpersonal conflict and increasing militarism in Late Bronze and Iron I society. In this paper we examine the bioarchaeological evidence of trauma from Bronze and Iron I period mortuary sites in the Sevan Basin, Shirak plain, and Tsaghkahovit plain located northern Armenia.

Marsteller, Sara (Arizona State University) and Giancarlo Marccone Flores (University of Pittsburgh)

[226] *The Sociopolitical Significance of Child Burials at "Lote B" (Cerro Manchay), Lower Lurín Valley (Perú)*

Children are rarely considered significant in archaeological interpretations of social and political processes. The assumed marginality of children is reinforced by frequent underrepresentation of subadults in mortuary contexts and by common interpretations of subadult remains as sacrificial offerings. The site of Lote B on the

central Peruvian coast presents a unique case study in which natural deaths of subadults were utilized by local rural or regional Lima elites for political means. Burial styles, locations, and associations suggest that local rather than highland Wari state symbols were utilized to garner the support of the lower Lurín Valley population.

Marston, John (University of California, Los Angeles)

[151] *Identifying Agricultural Risk Management Using Paleoethnobotanical Remains*

Identifying how ancient societies assessed and mitigated the risk of subsistence failure is particularly important for understanding why some pre-industrial agricultural systems flourished and others collapsed. Paleoethnobotanical remains offer an effective mechanism for investigating agricultural risk management systems employed in the past. In this paper, I consider how various theoretical models for risk management lead to specific predictions that can be tested with paleoethnobotanical remains. I then demonstrate the utility of this approach with data from the multi-period mounded site of Gordion in central Anatolia, modern Turkey, which show diachronic changes in agricultural risk management practices at the site.

Martin, Alexander (University of Pittsburgh) and Benjamin Carter

[67] *Regional Craft Standardization Through Domestic Cottage Production: New Data From the Spondylus Industry of Coastal Ecuador*

Between c. A.D. 700-1200, the manufacture of shell beads, many of which are made from Spondylus, becomes widespread and technologically similar across much of coastal Ecuador. At the same time, settlement pattern analysis suggest that this manufacturing industry was organized around the domestic mode of production as family units included part time shell manufacturing activities within a broader range of subsistence pursuits. This cottage production appears to have resulted in very regularized production sequences and finished products throughout coastal Ecuador without the need for politically coordinated oversight or full-time specialized productive strategies.

Martin, Andrew (Cultural Resource Analysts, Inc.), Andrew Bradbury (Cultural Resource Analysts, Inc.) and Paul Bundy (Cultural Resource Analysts, Inc.)

[172] *Archaic Sites Excavated During the Avenue of the Saints Project*

Significant Archaic components were documented at four sites (Baxter Lake, Logsdon Fan, Berhorst, and Big Branch Fan) excavated as part of the Avenue of the Saints archaeological project. Early Archaic components were documented at the Baxter Lake and Logsdon Fan sites, Middle Archaic components were documented at the Berhorst Site, and multiple Late Archaic components were documented at the Big Branch Site. This paper provides an overview of the findings for each site.

Martin, Andrew [172] see *DelCastello, Brian G.*

Martin, Cheryl M. [211] see *Edwards, Susan R.*

Martin, Dan (BLM), Derrick Baldwin (BLM), Jeanne Moe (BLM) and Nefra Matthews (BLM)

[75] *Archaeological Information Technology [Computing] in BLM's NLCS, throughout BLM and Beyond*

This poster will present a review of the development and application of Information Technology [Computing Capabilities] (including world wide web tools, Geographic Information Systems, Remote Sensing, GPS, etc.) by the Bureau of Land Management, its partners, and researchers to create a body of work that has contributed to the science of archaeology as well as a better understanding of BLM resources.

Martin, Kristie (The Ohio State University)

[151] *The Missing Sister: Assessing Variability in Fort Ancient Subsistence Systems*

The picture of Fort Ancient peoples as consummate maize agriculturalists generally relies on data from excavations of large communities. Recent research at a small settlement in Ohio's Miami Valley suggests greater variability in Middle Fort Ancient (1200-1400 CE) economies than previously recognized. This research explores alternative explanations for the apparent lack of reliance on maize and seeks to address new questions concerning taphonomic processes, social and economic relationships, and incentives to invest in farming introduced crop species.

Martin, Lana (University of California Los Angeles)

[232] *Reconstructing Paleoenvironmental Instability and Plant Resource Availability at Santa Cruz Island using Macrobotanical Analysis*

Fluctuations in climate change and biodiversity over time have been linked to changes in human culture and social organization. Identification of plant genera present in macrobotanical samples obtained from four sites on Santa Cruz Island suggests the Chumash were forced to cope with changes in plant resource availability during the Transitional period (A.D. 1150 – 1300). Analyses of these patterns of plant availability and usage, compared with previous analyses of other material evidence, contribute to our understanding of how the island Chumash coped with changing resources and why they actually flourished during and after a period of environmental disruption.

Martin, Terrance (Illinois State Museum)

[125] *Animal Exploitation Patterns at French Colonial Sites in the Illinois Country*

Recent archaeological investigations permit an examination of animal exploitation patterns within the French colonial and post-colonial occupations of the Mississippi Valley. Whereas the small villages in the Illinois Country provided wheat flour and salted pork to French settlements in the lower Mississippi Valley during the eighteenth century, faunal analyses indicate that these Creole habitants relied on wild animals to a greater extent than did those people living at the administrative center at Fort de Chartres. These findings reveal inter-site complexity and supplement the sparse documentary record of French colonial foodways.

Martin, Trevor (University of Oklahoma)

[52] *Berry Site Ceramics: An Analysis of Burke Phase Pottery Associated with Fort San Juan*

The most common class of artifacts recovered at the Berry site is Burke phase ceramics. This paper focuses on ceramics recovered from feature contexts associated with the five structures of Fort San Juan. Ceramic data from these contexts, including surface treatment, vessel size and form, and serving dish to cooking vessel ratios are compared with ceramics recovered from portions of the site associated with the Native occupation. These data provide a better understanding of daily life at Fort San Juan and offer insights into relations between the people of these different cultures while they were in close, sustained contact.

Martinez, Desiree (Harvard University)

[181] *The "Shoshonean Wedge" Should Only Be the Name of a Shoe: The Wedge Theory and Its Affects on Tongva History and Identity*

Gabrielino (Tongva) community members have been fighting for federal, state, and local recognition while inserting themselves into projects and processes that deal with their ancestor's cultural remains and material. However, this movement had been hindered by the idea that the Gabrielino (Tongva) immigrated to Southern California from the Great Basin around 500AD (i.e. Shoshonean Wedge Theory). Scholars and non-scholars alike point to this theory to silence and ignore Gabrielino (Tongva) calls for inclusion in decision making regarding archaeological material within their traditional homelands. This paper explores how academic research has political, social and economic ramifications for the Gabrielino (Tongva) community.

[174] *Discussant*; [127] *see Teeter, Wendy G.*

Martinez, Estela

[195] *Estudio Regional de Chalchihuites Prehispánico, Zacatecas, México*

El enfoque regional sirve de base para las investigaciones que hemos desarrollado en los últimos cinco años en la región de Chalchihuites. Expondré algunas reflexiones relacionadas a la comprensión de los procesos que permitieron un complejo desarrollo sociopolítico regional durante el primer milenio de nuestra era. El aspecto económico, particularmente la minería, serán tratados con mayor énfasis ya que sus productos (piedras azul-verdes, pigmentos minerales, oro en polvo, etc.) fueron la materia prima para la producción de bienes de prestigio, referente importante de su complejidad social.

Martinez, Gustavo (CONICET-INCUPA-UNICEN)

[120] *Hunter-Gatherer Social Interaction Networks in an Arid Landscape (Argentina)*

The hunter gatherers who inhabited the lower stream of the Colorado river valley (Pampean-Patagonian transition) underwent organizational changes during the late Holocene. Since 1000 yrs BP subsistence included a boarder spectrum of consumed species, while the exploitation of local raw materials predominated and a more complex pattern of artifact production characterized lithic technology. Mobility decreased and places were used redundantly. Secondary burials are recorded in complex funerary disposals. These changes will be discussed regarding open and close social interaction networks experienced by local residents groups.

[47] *see Gutierrez, Maria A.*

Martinez, Maria (Univ. of Texas at Austin)

[112] *Conceptualizing Space: The Use, Function, and Meaning of Maya Architecture, La Milpa, Belize*

Despite over 150 years of studying monumental architecture in the Maya Lowlands, archaeologists continue to struggle with the fundamental questions of use, function, and above all, meaning of architectural groupings. Courtyards within Maya centers are comprised of various architectural forms, and merit further exploration in terms of how we conceptualize the social practices that take place within these socially constructed spaces. Departing from a strictly functionalist view, this paper explores the architecture of a mini-acropolis occupied from the Late Preclassic through the Late/Terminal Classic periods at La Milpa, Belize, through a relational account and a configurational view of space.

Martinez, Natalia [235] see Pailles, Matthew C.

Martinez, Nathan [190] see Connolly, Cara D.

Martínez, Ronald [196] see Oconitillo, Giancarlo

Martínez Tuñón, Antonio (Zona Arqueológica de Monte Albán-INAH)

[103] *La Cueva de los Machines: Diversidad en la Pictografía Rupestre en Oaxaca*

El Proyecto Cuevas Prehistoricas de Yagul y Mitla ha logrado registrar mas de cien sitios arqueologicos con distintas manifestaciones culturales. De estas una de las mas llamativas es la pintura rupestre documentada en una gran cantidad de sitios. Si bien en muchos casos los diseños constan tan solo de series de puntos o lineas, en un sitio particular, "Cueva de los Machines", se registraron una diversidad de diseños entre los que destacan los zoomorfos, fitomorfos, antropomorfos y otros. Este trabajo hará una descripción puntual de ellos.

[103] *see Tuross, Noreen C.*

Martins, Mafalda [98] see Wauters, Valentine

Martos, Luis

[195] *Resultados de los Recientes Trabajos en Plan de Ayutla, Chiapas*

A finales de 2008 iniciamos un programa de investigación y

conservación en el sitio arqueológico Plan de Ayutla, Chiapas. Aquí exponemos los primeros resultados con nuevos datos sobre las características arquitectónicas del sitio que reúne elementos propios de la región del alto Usumacinta, así como características propias; los estudios de cerámica comprueban una cronología que se extiende desde el Clásico temprano hasta el Clásico terminal y posclásico temprano. Destacan los trabajos en el Juego de Pelota y la exploración de la estructura 13 de la acrópolis norte, edificio importante y emblemático del complejo palacio, que posee elementos de relevancia astronómica.

Marty, Johanna (California State University, Los Angeles), Amanda Taylor (University of Washington), Nicolas Poister (California State University, Los Angeles) and Rene Vellanoweth (California State University, Los Angeles)

[232] *Anatomy of Mound: Sediment Analysis at Tule Creek Village, San Nicolas Island, CA*

Excavations of a 5 x 1 m trench at Tule Creek Village (CA-SNI-25) on San Nicolas Island, CA during 2008 and 2009 field seasons centered on understanding site formation processes at Mound B, a habitation area occupied from the middle Holocene to late prehistoric times. We encountered alternating layers of darker and lighter sediment, both of which contained abundant cultural materials. To investigate the cultural and natural processes that created this stratigraphy, we conducted loss-on-ignition and grain-size analysis of column samples taken from the trench. In this poster, we discuss the results of this work.

Martz, Patricia C. [31] see James, Steven R.

Marwick, Ben (University of Washington)

[194] *Do Model-based Explanations suit Archaeology Better than Inference to the Best Explanation?*

Lars Fogelin's recent paper on Inference to the Best Explanation (IBE) has substantially sharpened the focus on how archaeologists actually explain, and advocated a historically and philosophically popular approach to explanation. In this paper I argue for a different approach to explanation based on model-building and ranking. I discuss van Fraassen's objections to IBE, the revival of the hypothesis-testing in historical sciences and current work in philosophy of science in general and biology in particular. These recent developments suggest that a better way to articulate mechanisms of cause and effect in archaeology is likely to involve modeling and model selection.

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

[175] *Interaction Spheres and Aleut Ethnogenesis*

Historically the Aleut were differentiated into eight language dialects and at least twenty regional polities focused around specific island groups. Social networks across this 2100km region were facilitated by advanced boating technology and mental maps of considerable scale. Excavations on the western Alaska Peninsula and analyses of igneous lithic materials demonstrate that some of these networks were in place as early as 3300 BC. Comparable data to the east indicate that these networks did not include regions that were occupied by non-Aleut peoples in historic times. These findings demonstrate that Aleut social boundaries were established early and continued for millennia.

Maschner, Herbert [175] see Misarti, Nicole; [27] see Lech, Veronica

Massey, Alexandra [166] see Bell, Alison

Massey, David (The Ohio State University), Anne Bomalaski (The Museum of Archaeology and Anthropology of the University of Pennsylvania) and Ayse Gürsan-Salzmann (The Museum of Archaeology and Anthropology of the University of Pennsylvania)

[183] *Managing the Legacy Data from the University of*

Pennsylvania's Survey and Excavation at Tepe Hissar in North Eastern Iran (1931-2, 1976) through GIS.

The necessity of digitizing legacy data from past excavations and surveys is becoming increasingly important as archaeologists continue to shift into a digital environment for analysis and archival purposes. Vast archaeological datasets still exist in undigitized form in books and museum basements; digitization often presents several challenging problems. Managing the legacy data from the Penn Museum's excavations at Tepe Hissar in northeastern Iran (1931-2, 1976) provides a case study of how this digital era of archaeology is reexamining the archaeological record.

Massineo, Pablo [21] see Larson, Mary Lou

Masson, Marilyn (University at Albany SUNY)

[20] *Economic Linkages from Houselot to Temple at the Ancient Capital City of Mayapán*

Variation in work routines of daily life at Mayapán is expressed across the city's neighborhoods in terms of degree and type of occupational specialization, domestic and public contexts for work activities, and the affluence derived from productive efforts by members of various households. Eight fully excavated houses, one workshop and a portion of one outlying ceremonial group provide robust artifact samples used to evaluate the interplay between labor diversification and affluence. Particular attention is paid to production and consumption linkages that tied the economies of daily life to the practices and demands of neighborhood governors and priests.

[20] *First Organizer*; [20] *Discussant*; [20] *see Hare, Timothy S.*; [20] *see Delgado Ku, Pedro*

Massouh, Paula

[152] *The Largo-Gallina Household: A View from the L/102 Site*

While artifact assemblages relating to Largo-Gallina sites are housed in several depositories in the Southwest, few have been examined and reported. As a result the knowledge that could be derived from researching such collections remains undisclosed. In this study information obtained from analyzing ceramic, lithic, faunal and archeobotanical assemblages, skeletal remains and architectural attributes have been integrated to define a Largo-Gallina household at the L/102 site. Data also was used to infer what activities and social, political and economic interactions might have taken place on the household level.

[152] *First Organizer*; [152] *First Chair*

Masucci, Maria (Drew University)

[67] *Beyond Spondylus in Regional Developments: Shell working and Explanatory Models for the Regional Developmental Period, Coastal Ecuador*

Early investigations of coastal Ecuador labeled socio-political change and regionalization in ceramic styles ca. 500-300 BC as the Regional Developmental Period. Emphasizing commonalities among regions, an explanatory model cited competition over long distance trade in Spondylus shell. Subsequent research supports shell working within domestic contexts as a constant throughout the period, first within the context of an increase in settlements dispersing into inland drainages and finally to a population shift to nucleated centers along the coast ca. AD 600-800. Spondylus shell working is one of the constants across regions but does not explain the now recognized diversity in "regional developments".

Mathews, Jennifer [212] see Glover, Jeffrey B.

Mathien, Joan [123] see Hull, Sharon K.

Mathiowetz, Michael (U.C. Riverside)

[199] *The Aroma and Nectar of Flowers: Floral Symbolism in the Art and Ritual of the Aztatlán Tradition of Ancient West Mexico*

With the development of the Aztatlán tradition, the Postclassic period (AD 900-1521) in West Mexico realized dramatic and widespread shifts in social, political, religious and economic organization.

Symbolism and ritual practices evident in Aztatlán material culture

reflect the florescence of a new system of religious beliefs in West Mexico associated with the Flower World Complex and the solar deity Xochipilli, a shared belief system recently identified in Mesoamerica and the American Southwest. The identification of this religious complex in West Mexico provides a critical link in understanding the nature of long-distance interregional interaction in Northwest Mexico and the American Southwest.

[199] **First Organizer**; [199] *First Chair*; [199] *see Ohnersorgen, Michael*

Matisoo-Smith, Lisa (University of Auckland) and Jose-Miguel Ramirez (University of Valparaiso, Chile)

[68] *More Biological Evidence for Polynesian Contact in Chile?*

While the presence of kumara in Polynesian archaeological sites provided conclusive evidence of prehistoric contact between South America and Polynesia our discovery of pre-Columbian Polynesian chicken bones at El Arenal, Chile indicated that the voyaging was two way, yet people still question the interpretation of this result. Evidence of Polynesians or their direct descendants, found in a secure prehistoric context would put the issue to rest. Here I will discuss the evidence from physical anthropology, including both anthropometric and genetic data that may provide conclusive evidence of Polynesian presence in South America and help assess the nature of that contact.

Matovich, Jeanette (Jeanette Matovich), Daniel P. Love (BLM Special Agent), Patrick G. Brosnan (FBI Special Agent) and Richard McKelvie (AUSA)

[86] *Overview and Lessons Learned from Cerberus Action, History's Largest ARPA Case*

On November 30, 2006, the Utah Bureau of Land Management in partnership with the Federal Bureau of Investigation opened a criminal investigation targeting artifact theft and trafficking in the Four-Corner region. The ongoing case, known as "Cerberus Action" has (to date) indicted and charged 25 subjects in with violations of ARPA and NAGPRA. Cerberus Action has created a "marriage" of science and law enforcement in order to support and ensure the success of the largest ARPA case in history. The experiences and lessons learned throughout will likely influence national policy and protocol, and certainly the nature of future ARPA investigations.

Matson, R. (Univ of British Columbia) and Jesse Morin (University of British Columbia)

[84] *Differentiating Archaic and Basketmaker II Projectile Point Manufacturing Techniques*

Geib recently argued that production technologies differ for Archaic versus Basketmaker II projectile points; for the latter, indirect punches and wide compound pressure flakers were used to produce very thin, broad bifaces. To test this model we measured 6 attributes of flake scar morphology on Archaic and BM II bifaces from Cedar Mesa. These variables show statistically significant differences between the two groups of artifacts in accord with Geib's model. Metric multidimensional scaling of these attributes clearly differentiates Archaic from BM II bifaces and also detects previously misclassified artifacts. This BM II technological tradition may well be an enculturated style useful for tracking populations.

Matson, R.G. [84] First Organizer; [84] *see Curewitz, Diane*; [84] *see Kemp, Brian M.*

Matsunaga, John (UC Berkeley)

[175] *Technological Practice and Household Ceramic Production at Vinca-Belo Brdo*

This paper presents the results of a technological analysis of ceramic objects from the Neolithic and Eneolithic Vinca Culture settlement of Vinca-Belo Brdo. The goals of this analysis are: 1) to increase our knowledge of the technological choices and practices involved in Vinca ceramic production, and 2) to further our understanding of the organization of ceramic production and social organization within the Vinca Culture. Based on this analysis, it is argued that models of Vinca social organization that emphasize the significance of

autonomous households need to be reevaluated and that more communal forms of organization may have been in existence.

Matthews, Neffra [75] see Martin, Dan W.; [22] *see Bies, Michael*

Matthews Cascon, Leandro [142] see Caromano, Caroline F.

Matts, Michael [252] see Loorya, Alyssa

Mattson, Hannah (University of New Mexico)

[131] *Utilitarian Ceramics from the Pueblo Bonito Mounds*

Over 97,000 grayware sherds were analyzed during the course of the Pueblo Bonito Trash Mound project. The resulting data on utilitarian wares from the middens allow for a new look at important issues such as site function, mound formation, and interaction. Specifically, this paper will focus on chronology, vessel attributes and frequencies, and importation. Comparisons with Pueblo Alto and small sites in Chaco Canyon will also be discussed.

Mauldin, Raymond [74] see Munoz, Cynthia M

May, David W. [210] see Hill, Matthew G.

May, Kevin [160] see Tilton, James C.; [160] *see Yatsko, Andrew*

May Cia, Rossana [178] see Bey, George J.

Mayer, Gary [184] see Bergin, Sean M.

Mayer, James M. [234] see Hill, Matthew E.

Mayfield, Tracie (Illinois State University)

[134] *Ceramics, Landscape, and Colonialism: Archaeological Analysis of the British Sugar Estate at Lamanai, Belize 1837-1875*

In 1837, two-hundred acres of land at Lamanai, Belize were granted to James Hyde and Company by the British government in order to establish a sugar estate. However, the mill was not in working order until around 1860 and only remained a viable facility until approximately 1875. The construction of this landscape was a concerted effort by the colonists to establish permanence at Lamanai. But, the brevity of the formalized, profit-making occupation points to a critical incompatibility, whether of social, political, or economic systems and resources.

Maynard, J. Barry [257] see Gerke, Tammie L.

Mayne, Karla (N/A)

[62] *The Importance of Collaborative Efforts Between Cavers and Archaeologists*

Caves and rockshelters often present an excellent environment for the preservation of archaeological material. Caves also present a challenging environment. They are often difficult to reach, are dark, and contain complex terrain. Recreational cavers can be an excellent resource to use in cave archaeology studies. Their knowledge of cave locations and skills in navigating the cave environment often mean that they are the first to find sites within caves. A friendly relationship between cavers and archaeologists is required to gain access to that knowledge and to the assistance that cavers can provide in reaching caves and the deposits within them.

Mazow, Laura (East Carolina University)

[186] *Throwing the Baby Out with the Bathwater: Innovations in Mediterranean Textile Production at the End of the 2nd/Beginning of the 1st Millennium BCE*

Bronze Age bathtubs from the eastern Mediterranean have been interpreted as basins for bathing and/or purification rituals. Their find-spots, however, demonstrate that 'bathtubs' are often found in industrial locations in association with weaving tools. This context suggests that bathtubs functioned within the manufacture and production of textiles. I propose that bathtubs were used for fulling wool. The identification of fulling in the archaeological record of the Late Bronze and early Iron Ages corresponds with a suite of other

innovations in textile technologies that appear at this time in the Eastern Mediterranean, reflecting changes in textile manufacture and scale of production.

McAllister, Martin (WCRM / ARI)

[86] *Archaeological Damage Assessment Under ARPA: A Long, Strange Trip*

There are four periods in the history of archaeological damage assessment under ARPA: 1979 through 1984 (statute only); 1984 through 2000 (statute and regulations); 2000 through 2003 (statute, regulations and specialized training); and 2003 through the present (statute, regulations, specialized training and professional standards). This presentation will discuss how the professional status of archaeological damage assessment has progressed through these four periods to its current level of development today. Also addressed will be the positive and negative aspects of the current state of this process relative to ARPA litigation in the future.

[86] *First Organizer*; [86] *First Chair*

McAnany, Patricia [212] Discussant [159] Discussant [159] Second Organizer

McAndrews, Timothy (University of Wisconsin - La Crosse)

[94] *Culture Continuity and Change from Formative through Tiwanaku Times at Pirque Alto*

The site of Pirque Alto, in the department of Cochabamba, Bolivia, is a multicomponent site dating from the Formative Period through Tiwanaku times and beyond. Research at Pirque Alto is beginning to reveal a number of important socio-cultural developments including one of the earliest copper smelting industries in the Andes, an ongoing exchange relationship with distant populations, and a clear material culture influence from the Titicaca Basin. These and other recent findings from research at Pirque Alto will be discussed in this presentation.

[94] *Second Organizer*; [162] *see Anderson, David A.*

McBride, Kevin [117] see Kasper, Kimberly

McBrinn, Maxine (PaleoCultural Research Group) and Bradley Vierra (Statistical Research Inc.)

[248] *Resistant Foragers: The Problem of Low Maize Ubiquity at Sites in the Northern Rio Grande Valley*

In much of the Southwest, people appear to have been significantly invested in maize horticulture by A.D. 200 and earlier. However, in the Northern Rio Grande Valley, maize seems to have played only a supplemental role in subsistence strategies until much later. Although there is evidence that maize was grown in the region by 1200 B.C., its remains do not become archaeologically ubiquitous until A.D. 600 or later. We propose that potentially rich piñon harvests, combined with locally abundant cheno-ams and other wild seeds, provided sufficient yields of easily stored foods, making the labor costs for maize agriculture generally unattractive.

McBrinn, Maxine [118] see Seamont, Morgan S.; [248] First Organizer; [248] Second Chair

McCafferty, Geoffrey (University of Calgary) and Carrie Dennett (University of Calgary)

[191] *Evaluating the 'Out of Mexico' Migration Theory: New Light on the Bagaces/Sapoa Transition in Pacific Nicaragua*

The Greater Nicoya region of Lower Central America has long been identified with Mesoamerica. This has been particularly acute for the 'Postclassic' period based on ethnohistorical accounts, and supported by polychrome pottery with Mexican iconography. Excavations along Lake Nicaragua have specifically targeted the ethnicity of cultural groups dating to the Bagaces and Sapoa periods, with interest in cultural changes and continuities. This paper presents results of these investigations as they relate to the 'Out of Mexico' theory, concluding that while some evidence suggests ideological affiliation there is also conflicting evidence to suggest a more complex process of culture change.

McCafferty, Geoffrey [191] First Organizer; [202] see McCafferty, Sharisse D.

McCafferty, Sharisse (University of Calgary) and Geoffrey McCafferty (University of Calgary)

[202] *Mortuary Practices at Locus 1, El Rayo, Nicaragua*

A small cemetery spanning the Bagaces and Sapoa periods (AD 500-1300) was discovered at the tip of the Asese peninsula into Lake Nicaragua. This poster documents burial practices relating to cultural changes, possibly relating to the arrival of 'mexicanized' migrants known as the Chorotega. It also contrasts Sapoa patterns involving distinctive shoe-shaped urns that have been excavated at related sites such as Santa Isabel and Tepetate. Numerous disarticulated skulls may indicate sacrificial rituals, trophy head offerings, or ancestor veneration.

McCall, Grant (Tulane University), Jonathan Thomas (University of Iowa), Kurtis Kettler (University of Iowa), Merritt Sanders (Tulane University) and Sherman Horn (Tulane University)

[35] *An Overview of the 2009 Excavations at the Erb Tanks Site, Western Namibia*

This paper reports on the 2009 excavations at the Erb Tanks site in the central Namib Desert, Western Namibia. This paper presents information concerning the site's geographic context, a description of the stratigraphy, dating attempts, and an inferred chronology for the new discoveries. Present at the site are (1) Upper Pleistocene Middle Stone Age (MSA) lithics and ostrich egg shells (OES) fragments (including beads), and (2) Middle Holocene to historic-period Later Stone Age (LSA) lithics, faunal remains, OES beads, glass beads, and ceramics. This paper presents an overview of these finds.

[35] *First Organizer*; [35] *First Chair*

McCall, Grant [35] see Horn, Sherman W.; [35] see Kettler, Kurtis H.; [35] see Thomas, Jonathan T.; [190] see Johnson, Scott A. J.

McCarty, Sue Ann (University of Virginia)

[64] *Transforming Cattle into Rain: Reassessing Relationships with Animals in the Late Neolithic Halaf of Northern Mesopotamia*

The relationship between nature and culture forms a fundamental part of the way human communities understand order in the world. Ceramics from the Halaf cultural horizon (5,900-5,350 Cal. B.C.E.) in northern Mesopotamia are well-known for their prominent painted depictions of natural forms and, especially, cattle in various states of transformation and abstraction. Although many other domestic animals were also utilized, cattle often formed a major source of meat in Halaf villages. This paper discusses the possible role of cattle pastoralism as a source of inequality in a time period for which the evidence for marked status differentiation remains uncertain.

[64] *First Chair* [64] *Second Organizer*

McClung de Tapia, Emily (UNAM MEXICO)

[161] *Stable Carbon Isotopes applied to Landscape Reconstruction: Teotihuacan Valley, Mexico*

Stable carbon isotope values from organic material in sediments suggest possible sources of carbon and contribute to the development of hypotheses concerning the composition of regional vegetation. Such data provide complementary information which can be combined with the determination of stratigraphic micro- and macrobotanical remains from archaeological contexts, thus broadening our perspective concerning past landscapes. This poster explores applications to the study of soils and sediments in the Teotihuacan Valley, Mexico, the complexity of human ecodynamics through time and implications for landscape reconstruction.

McClure, Sarah (University of Oregon) and Emil Podrug (Muzej Grada Sibenika)

[9] *The Pottery of Pokrovnik and Danilo Bitinj: 1,000 years of Pottery Production in Dalmatia*

The ceramic assemblages of Pokrovnik and Danilo Bitinj provide an unparalleled window into pottery production during the Early and

Middle Neolithic on the Dalmatian coast. Both sites yielded large quantities of pottery, and, in the case of Pokrovnik, assemblages span 1,000 years of continuous production. We present preliminary results of stylistic and technological analysis of pottery from these two sites and highlight questions of technological innovation and exchange.

McCormick, Charla (Indiana University) and Frederika Kaestle (Indiana University)

[257] *Burial Location and Maternal Relatedness at Angel Mounds*
In the early years of excavation at Angel Mounds over 300 human burials were uncovered, many of which occurred in the eastern village area of the site. However, a number of individuals were buried in other locations as well, such as within mound structures and outside palisade walls. This raises the question whether familial relationships affected burial location at Angel, as they often do today. In this paper, the spatial patterning of burials on the landscape at Angel Mounds is addressed by analyzing ancient mitochondrial DNA (mtDNA) recovered from Angel residents. Maternal relationships present among the mortuary population are discussed.

McCormick, Michael (Harvard University)

[243] *A Small Town Experiences the Fall of the Roman Empire: (2) Thinking about Tarquimpol's New Answers to an Old Question*
The results outlined in Henning's paper offer new insights into the end of the Roman empire whose importance transcends the local situation. The hitherto unknown restoration of a settlement center at Tarquimpol in the fourth century and its subsequent demise shed important new light on the archaeology and history of the security challenges, imperial responses, and the communications systems that characterized the late Roman and post-Roman period. They powerfully exemplify the way in which archaeological and historical investigation can be brought together to illuminate the human past. This paper will present further new findings from Tarquimpol and the written sources, and discuss the archaeological results in the light of recent historical investigation, particularly with respect to the Roman and post-Roman economy.

McCorriston, Joy (The Ohio State University) and Matthew Senn (The Ohio State University)

[11] *Political Ecology of Frankincense Production in Southern Arabia*
The South Arabian archaeological record suggests pure pastoral economies (household labor dedicated to herding domesticated animals) emerging before agriculture, offering a diachronic perspective on ethnographic observations of political tribal organization confronting centralized states. Arabian prehistory raises questions about how socioeconomic factors of (re-)production in pastoral ecosystems constrained other environmental choices, including agriculture and participation in the frankincense trade of Arabia's Caravan Kingdoms. Current research in Yemen and southern Oman incorporating remote sensing and archaeological survey data has generated a GIS modeling least-cost pathways for ancient pastoral groups. This research explores pastoralists' participation and engagement with centralized Arabian states.

McCorvie, Mary (US Forest Service)

[59] *The New Deal in Illinois Archaeology: an Introduction*
During the worst of the Great Depression, CCC or WPA sponsored archaeological excavations occurred at a minimum of 17 sites in Illinois, in addition to a smaller number of satellites sites that had only limited testing programs. Since the 75th Anniversary of the FDR's work-relief projects was celebrated in 2008, it is important to remember that WPA archaeology, through the use of Illinois' unemployed labor force, established the basic cultural chronologies we use today; the current state of our archaeological knowledge is largely the result of the foundation laid by the Illinois' WPA archaeological initiative.

McCoy, Curtis [29] see Pedler, David

McCoy, Mark (University of Otago), Greg Asner (Stanford

University), Keith Prufer (University of New Mexico), and Michael Graves (University of New Mexico)

[230] *Research Applications of Lidar in Archaeology: A Case Study in Reconstructing Irrigated Agriculture in the Hawaiian Islands*
Lidar has proven remarkably useful as an aerial remote sensing tool for archaeological prospecting. But, it is less common for archaeologists to use the digital elevation model (DEM) produced by this method for other purposes, such as spatial analysis. In this study, we discuss the application of a high quality, lidar derived DEM in reconstructing how irrigation water was diverted and allocated in agricultural fields built by Native Hawaiians in the era before European contact. This paper builds upon traditional field survey and excavation data of canals and fields and demonstrates the value of research directed applications of spatial technology.

McCray, Brian [166] see Clites, Elizabeth A.

McCulloch, Tom (Advisory Council on Historic Preservation) [130] Discussant

McCullough, Robert [219] see Strezewski, Michael

McDonald, Josephine (Australian National University) and Peter Veth (Australian National University)

[104] *From Altamira to Australia: Aggregation and Dispersal as an Explanatory Framework for Stylistic Complexity in the Western Desert*
Meg Conkey's study of decorated antler/bone objects at Altamira highlighted the need to formulate explicit test implications of aggregation and dispersal in hunter gatherer settlement systems. She introduced the concept of diversity in design elements into the aggregation 'mix' of subsistence, social behaviours and ritual expression, thereby opening the door to rock art as a suitable element for archaeologists studying aggregation behaviour. This paper explores how Conkey's originally defined expectations and predictions for aggregation locales have been taken from Magdalenian rockshelters to petroglyph and pictograph sites, style provinces and culture blocs in the Australian Western Desert.
[104] *Second Organizer*

McDonough, William F. [161] see Inanez, Javier G.

McElrath, Dale [146] see Evans, Madeleine G.

McEwan, Colin, Cirilo Vivanco (University of Huamanga), Francisco Ferreira (Rpyal Holloway College), Frank Meddens (Pre-Construct Archaeology) and Gabriel Ramon (The British Museum)

[18] *Re-cognizing and Marking the Andean Landscape: Ushnus, Apachetas, Sayhuas and Wankas*
Two folio pages in the recently published Galvin manuscript portray a high montane landscape dissected by roads around which are arrayed cultural features broadly identified as 'apachetas'. This paper reports the results of field studies around the Ayacucho Basin and Huanco Sancos respectively that reveal a larger range of cultural constructions than hitherto suspected, including ushnu platforms, apachetas, sayhuas and wankas. The systematic description and classification of these structures offers insights into their role in appropriating and marking the high puna landscape, especially within the context of Inca imperial expansion.

McEwan, Colin [18] see Meddens, Frank

McFadden, Douglas (McFadden Archaeological Consulting) [75] *Recent Investigations on the Paria Plateau, Vermilion Cliffs National Monument*

This display highlights recent archaeological investigations carried out on the Paria Plateau in northern Arizona. Intensive inventories suggest that a population, originating from the west, moved onto the Plateau during favorable climate conditions about A.D. 1100. A strategy of dry-farming the natural basins that characterize the Plateau is examined. Plaza-style pueblos, suggesting the occupation

extended into the 1200's, raise the possibility of discontinuous occupation during periods of drought. Exceptional site preservation on this NLCS unit offers opportunities for detailed examination of site layouts, construction histories and social organization.

McFarlane, William (Johnson Co. Community College, KS) and Miranda Stockett (Johnson County Community College, KS)
[65] *What Does It Mean to be Non-Maya (or Lenca, for that matter)? Composing a Lenca Identity from the Archaeological Record of Western Honduras*

Recent efforts of the Honduran Institute of Anthropology and History have renewed interest in investigating the diversity of pre-Columbian and historic communities of Honduras. For archaeologists working in Honduras, a specific outcome has been a reconsideration of the dynamic and multi-ethnic composition of the region. In this paper we synthesize a decade of our own research in locales across Honduras and suggest a move beyond essentialized models focused on constructs such as the "non-Maya" to those that emphasize distinctive communities across time and space. In essence, we argue that the data show what it means to be "Lenca" in pre-Columbian times varied across time, space, and socio-historical context.

McGaha, Shaun [217] see *Lockhart, Jamie J.*

McGill, Dru (Indiana University) and Erica Ausel (Indiana University)

[257] *Early Angel: Revealing Discoveries from a Burnt Mississippian Structure, c. A.D. 1100*

In 2007, the Glenn A. Black Laboratory of Archaeology began excavations in an Angel Mounds structure first identified by its strong dipole signature in a magnetometry survey. Two subsequent summers of field-school excavations revealed a severely burnt structure with several unique features, dating to the earliest periods of Mississippian occupation at Angel Mounds, circa A.D. 1100. Most impressive among these features was a well-preserved cane mat that covered the structure's ground surface, and large pottery vessels (one fully intact) resting on the mat. The excavations and lab analyses augment our understanding of life at Angel Mounds during its formative periods.

[257] *First Chair [257] Second Organizer*

McGill, Dru [257] see *Stockdell, Eric K.*

McGuire, Randall (Binghamton University)

[167] *Archaeology as Political Action in the Coalfields*

The Ludlow Massacre and the Battle of Blair Mountain represent two of the most violent and clearest examples of class warfare in U.S. history. Excavating the remains of these conflicts defies the ideology that class warfare never occurred and propels archaeologists into political struggles. A theory of archaeological praxis can guide us in such struggles. Praxis uses the craft of archaeology to help communities construct meaningful, honest histories, and to strive for real collaboration. At Ludlow and Blair Mountain, praxis challenges the omnipresent class struggles of the modern world by working in solidarity with working people.

[33] *Discussant [181] Discussant*

McIlraith, Erin (WSU)

[203] *Talking to the Dead: Using Correspondence Analysis to Understand Gender, Age, and Time at the Greenville Burial Ground, BC*

Mortuary data on the Northwest Coast has primarily been used to support claims of status differentiation throughout time. Mortuary data, however, can also be used to understand important differences in gender, age, and burial time. Burial goods and treatments have the potential to share information about the social structures and behaviors of the living, and by using correspondence analysis, the meanings of certain burial treatments and goods can be seen to be associated with a specific gender or age group. This study exposes social dynamics and gender-object associations of the living by using correspondence analysis on mortuary data.

McIntosh, Susan [121] see *Cisse, Mamadou*

McKee, Arlo

[72] *The Application of Ground Penetrating Radar at Kanorado, an Early Paleoindian Locality in Northwest Kansas*
The Kanorado locality in northwestern Kansas consists of three Early Paleoindian sites with cultural deposits 1-2 m beneath an alluvial terrace. A Ground Penetrating Radar (GPR) survey of site 14SN106 was conducted in an attempt to delineate the site stratigraphy. High attenuation rates at the site limited the depth of imaging and resolution of the survey. However, the survey was successful because it helped to delineate the extent of the site as well as an unknown paleo-arroyo under the terrace. This study demonstrates how GPR can be an effective research tool even if cultural remains are not imaged directly.

McKee, Arlo [231] see *Fullerton, Ben L.*

McKelvie, Richard [86] see *Matovich, Jeanette*

McKenzie, Dustin, John Schlagheck (Cabrillo College) and Mark Hylkema (California State Parks)

[81] *Middle Holocene Subsistence and Settlement Patterns at the Sand Hill Bluff Site*

The Sand Hill Bluff Site (CA-SCR-7), located five miles north of Santa Cruz, has played a significant role in the identification of Middle Holocene cultural adaptations along the central coast of California. Collaboration between California State Parks and Cabrillo College resulted in the systematic excavation of over twelve cubic meters of site deposit during the 2008 field school. Analysis of recovered materials suggests that site occupants maintained a subsistence economy focused on the exploitation of rocky inter-tidal shellfish and terrestrial mammals and may indicate seasonal population movements between the coast and interior valleys during the Middle Holocene.

McKillop, Heather (Louisiana State University), April Sievert (Indiana University), C. Wayne Smith (Texas A & M University), George Harlowe (American Museum of Natural History) and Michael Wiemann (USDA Forest Products Laboratory)

[139] *Demystifying Jadeite: Underwater Discovery at Ek Way Nal, Belize*

Underwater archaeology in Paynes Creek National Park, southern Belize led to the discovery of a jadeite gouge with a wooden handle, resting by a wooden building post at the Ek Way Nal salt works. Geological analysis revealed the tool is of exceptionally high quality and consistent with jadeite from the Motagua Valley, Guatemala. The handle is rosewood, radiocarbon dated to the Late Classic. The quality of the jadeite tool might suggest its use in a burial or cache, but its context at salt works indicates it was just a tool.

McKnight, Justine [247] see *Gallivan, Martin*

McLaren, Duncan [224] see *Fedje, Daryl W.*

McLaughlin, Meredith (Archaeological Research Center of St. Louis, Inc.)

[187] *Archaeological Excavations of the "Modern" Historic: Findings from the Missouri Botanical Garden, Multi Modal Site (23SL1215)*
The Missouri Botanical Garden, Multi Modal Site (23SL1215), located near the corner of Shaw and Vandeventer in St. Louis City, Missouri, is a "modern" historic site that was tested in May of 2003. Archival research found that the area formerly contained a tavern and ten homes that were constructed in 1894. The homes were occupied by families of unskilled or low paid laborers, a group under represented in the historical record. The archaeological testing helped to fill in these historic gaps and gave a face to the lower classes of St. Louis at the start of the 20th century.

McLeester, Madeleine (University of Chicago) and Melissa Rosenzweig (University of Chicago)

[11] *Managing Nature: Integrating Political Ecology and Archaeology*
This presentation examines the continuity (and discontinuity) of the history of ecology in Northern Indiana. Relying upon pollen analysis of two sediment cores, I will argue that the historical accumulation of human strategies, decisions, and actions have shaped and continue to shape this landscape. In particular, I challenge our conceptions of industrialization as a rupture and end of "natural" nature. Drawing on examples from an industrial, remnant wetland and a conservation area, this presentation will introduce the themes of this symposium and explore the ways in which the political ecological perspective can advance archaeological research and theory.

[11] *First Chair*

McLemore, Virginia [144] see *LeTourneau, Philippe D.*

McLoughlin, Patrick (USDA-Natural Resources Conservation Service)

[249] *A Look at Two Buried Prehistoric Sites in the Driftless Area of Southeast Minnesota*

The Upper Mississippi River Valley cuts through the rugged and unglaciated Driftless Area. This unique setting of rich and diverse natural habitats characterized by dramatic limestone bluffs, river valleys, and forested hillsides starts at Lake Pepin, below Red Wing, Minnesota, and ends near Dubuque, Iowa. In recent years there has been an increase in funding at both the state and federal level to implement streambank protection practices along smaller tributaries of the Mississippi River in the Driftless Area. The goals of these practices are to impede erosion, improve water quality, and improve riparian and prime cold water fish habitat. This paper focuses on two buried prehistoric archaeological sites encountered in the Driftless Area of southeast Minnesota during compliance activities for federally funded streambank stabilization projects. These stratified, multi-component sites, that appear to date from the Woodland period to possibly well into the Archaic, are helping to shed light on time periods and site types that are poorly known in the Driftless Area and Upper Mississippi River Valley in general.

McManamon, Francis (Digital Antiquity) [12] *First Organizer*, [12] *Discussant* [12] *First Chair*

McNeil, Cameron (Lehman College, CUNY)

[258] *In the Country and in the City: Terminal Classic and Postclassic Land Use in Copan, Honduras*

The analysis of sediment cores and archaeological sites from the Copan Valley, Honduras demonstrates that people were utilizing the landscape of the low valley floors and upland regions in different ways during the Terminal Classic and Postclassic periods. While the ninth century collapse of the ancient city saw the near abandonment of the valley floor, people took refuge in the more defensible sections of the valley's hills where agricultural fields are found past A.D. 1000. In this presentation this pattern will be discussed and compared with evidence from other areas of the southeastern periphery.

McNeil, Lynda (University of Colorado, Boulder)

[104] *The Spread of Old Uto-Aztecan Flower World Complex into the American Southwest: Anthropomorphized Cult Deities in Rock Art and Other Media*

This paper tracks the spread of Old-UA Flower World Complex into the American Southwest where evidence in rock art and other media appears ca. 1000 B.C. to A.D. 1300. To narrow the scope, the paper focuses on the reproduction and transformation of an iconic suite of anthropomorphized cult deities spanning Early Agricultural (Basketmaker II-III and Fremont) Style rock art, Hohokam and Salado pottery styles and designs, and other media. In historic times, this iconography survives in Hopi katsinas, rituals, and ritual paraphernalia, in particular those related to Powamuya, spring purification and planting rites.

McNeill, Casey (University of Notre Dame), Alissa Nauman

Ian Kuijt (University of Notre Dame) and Nathan Goodale (Hamilton College)

[185] *The Dynamic Village: 19/20th Century Organization of InisAirc, Co. Galway, Ireland*

Drawing upon living memory, archival research, and historical documentation, this poster explores tempos of life experienced by 19th through 20th century residents of InisAirc, a historic fishing village off Western Ireland that was abandoned in 1960. By combining oral history research with historical 1838, 1911, and 2008 maps of the village we are able to trace broader patterns of construction, inhabitation, and abandonment of vernacular architecture. This study, as well as oral interviews, helps us reconstruct village scale land use and residential patterns, as well as the connections between individual building life histories and the specific residents who lived in them.

McNeill, Casey [185] see *Tynan, Collins P.*

McPherron, Shannon (Max Planck Institute), Alain Turq (National Museum of Prehistory (Les Eyzies, France)), Dennis (Simon Fraser University) and Harold L. Dibble (University of Pennsylvania)

[8] *Small Flake Production and the Levallois Assemblages from the Lower Levels at Roc de Marsal, Dordogne*

The Roc de Marsal sequence includes two major Mousterian components: the upper Levels (4-2) characterized by Quina industries and the lower Levels (10-5) dominated by Levallois technology. The Levallois levels are distinct from the upper levels in several respects: they include a significant focus on the production of small flakes as reflected in the occurrence of diminutive Levallois ("Asinipodian") elements, truncated-facetted pieces and Kombewa elements; they have a significantly higher blank to core ratio; and they have a particularly low tool to blank ratio. These and other characteristics of the lithic technology of these lower levels are examined here.

McPherron, Shannon [8] see *Aldeias, Vera I.d.*; [8] see *Sandgathe, Dennis M.*; [58] see *Iovita, Radu P.*; [8] see *Dibble, Harold L.*

Meadow, Richard (Harvard University) and Jade D'Alpoim Guedes (Harvard University)

[162] *The Undergraduate Concentration in Archaeology at Harvard University*

Archaeology has been taught in one form or another in Harvard College for at least a century. However, Archaeology's status as a concentration (major) separate from those in Social and Biological Anthropology developed only in the last quarter of the twentieth century, continuing to today. We review curricular developments in Archaeology at Harvard over the past three decades, showing how instruction has changed in order to educate students about contemporary practice and concerns in the discipline within the context of a liberal arts education at a premier private university.

Meadow, Richard [189] see *Valentine, Benjamin*

Means, Bernard (VA Commonwealth Univ/Versar, Inc.)

[59] *Brother, Can You Spare a Dime... for Archaeology? The New Deal and American Archaeology*

Franklin Delano Roosevelt's New Deal for the American people initiated massive work programs to alleviate the crippling nation-wide unemployment that characterized the Great Depression. The "alphabet soup" of New Deal work relief funding agencies included the Civil Works Administration (CWA), the Works Progress Administration (WPA), and the Civilian Conservation Corps (CCC). Relief workers excavated archaeological sites across the USA, ranging from small camps to large mounds. I present an overview of New Deal archaeology, which incorporates renewed attention to old collections of field notes and artifacts, and new excavations of sites associated with the New Deal, notably CCC work camps.

[59] *First Organizer*, [59] *First Chair*

Meddens, Frank (Pre-Construct Archaeology), Colin McEwan

(British Museum), Millena Frouin (Royal Holloway) and Nick Branch (University of Reading)

[18] *Locating Usnus: The Inca Rationale for the Placement of Sacred Platforms*

Cristobal de Albornoz between 1581 and 1585 identified two types of Inca usnus; one located in the main square of Inca settlements and the other along side the Inca road system. This paper presents new evidence that helps to explain the rationale behind regional variations in the location, architecture and construction methods of these sacred platforms. In addition to the administrative importance of the usnus, we explore the symbolic function with respect space, liminality and performance.

Meddens, Frank [18] see *McEwan, Colin*

Medeiros da Silva, Francini (Universidade de São Paulo), Lígia Trombetta Lima (Universidade de São Paulo) and Myrtle P. Shock (UC Santa Barbara)

[142] *Amazonian Potential in Archaeobotanical Remains*

The humid conditions of the tropics have been seen as a limiting factor to archaeobotanical research focused on plant seed remains. The excavation and flotation of sediment from large features at Laguinho, a site in the central Amazon, is helping to break this paradigm as seed material has been recovered. Ongoing analysis leads us to believe that there is great potential for an expanded understanding of diet based on complete sediment recovery from hearth type features within black earths (terra preta).

Medeiros, Melanie (University of Arizona/William Self Associates)

[213] *Performance Theory and the Archaeological Record: Theorizing Hohokam Feasts*

Realization that feasting is an important aspect of many societies has driven archaeologists interested in politics, power, ritual, and ideology to explore how feasting was actively involved in the performance of these concepts. While recent studies have recognized this performative nature of feasting, few have utilized performance theory to explore the political, ritual, or ideological aspects of feasts. Application of performance theory to feasting data from several Hohokam sites suggests that while feasting was an important activity, further refinement of the archaeological data set is necessary before inferences regarding the performative significance of Hohokam feasts can be made.

Meeks, Scott (University of Tennessee, Knoxville) and David Anderson (The University of Tennessee, Knoxville)

[224] *Evaluating the Effect of the Younger Dryas on Paleoindian Cultures in the Southeastern United States*

The Younger Dryas (ca. 12,900 to 11,600 cal yr BP) has been attributed a casual role in Paleoindian culture change across the southeastern United States, including the fragmentation of the widespread Clovis tradition, the development of more geographically circumscribed cultural traditions, and an apparent population decline. In this paper, we use fossil pollen data and the regional archaeological record to examine the complex interactions occurring between humans and abrupt climatic shifts associated with the Younger Dryas event and how these climatic shifts may have promoted time-transgressive changes in terms of demography, land-use patterns, and technological organization.

Mehta, Jayur (Tulane University), Jay Johnson (The University of Mississippi), John Connaway (Mississippi Department of Archives and History), Kelsey Lowe (Coastal Environments, Inc.) and Rachel Stout Evans (Natural Resource Conservation Service)

[217] *An Epic Flood and the Genesis of a Monumental Mound Center: Geomorphological Investigations at the Carson Mounds Site (22CO505), Coahoma County, Mississippi*

Preliminary investigations have corroborated an 1894 map of the Carson Mounds site. Located in the Northern Yazoo Basin, this site once contained 88 pyramidal and small conical mounds over the

extent of one mile. The main purpose of this study is to map the river channel chronology and discover any remaining mounds – 11 have been found to this date. Two weeks of fieldwork are described in this study and demonstrate for a flood event underlying some of the mounds and interrupting construction at others. While these data are yet preliminary, they should refine methods in geomorphological and geophysical investigation.

Meierhoff, James (University of Illinois at Chicago) and Mark Golitko (University of Illinois at Chicago)

[139] *Sourcing of obsidian from the ancient Maya farming village of Chan, Belize using portable-XRF*

This study focused on determining the elemental composition of the obsidian artifact assemblage from the ancient Maya village of Chan. The extreme longevity of settlement at Chan (roughly 800 B.C.-1200 A.D.) in contrast to the rapid florescence and decline of other larger sites in the Belize River Valley allows us to examine the impact these major socio-political changes had on the maintenance of exchange networks that supplied smaller settlements with obsidian. Also, this project assessed the efficacy of portable XRF instrumentation for identifying Mesoamerican obsidian sources, demonstrating the promise of p-XRF as a rapid, low-cost, portable method of characterizing obsidian.

Meiggs, David (University of Wisconsin- Madison) and Benjamin Arbuckle (Baylor University)

[214] *Where Shepherds Roam: Tracing Changes in Pastoral Management at Kösk Höyük, Central Turkey*

Traditional archaeozoological methods reveal a wealth of information about prehistoric pastoral systems. It has been more difficult to ascertain the geographic and seasonal character of herd mobility. Strontium isotope analysis of intra-tooth samples elucidates geographic facets of herd management. Previous archaeozoological analysis of ovicaprines from Neolithic/Early Chalcolithic Kösk Höyük (6200-4800 cal BC) suggests shifting emphasis in herd management practices through time. This paper presents 87Sr/86Sr tooth enamel data augmenting these observations, detailing changes in extent and variability of land use from the Neolithic to Chalcolithic. Results will highlight the potential of 87Sr/86Sr to elucidate intra-regional mobility and consider methodological issues.

Meinkoth, Michael (Missouri Department of Transportation)

[172] *Archaeological Data Recovery on the Avenue of the Saints*

The Missouri Department of Transportation planned improvements to U.S. Route 61, the Avenue of the Saints, in northeastern Missouri. The archaeological investigations mirrored the MoDOT philosophy of "Practical Design," which is to get the best value for the least cost through innovation, creativity, and flexibility. Over 1000 features excavated, 60,000 artifacts collected, and archaeobotanical, faunal and paleoenvironmental data recovered from over two-dozen of the 55 sites examined. This project gives us access to data regarding 10,000 years of human history and environmental changes in a 15-mile segment of the Mississippi River valley.

Meissner, Nathan (Southern Illinois University at Carbondale), Andrew K. Balkansky (Southern Illinois University at Carbondale) and Katherine E. South (Southern Illinois University at Carbondale)

[169] *Early Evidence for Figurine Embodiment in the Formative Mixteca Alta, Oaxaca, Mexico*

This study examines archaeological data from the site of Tayata in the Mixteca Alta region of Oaxaca where human and non-human ceramic figurines dating from the Early Formative (1,500-1,000 B.C.) to the Early Middle Formative transition (1,000-900 B.C.) provide a unique opportunity to understand early household practices of embodiment. A holistic approach to Tayata data including bioarchaeological, faunal, and ethnographic information illuminates key aspects of the embodiment of Tayata figurines and indicates a relationship between the life cycle termination of both human and non-human figurines relating to the post-mortem treatment of individuals.

Melgar, Emiliano [67] *see Velazquez, Adrian*

Meltzer, David (Southern Methodist University) and Vance Holliday (University of Arizona)

[224] *The Impact (or not) of Younger Dryas age Climate in the Plains and Rocky Mountains*

It is often assumed cooling temperatures during the Younger Dryas Chronozone would have impacted biota and thus posed significant adaptive challenges to Paleoindians. Yet, assumptions about the nature, severity and abruptness of Younger Dryas cooling are often based on cores from the Greenland ice sheet. These changes were significant. However, a review of climatic and environmental records from the Plains and Rocky Mountains indicate that conditions in these regions were hardly so demanding. Accordingly, such changes as occurred may not have measurably added to the challenges routinely faced by Paleoindian groups.

Meltzer, David [224] *see Holliday, Vance T.*

Mendizabal, Tomas [226] *see Wake, Thomas A.*

Mendjusic, Marko [9] *see Fadem, Cynthia M.*

Mendoza, Rubén (CSU Monterey Bay)

[89] *Archaeoastronomy and Solar Eucharistic Worship in the Millennial New World*

A new Hispanic Catholic doctrine rose with the conquest of the Americas, which linked Armageddon to indigenous conversions. The imminent return of the Solar Christ is seen in meridian alignments and the solar geometry of Colonial and Hispanic Catholic missions, church iconography, and tabernacle enclosures from throughout the Southwest and Mesoamerica. Feast day illuminations and meridian alignments were discovered at twelve of twenty-one California missions, seventeen Southwestern sites, as well as others in Mesoamerica and Perú. Fully one-third of these sites were constructed with heliocentric, calendrical, and or solar Eucharistic considerations in their syncretic and millenarian elaboration and architectonic layout.

[89] *First Chair*

Mendusic, Marko (Ministry of Culture, Croatia) and Emil Podrug

[9] *The culture of Danilo Bitinj and Pokrovnik: results of excavations from 2003 to 2006*

Excavations at Danilo Bitinj (2003-2005) and Pokrovnik (2006) have illuminated the Early Neolithic (Impressed Ware) and Middle Neolithic (Danilo) cultural episodes in Dalmatia. Both sites were large villages with considerable horizontal variation in structures, including terrace walls, houses, and pits. This variety suggests that each settlement had a complex layout. The abundant artifacts, including large quantities of pottery and some ground stone tools, flints, bone artifacts and other objects, attest to the cultural richness that developed during the Neolithic in Dalmatia.

Mentzer, Susan (University of Arizona), Mary Stiner (University of Arizona) and Mihriban Özbasaran (Istanbul University)

[259] *Micromorphological Investigations of Anthropogenic Features at the Aceramic Neolithic site of Asikli Höyük, Turkey*

Asikli Höyük is a Neolithic tell situated in Anatolia's Cappadocia region. In conjunction with a new phase of conservation and excavation, micromorphological samples were collected from anthropogenic features (walls, floors and midden) in order to characterize and compare building materials, maintenance, discard, and post-depositional modifications amongst three occupation levels. The construction materials vary in texture, carbonate content, temper and other inclusions. Floors exhibit phases of construction and maintenance, while overlying fills contain debris related to combustion and domestic activity. Analyses of middens reveal well-preserved refuse lenses as well as plant materials, phosphates and calcareous spherulites likely derived from ruminant dung.

Mercier, Norbert [8] *see Guerin, Guillaume*

Merewether, Jamie [235] *see Arakawa, Fumiyasu*

Mergen, Vanchigdash [122] *see Eng, Jacqueline T.*

Merkel, Stephen [235] *see Tyson, Erin R.*

Merrill, Michael (Arizona State University) and Dwight Read (UCLA)

[6] *A New Method Using Graph and Lattice Theory to Discover Spatially Cohesive Sets of Artifacts and Areas of Organized Activity in Archaeological Sites*

We will present a new method to analyze spatially cohesive sets of artifacts and relate them to intrasite activity areas using the spatial similarity and cohesion of artifact types. This method can incorporate heterogeneous data and is able to reveal and deconstruct overlapping areas into their constituent elements. We will also discuss the results of the method applied to a Chumash Early period habitation site (CA-LAn-803) from coastal southern California that enables us to distinguish several spatially cohesive sets ("tool kits") of artifact types and relate these to specific types of "indoor" and "outdoor" activities.

Merrill, William [248] *see Hard, Robert J.*

Merriman, Christopher [21] *see O'Brien, Matthew J.*

Messenger, Phyllis (University of Minnesota) [237] *Discussant*

Messer, Andrea (Penn State)

[50] *Archaeology in the Age of Aquarius – Media Coverage in the 60s*

From civil rights marches to flower children and from assassinations to the Chicago Democratic Convention, the 1960s were memorable. But how memorable was the archaeology of the sixties? An investigation of how archaeology was portrayed in newspapers and magazines during the decade will highlight what made the news and how it was presented. Was New World archaeology the focus or did Egypt and Europe hold sway. Did the Viet Nam War and the problems in Laos and Cambodia bring to light the archaeology of Southeast Asia? How were archaeologists depicted and who were they?

[50] *First Organizer; [141] Discussant*

Messner, Timothy (Smithsonian NMNH) and

[215] *Ground-Up Grains: Middle Holocene Plant Processing in the Lower Illinois River Valley*

The ability to process plants has enabled people to gain sustenance from otherwise nutritionally inaccessible elements in their environment. The archaeological recovery of grinding stone technologies provides insight into prehistoric processing strategies, yet their actual function and the plants utilized remains speculative. This paper presents preliminary findings from an extensive starch grain analysis study focused on mortars and metates recovered from mid-Holocene sites distributed throughout the Lower Illinois River Valley. Findings demonstrate that this technology was used to process substances including small seeds. This data has implications for increasing our understanding of mid-Holocene human/environmental interactions in the mid-continent and abroad.

[215] *First Organizer; [215] First Chair*

Meyer, Cailin (Rhodes College)

[219] *Land Value and the Formation of the Planter Class in Fayette County, Tennessee*

In order to better understand the relation between land value and social status in Fayette County, Tennessee, a study consisting of 309 land deeds registered in 1825-1860 was conducted. This study identified important factors and patterns in the buying habits of the region's slaveholding farmers. One key component was the Panic of 1837, when land prices artificially rose in value instead of decreasing due to planter activity. Others include the location of purchased land

to the buyer's original parcels, and the buyer's economic class status held the most influence on land prices, while a land's growth potential held little impact.

Meyer, Lauren [235] see *Tyson, Erin R.*

Meyer, Michael (MoDOT)

[187] *Industry and Innovation: Archaeological Investigations of a 19th-Century Brass Foundry*

In Summer 2009, the Missouri Department of Transportation conducted a data recovery project at the John C. Kupferle Foundry site, a late-19th-century iron and brass foundry located in northern St. Louis. The factory was in operation from 1882 to 1910, and represents a transition from preindustrial to industrial manufacturing. The factory was built on the former location of Big Mound, the last vestige of the St. Louis Mound Group finally destroyed in 1869. Several historic features, dating to the critical period between the destruction of the mound and the establishment of the foundry, were also uncovered below the factory foundations.

[187] *First Organizer*; [187] *First Chair*; [187] see *Greenwood, Brianne*

Meyer, Regina (Missouri National Guard) and Judith Deel (Missouri State Historic Preservation Office)

[187] *Preserving Jefferson Barracks: A Case Study of the Management of Military Sites*

The Missouri National Guard manages and operates Jefferson Barracks near St. Louis, MO. Established in the 1820s as the country's first "Infantry School of Practice", this property continues to meet the needs of the National Guard as an active and significant training center. Military sites such as this face constant modernization in the form of renovation, construction, and demolition. These alternations must be considered in context of a property listed on the National Register while actively serving the military. This paper will discuss past and current successes in the management of Jefferson Barracks, the military gateway that opened the west.

Meyers, Maureen (University of Kentucky)

[127] *Frontier Landscapes and Power Formation at the Mississippian border*

Frontiers are unique landscapes because they are physically and metaphorically removed from core regions' power. They are often placed in mountain areas because they contain natural resources prized by cores for trade good production. Frontiers are areas where identity is more malleable than at the core, and as a result, power is more easily co-opted through control of trade. This paper will examine the Mississippian frontier Carter Robinson mound site to identify how power formation within a frontier landscape varies through an analysis of architectural grammar, ceramic attributes and trade goods.

Michel, Mark (The Archaeological Conservancy) [86] *Discussant*

Mickelson, Andrew (University of Memphis)

[244] *The Unobtrusive Mississippian Village: Rethinking Late Prehistoric Settlement Patterns in Western Tennessee*

Magnetometry, surface survey, and excavation results from the Early Mississippian Ames site located in southwestern Tennessee are presented. For decades Ames was known only for its four platform mounds and an associated "low density" artifact scatter. The seeming lack of a village scale settlements in the Ames region had perplexed researchers for decades. Magnetometry and excavation data, however, revealed that the mounds are part of a community plan that included a 2 ha village surrounded by a substantial palisade. Surface survey and test pit data utilized in the development of prehistoric landuse models are reexamined in light of these findings.

Mickleburgh, Hayley and Roberto Valcarcél Rojas (Centro de Investigaciones y Servicios Ambientales y Tecnológicos de Holguín)

[97] *What's in a Smile? Patterns of Dental Wear and Pathology at El*

Chorro de Maíta, Cuba

A dental anthropological study of 76 dentitions from the site of El Chorro de Maíta, Banes, Cuba, was carried out in order to understand diet and subsistence strategies, possible gender-based divisions in 'teeth-as-tools' activities, and the implications hereof for oral and general health. The site, which dates to the Late Ceramic Age and early contact period, has yielded interesting preliminary results, including the first case of intentional dental modification at an Amerindian site in the Caribbean, and a small number of cases of what appears to be a new form of LSAMAT (lingual surface attrition of the maxillary anterior teeth).

Mihok, Lorena (University of South Florida)

[204] *Consequences of Contact in the Bay Islands*

Although the Bay Islands of Honduras were claimed by Spain in the sixteenth century, English settlers, along with French and Dutch buccaneers began arriving in the islands during the early seventeenth century. By using historical descriptions of indigenous and European settlements as guides to archaeological investigation, this research contributes to a baseline of knowledge regarding the early colonial period of the islands before the removal of indigenous populations by Spain in 1650. As modern development threatens to destroy remaining archaeological resources, culture contact studies are vital to our understanding of the ways in which colonial interactions have shaped contemporary attitudes toward identity and heritage.

Milbrath, Susan (Florida Museum of Natural History), Carlos Peraza (Instituto Nacional de Antropología y Historia, Merida)

[20] *Effigy Censers of Mayapan: Context, Iconography, and External Connections*

Chen Mul Modeled effigy censers comprise a large percentage of Mayapan's late Postclassic Tases ceramic complex. Mayapan remains the center of greatest production and iconographic diversity. Some Central Mexican gods indicate contact with the Central Highlands, but most are Maya deities, including well known gods from the codices. Paired figures probably served as katun idols, in accord with Landa's descriptions. Other groupings may represent cosmological diagrams. The censer cult was widespread at a number of sites in Campeche, Peten, Belize, and on the east coast of Quintana Roo, sites where censer use continued after the fall of Mayapan in 1450.

Miles, Wesley [44] see *Wright, David K.*

Millaire, Jean-François [138] see *Surette, Flannery K.*

Miller, Alexandra (Arizona State University), Arturo Lombera Hermida (Universidade de Santiago de Compostela), C. Michael Barton (Arizona State University) and Ramón Fábregas Valcarce (Universidade de Santiago de Compostela)

[205] *A New View of the Paleolithic Settlement of the Galician Hinterland, Spain*

Despite a long history of archaeological study in neighboring areas of Asturias and Cantabria, the autonomous region of Galicia has only recently become a focus for Paleolithic research. Much of Galicia is densely vegetated and topographically rugged, making traditional survey techniques difficult. In the last 4 years, a systematic survey of the Paleolithic occupation has been undertaken in the inland areas of Galicia. Alternate technologies, such as remote sensing and GIS analysis, have been a valuable supplement to traditional methods for detecting sites and land-use patterns – with potential application to regional studies elsewhere in temperate Europe.

Miller, Christopher (University of Tübingen) and Paul Goldberg (Boston University)

[157] *Geoarchaeology, Paleoenvironments and Settlement Dynamics in the Swabian Jura: A Micromorphological Approach*

A micromorphological study of Hohle Fels and Geißenklösterle caves revealed a variety of sediments that permitted us to interpret taphonomic influences and variations in deposition linked to climatic changes. We observed a marked difference in sediments at the

Middle-Upper Paleolithic boundary that represents a shift from a warmer environment to a colder, drier environment. These results are linked with analysis of anthropogenic deposits to interpret past behavior and settlement systems within the caves. Our results show that the virtual absence of Middle Paleolithic occupation prior to initial Aurignacian settlement in the two caves was not connected to unfavorable climatic conditions.

Miller, Christopher [157] *First Organizer; [157] Second Chair*

Miller, D. Shane (University of Arizona), Erik N. Johanson (University of Tennessee) and Joseph A.M. Gingerich (University of Wyoming)

[90] *Ambiguous Chronologies and Biface Morphology: Examining Spatial and Temporal Trends in Eastern Fluted Points*

In the Eastern United States, stratified sites extending into the Paleoindian period are extremely rare. As a result, researchers often have to rely on well-dated sites from outside the region to extrapolate chronological sequences. To this end, this analysis utilizes a geometric morphometrics approach to compare samples of Eastern fluted points recorded in the Paleoindian Database of the Americas (PIDBA) with those from well-dated contexts from other regions. Finally, we argue that the application of multivariate approaches and the creation of adequate comparative samples may prove invaluable for understanding spatial and temporal trends in Paleoindian biface morphology.

Miller, D. Shane [90] *see Smallwood, Ashley M.*

Miller, Donald [252] *see Pretola, John P.*

Miller, Jason [162] *see Davis-Salazar, Karla L.*

Miller, Karen [59] *see Howe, Mark L.*

Miller, Mark [28] *see Kornfeld, Marcel*

Miller, Mason (Hicks & Company) and John Campbell (Hicks & Company)

[59] *The CCC and Garner: Archeological Inventory of the Materials and Aesthetics from the Creation of One of Texas' Most Prized State Parks*

Hicks & Company archeologists conducted an archeological survey of portions of TPWD's Garner State Park in Uvalde County, Texas. Along with prehistoric sites and artifacts, surveyors paid particular attention to those resources directly attributed to the park's construction by CCC Camp 879 during the late 1930s. This paper will describe a brief history of the CCC at Garner, the park planners' reliance on 'inconspicuously pleasant' aesthetics for its conception, and the methods used during its construction through varied archeological artifacts and features inventoried during the survey as well as park planners' designs, schematics, and photographs from the period.

Miller, Melanie [245] *see Capriles, José M.*

Miller, Myles (GMI)

[128] *Dust to Dust: Ritual Termination of Jornada Mogollon Pueblos in South-central New Mexico*

Excavations at fourteenth century Jornada Mogollon pueblos in south-central New Mexico have identified prescribed sequences of ritual abandonment and termination, including emplacement of termination objects by individual households, burning of roof remnants in civic-ceremonial rooms, and communal burial of ritual and medicinal paraphernalia gathered from distant places. Different types of ritual deposits were formed through such actions. This paper explores how abandonments of transitory pueblo settlements were mediated through communal ritual and decision-making practices and how the materiality of such termination practices reflects geographies of social relations involved in the abandonment of place and movements across the landscape.

[128] *First Organizer; [128] First Chair*

Miller, Myles [87] *see Kenmotsu, Nancy A.*

Miller, Myles R. [235] *see Beasley, Virgil*

Miller, Naomi (Univ of Pennsylvania Museum-ISAW)
[132] *Discussant*

Miller, Sarah, Amber Grafft-Weiss (Florida Public Archaeology Network) and Richard Estabrook (Florida Public Archaeology Network)

[219] *Three Cemeteries and a Funeral: Preliminary Results of GPR Testing at the Huguenot, Tolomato, and National Cemeteries in St. Augustine, Florida*

The Northeast FPAN Center conducted small scale surveys of three cemeteries in the historic district of St. Augustine. Included was the earliest known Catholic Cemetery (Tolomato), the Territorial period Huguenot Cemetery, and the National Cemetery—all of which are downtown in the historic district. The Center was further invited to look for the burial of the celebrated Menorcan figure Father Camps down the center aisle of the Cathedral during lent. This paper will provide the preliminary results of the surveys and discuss general trends in using GPR as a tool in urban northeast Florida environments.

Miller, Sarah [26] *see Grafft-Weiss, Amber*

Miller, Shane [24] *see Johanson, Erik N.*

Millhauser, John (Northwestern University)

[13] *Obsidian, Conflict, and Commerce in Postclassic Tlaxcala*
Obsidian was a key commodity in Tlaxcala during its century-long conflict with the Aztec empire. Domestic needs notwithstanding, provisioning weapons required access to high-quality sources of obsidian. This paper presents an XRF analysis of a random sample of 45 gray obsidian artifacts from systematic surface collections at three Postclassic Tlaxcalan sites: Tepeticpac, Ocotelulco, and Quiahuixtlan. Surprisingly, the Tlaxcalans acquired as much as 75% of their obsidian from the Paredon source in Hidalgo, within the sphere of Aztec influence. With these data, I consider the "flowery war" and how and why states engage in sustained conflict.

Millhouse, Philip (University of Illinois-ITARP)

[88] *Burial Mound Preservation in Northwestern Illinois and the Success of Multi-Party Cooperation*

Since 2003 the University of Illinois-ITARP has been involved in preservation efforts with the Jo Daviess County Conservation Foundation and several state agencies. Through a combination of public involvement and land owner outreach it has been possible to purchase three parcels of land totaling 200 acres that include numerous habitation sites and 53 Native American burial mounds. These parcels are currently being converted to publicly accessible parks with restored natural habitat, hiking trails and informational kiosks. This successful project can serve as a good model for future preservation efforts in the region.

Milligan, Colleen (Michigan State University) and Adrienne Daggett (Michigan State University)

[124] *"America's Healthiest City": A look at Comparative Studies of Health and Paleopathology from the Milwaukee County Indigent Grounds Cemetery*

The combination of archaeological investigations, historical archives, and bioarchaeological analyses of skeletal remains can provide valuable insight into the lives of past populations. However, the need exists for comparative studies to provide a more complete picture of the biocultural factors at work in regional, national, and global contexts. This poster highlights research that would contribute to such discussions of Milwaukee's past and present, and that of historical urban areas. Particularly, paleopathological evidence of disease and nonspecific indicators of health from the MCIG cemetery allows for extensive demographic and historical comparisons in what was once

deemed "America's Healthiest City".

Millis, Heather [217] see *Malpiedi, Jennifer T.*

Mills, Barbara (University of Arizona), Deborah Huntley (Center for Desert Archaeology), Jeffery Clark (Center for Desert Archaeology), Meaghan Trowbridge (University of Arizona) and W.R. Haas (University of Arizona)

[113] *The Southwest Social Networks Project: Late Prehispanic Social Dynamics in the Southwest U.S.*

The Southwest Social Networks Project focuses on the interval from A.D. 1200 to 1550, a period that was both a tumultuous and "connected" period in the Southwest with large-scale migrations generating broad stylistic horizons and exchange systems. We outline our efforts to build a macroregional GIS-based database of ceramics, obsidian, and architecture, and then discuss some of the results of the application of social network analysis to the data. We focus on questions addressing network dynamics before, during, and after the late 13th century migrations to elucidate how social network analysis augments interpretations of regional interaction in archaeology.

Mills, Barbara J. [14] see *Ferguson, T. J.*; [200] see *Trowbridge, Meaghan A.*

Millward, Georgia (Indiana University) and Frederika Kaestle (Indiana University)

[239] *Maternal Genetic Relatedness in Mississippian Burial Practices:*

Ancient mtDNA at Mound 2, Yokem Mounds, Pike County, Illinois
Yokem Mounds is located on the northern edge of the lower Illinois River Valley and individuals were continuously interred at the site from the Archaic through the Mississippian period. Mound 2 (AD 1430) is notable for interment of primarily females (15/20) and its charnel structure that housed four pairs of individuals. Mitochondrial DNA sequences from these individuals are used to assess the influence of maternal genetic relatedness on the placement of individuals within the mound, including proximity to the charnel structure and within pairs. We also compare these results to aDNA analyses from other Midwest sites.

Milner, George (Pennsylvania State University)

[61] *Population, Economy, and Warfare: Their Relationship to Sociopolitical Evolution in Prehistoric Eastern North America*

Long-term trends in population size, subsistence practices, and warfare in eastern North America are quantified and summarized within the context of changes over time in sociopolitical complexity. Of special interest are 1) different rates of population growth that do not correspond to conventional archaeological periods or cultural stages; 2) an occasionally step-like, as distinct from gradual, transformation in ways of life, specifically subsistence economies; and 3) variation in the intensity of warfare. While population, economy, and conflict appear to be intimately related to one another, archaeological demonstrable relationships among them defy simple explanatory mechanisms in the Eastern Woodlands or elsewhere.

Milner, George [140] see *Stahlman, Kathleen F.*

Minar, C. Jill [232] see *Binning, Jeanne Day*

Mink, Philip (Kentucky Archaeological Survey)

[253] *Formative Period Land Use Strategies on the North Rim of the Grand Canyon*

The North Rim of the Grand Canyon was inhabited by both Kayenta and Virgin branch ancestral pueblo groups during the Formative Period. This paper will examine the variation in land use strategies and settlement patterns by these groups. By combining regional geographic information system analyses with geophysical survey a multi-scalar examination of land use will be explored. These North Rim results will be integrated into the larger discussion of subsistence settlement strategies in the Grand Canyon and compared to the land-use strategies proposed for the Arizona Strip.

Mires, Ann Marie [69] *Discussant*

Misarti, Nicole (Institute of Marine Science – UAF), Bruce Finney (Idaho State University) and Herbert Maschner (Idaho State University)

[175] *Isotopes and Social Complexity in the Aleut Region*

Recent genetic and isotopic analyses of human remains from the Aleutian Islands have revived the debate of population continuation versus replacement ~1,000 years ago among the Aleut. Genetic data suggest a closely related population (Neo-Aleut) moved into the region and co-existed with the earlier population (Paleo-Aleut). The isotope data have been interpreted as Neo-Aleuts hunting at higher trophic levels than Paleo-Aleuts. Using isotopic data of the actual foods consumed, we propose that the genetic and isotopic differences found are based not on population movements but on effects of increasing social complexity and differential access to higher status foods.

Misarti, Nicole [27] see *Lech, Veronica*

Mitchell, Mark (Paleocultural Research Group)

[220] *Modeling Middle Missouri Warfare*

In their studies of warfare, anthropologists and archaeologists have mainly been interested in its causes, especially its origins, and its consequences, especially for social evolution. Less attention has been paid to how warfare articulated with other cultural, social, and economic practices in various times and places. The abundant evidence for recurring, organized conflict among agricultural communities in the Middle Missouri affords an opportunity to consider how warfare functioned as a social institution. A model for Middle Missouri warfare is developed using archaeological, ethnographic, oral historical, and documentary data from the Plains.

Mitchell, Seth (Caprock Environmental Services)

[150] *One Project, Over 60 Eligible Sites: No Problems?*

From 2007-2009 a phased archaeological investigation was conducted on the 639-mile Rockies Express East Pipeline (REX-EAST) Project. In total over 60 sites were recommended as eligible for listing on the National Register of Historic Places. These sites were identified within a 200-foot corridor which crossed portions of Missouri, Illinois, Indiana and Ohio. This paper will provide a brief overview of these sites, discuss strategies developed to avoid or reduce impact from construction, if these strategies were successful and provide detailed information on the challenges faced to complete a large CRM project.

[150] *First Organizer*; [179] *First Organizer*

Mizoguchi, Koji (Kyushu University, Japan)

[113] *Explaining the Emergence of Large-scale Centralized Hierarchy: A Network Theory-based Approach*

This paper reveals by applying social network analysis-derived methods that the centralised hierarchy that emerged at the beginning of the Kofun (mounded tomb) period in Japan can be explained by the geographical locations that the polities to be hierarchised occupy and the differences in the topological potentials that these locations generate. The paper argues that the topological structure of a social network itself can be a significant cause of its own hierarchisation, and it compares the finding with the manner in which the concepts of agency and power are applied to the explanation of social hierarchisation and centralisation in general.

Mkrtychyan, Ruzan [101] see *Marshall, Maureen E.*

Moak, Jason W. [250] see *Reitz, Elizabeth J.*

Modzelewski, Darren (UC Berkeley), Corey Abramson (UC Berkeley) and Phillip Fucella (UC Berkeley)

[181] *Legal Categories and Vested Interests: Cultural Affiliation, Knowledge Power, and the Symbolic Control of the Past*

Cultural affiliation as a salient contemporary legal term, raises significant questions about traditional archaeological understandings

of affiliation; which tribal groups claim ancestry to objects, and how such claim are made. Yet discussions of affiliation need to continue to highlight larger questions about the relationship between the construction of categories and the production of knowledge-power, its control, dissemination and destination in archaeo-legal contexts. Drawing on Foucault, I explore some of the power dynamics and struggles of that arise from affiliation and repatriation, and trace the way symbolic power functions to provide specific groups with material and cultural control over the past.

[66] *Discussant*

Moe, Jeanne [75] *see Martin, Dan W.*

Moffat, Charles (Commonwealth Cultural Resources Group, Inc.) and Katherine Guidi (Commonwealth Cultural Resources Group, Inc.)

[150] *Investigations at the Montezuma Mound Group (11PK1245)* CCRG located many of the previously reported mounds at Montezuma and also found two previously unrecorded mounds. Investigations on the bluff crest identified an extensive Late Woodland habitation with both Bauer Branch and Jersey Bluff affiliations. REX decided to drill under the mounds using an HDD pad at the base of the bluff that extended onto a distinct bench. Investigations within the HDD pad identified 13 shallow pit features, mostly associated with the Late Woodland occupation, and a small sinkhole, filled with a mixture of historic and prehistoric debris, that may have been used for ritual purposes.

Moffat, Charles [150] *see Weir, Donald J.*; [150] *see Hambacher, Michael J.*

Moigne, Anne-Marie [58] *see Moncel, Marie-Hélène*

Mol, Angus (Leiden University, Netherlands)

[116] *Connecting the Dots: Social Network Theory and Methodology Applied to Exchange in the Late Ceramic Age Caribbean* Social Network Theory is an untapped resource that will lead to a better understanding of past exchange practices. The combined network methodology (graph theory) and theory provide a powerful heuristic. This, with the aid of network software (i.e. UCInet & Visone), enables the visualization and analysis of Pre-Columbian social networks from an alternative angle. Instead of focusing on insights gained through the study of attributes of artifacts and iconographic styles, this paper will discuss data gathered on social networks of the Pre-Columbian Caribbean from a relational perspective. This is used to explicate communities, actors and their positions in their networks.

Monaghan, G. William (Glenn Black Laboratory of Archaeology, Indiana U)

[257] *Deconstructing Mound A: Tracing the History of the Angel Site (12VG1) through its Earthworks*

Geophysics, solid-earth coring and 14C chronology at Angel site indicate that Mound A was built to nearly its full 8m height just after AD 1050-1100, which coincides with site founding. Mound A was constructed by stacking 10-15-cm-thick turf blocks 2m high near its center. The chronology of a structure excavated by Black (1955) on top of Mound A indicates that the mound was used throughout site occupation but like Mound F, also excavated by Black (1939-1942), its surface was buried just prior to site abandonment. This final mound capping may be part of a "ceremonial closing" of the Angel site.

[257] *First Organizer*; [257] *Second Chair*

Monaghan, John (University of Illinois at Chicago)

[221] *The Rain, Lightning Bolts and Obsidian Blades: The Machete in Contemporary Mixtec Culture*

According to early colonial sources Mixtec speakers used the word *yuchi* to refer to obsidian blades. Today Mixtec people only rarely use obsidian for cutting, but they still use the word *yuchi*, only now it means "machete." This paper examines contemporary Mixtec ideas about the machete, and suggests possible connections with beliefs

and practices surrounding obsidian knives in ancient times.

Moncel, Marie-Hélène, Anne-Marie Moigne (National Museum of Natural History), Jean Combié (CNRS) and Sam Youssef (Post-doctor)

[58] *Behavioral Characteristics of the Middle Palaeolithic Roots in Western Europe: New Data on Orgnac 3 (France)*

Orgnac 3 is dated to MIS 9-8, a key period. It can be considered a model for observing the progressive appearance of new features concerning technology, land use, subsistence, fire and spatial organization. Recent studies on the complete faunal and lithic assemblages offer new insights into human occupation and behavior. The emergence and development of Levallois knapping, bifacial shaping flakes, predominant use of local stones, specialized hunting focused on one main herbivore, and higher fragmentation of bones in the middle and upper parts of the sequence gives us an opportunity to discuss evolutionary processes.

Mongelluzzo, Ryan (University of California - Riverside)

[99] *Ahau in the Abstract: Ancient Maya Rulership as a Power Strategy*

The foundations for Ancient Maya rulership led to particular strategies meant to maintain the hierarchical social relationships that were in place. By using various theories on power to provide a nuanced definition of Maya rulership, one can gain a better understanding of the efforts that were undertaken by these sovereigns. Of particular use are the works of de Certeau, Foucault, and Gil. I am particularly interested in how the nature of Maya rulership subsequently affected architectural design choices in the spatial layout of royal palaces. Scholars who link space to power relations include Giddens, Soja and Harvey.

Monroe, Cara (UCSB Anthropology and Washington State University), Brian Kemp (Washington State University, Pullman), John Johnson (Santa Barbara Museum of Natural History), Robert Kruszynski (The Natural History Museum, London) and Silvia Gonzalez (School of Natural Sciences and Psychology, Liverpool)

[56] *Ancient DNA Analysis of Prehistoric Burials from the Santa Barbara Channel Region*

Archaeological and linguistic research indicates that the Chumash have deep roots in the Santa Barbara Channel region and have occupied the southern California Coast for millennia. Previous genetic studies indicate that some Chumash belong to an ancient mitochondrial DNA (mtDNA) lineage that appears to be coastally distributed along North and South America. Ancient DNA was extracted from 21 individuals, approximately half of which are from El Monton archaeological site, a large shell midden deposit from Santa Cruz Island, in order to further elucidate the prehistory of the Chumash people. Preliminary results indicate direct maternal connections dating back 4000-6000 years.

Monroe, Cara [84] *see Speller, Camilla F.*; *see Kemp, Brian M.*

Montes, Lourdes [177] *see Aura, J. Emili*

Montgomery, John (Eastern New Mexico University)

[87] *Burned Rock Feature Variability in Southeast New Mexico*

Intensive archaeological field survey along portions of the Black River undertaken in 2006 and 2007 recorded a high concentration of burned rock features. Variation in size, content, artifact association, and age provides some interpretive basis for understanding later Holocene cultural lifeways (near the Pecos River) at the edge of the American Southwest.

Monton-Subías, Sandra (ICREA Research Professor. Universitat Pompeu Fabra)

[143] *Feminism and Archaeology in Spain: the Maintenance Activities Perspective*

I will review here the emergence and development of feminist perspectives in Spanish archaeology, focusing specially on

Maintenance Activities (MA). The concept of MA appeared in Spanish archaeology in the 1990's and remains in widespread use today. MA refers to the basic tasks that regulate the course of human life and social stability on a daily basis, being therefore crucial for the reproduction, cohesion and welfare of human groups. Its performance entails social actions implicated in the formation of identity; they create a specific range of social experiences, abilities, qualities and responsibilities and a specific relationship of self to society.

Moody, Carlisle (University of Oklahoma)

[52] *Structure 1 at 31Bk468: Public Space in Joara's Shadow*

A compound of five large buildings at the Berry site in western North Carolina probably housed Spanish soldiers stationed at Fort San Juan, built by Juan Pardo in 1567. In 2005, archaeologists identified and excavated a similar and contemporary structure at the Ensley Site (31Bk468), a mile from Berry. Lithic data from Structure 1 at Ensley suggest that it was a public building and possibly a men's house. Comparison of the Ensley structure with those from Berry suggests different uses for these architectural spaces and allows us to hypothesize about the relationship between the two sites during this time.

Mooney, Douglas (Philadelphia Archaeological Forum (PAF)) [3]

Discussant

Moore, Andrew (RIT), Anthony Legge (University of Cambridge), Kelly Reed (UCL) and Susan Colledge (UCL)

[9] *Economy, Chronology, and Environment*

Large-scale sieving and flotation of the excavated deposits from Pokrovnik and Danilo Bitinj have yielded significant quantities of charred plant remains and animal bones from domestic species. The economy of both sites was a mature farming system based on cultivated cereals and caprine herding. Interviews with traditional farmers are illuminating farming practices during the Neolithic. 20 AMS dates, mostly from charred seeds, document occupation from c. 8,000 to 6,800 CalBP. The two sites were located in a well-filled landscape of intervisible villages in every valley from the coast inland to the foothills.

[9] *First Organizer, [9] First Chair*

Moore, Andrew [9] see Fadem, Cynthia M.

Moore, David (Warren Wilson College), Christopher Rodning (Tulane University), David Moore (Warren Wilson College) and Robin Beck (University of Michigan)

[52] *The Exploring Joara Project: Chiefdoms, Spaniards, and Research Design for the Western North Carolina Piedmont*

The Exploring Joara Project explores early contact between Native Americans and Spanish armies in North Carolina's western Piedmont region during the sixteenth century. The project developed from archaeological and documentary evidence supporting the Berry site (31BK22) as the location of the Native American town of Joara and the Spanish Fort San Juan, constructed in 1567 and destroyed in 1568. This paper summarizes the history of the project and the comprehensive research design focused on native responses to early contact with European invaders. We also discuss the opportunities and challenges of coordinating a long-term public archaeology project.

[52] *First Chair*

Moore, David [52] see Rodning, Christopher B.; [52] see Beck, Robin A.

Moore, David G. [52] see Sanders, Merritt M.

Moore, Katherine (University of Pennsylvania)

[222] *Economy and Ecology of Bone Tools at Chiripa*

Bone tools at Formative sites in the Lake Titicaca basin, Bolivia, range from expedient scrapers and awls to elaborate ornaments. Research at Chiripa allows this assemblage to be compared to multiple aspects of the local and regional archaeological sequence.

Questions emerging from the analysis of more than 2000 bone artifacts include 1) the locus and organization of bone tool manufacture, 2) how supposed weaving tools related to production of camelids for wool, and 3) the response of the bone tool industry to broad shifts in subsistence.

[245] *Discussant*

Moore, Michael (Tennessee Division of Archaeology) and Kevin Smith (Middle Tennessee State University)

[217] *Archaeological Explorations of the Peabody Museum in Middle Tennessee, 1877-1884*

The Peabody Museum at Harvard University sponsored archaeological explorations across Middle Tennessee between 1877 and 1884. Extensive records and artifact collections from 38 site investigations were uncovered during three research trips to the Peabody Museum and Harvard University Archives between 1998 and 2002. The authors transcribed roughly 550 pages of letters, field notes, and other written materials generated from these expeditions; and also conducted an analysis of roughly 1700 complete to nearly complete mortuary objects. Using the site records and artifact data, we present hypotheses to refine our previously published chronological periods for Middle Cumberland Mississippian sites.

Moore-Shay, Laura (University of Notre Dame), Alissa Nauman (Washington State University), Ian Kuijt (University of Notre Dame), and John O'Neil (University College Dublin)

[185] *The Iron Age Shell Middens of Omey Island, Co. Galway, Ireland*

Archaeological survey of the northwest corner of Omey Island, Co. Galway, Ireland, has identified over 100 prehistoric and historic sites. The majority of these are collections of shell and fire cracked rock, typically covering an area of less than 25m² horizontal and 40 cm deep, and are situated inland by up to 200 meters. Radiocarbon dating indicates that the majority of the shell middens date to the Iron Age period, a period that remains poorly known in Galway. The results of this research are used to reflect upon marine resource use during the Iron Age.

Moraes, Bruno (Universidade Federal do Amazonas - UFAM (Brazil))

[142] *Rethinking the Space: GIS applied to the Central Amazonian Archaeology*

Archaeological research in the Central Amazonian region has produced a large corpus of data over the last fifteen years. A new theoretical approach, allied to empirical data, has led to different accounts of traditional models of occupation for the Amazon in general. This project organizes the sum of this empirical work into a single spatialized database, in order to produce a predictive model for the occurrence of archaeological features within the research area. Results of this work make possible the prospection of new sites, as well as the testing of land use pattern models and ancient landscape reconstruction.

[142] *Third Organizer*

Moraes, Claide (Universidade de Sao Paulo)

[142] *Ring Villages in the Central Amazon: A COntrast Between the Paredão and Guarita Phases*

We present the results of survey, excavation, and analysis of archaeological material from sites in the Lago do Limão and along the Madeira River, Amazonas State, Brazil. In the Lago do Limão the sites have mounds constructed during the Paredão phase (7th to 12th century AD) and structured as ring villages. Based on the ceramic chronology of these archaeological sites and the structure of villages in the landscape, a hypothesis is proposed to explain the relation between polychrome ceramics (Guarita phase 9th to 15th century AD), and the Paredão phase.

Morales, Reinaldo (University of Central Arkansas)

[22] *Faces in Places: Modified Speleothems of Cuba and their Worlding*

Cave art in the Antilles has many manifestations, from paintings and

drawings to low-relief engravings and their more sculptural cousins, modified speleothems. Typically, these speleothems are modified with faces, or face-like forms, having the visual effect of transforming the cave formations from mere supports into virtual torsos. This anthropomorphization allows for a mode of communication beyond and more expressive than that of a simple signifier-signified relationship. This allows for communication with a uniquely human affect, that of a worlding, a face to face human encounter. Cave art from Cuba will illustrate this phenomenon. Ethnohistoric sources will illuminate its possible significance.

Morales, Santiago [258] *see Kittel, Michelle*

Morales Jr., Reinaldo [22] *see Morales, Reinaldo*

Moran, Kimberlee (Forensic Outreach) [69] *First Organizer*; [69] *First Chair*; [168] *First Organizer*;

Moratto, Michael [81] *Discussant*

Moreau, Luc (Dpt. for Palaeolithic Archaeology, RGZM) [157] *The Aurignacian-Gravettian cultural change in Southwestern Germany*

This contribution addresses the question of a possible endogenous evolution of the Gravettian out of the Aurignacian in the Swabian Jura (Southwestern Germany). My approach consisted in a study of the assemblages of this given region, including economical, typological and technological aspects. Geißenklösterle cave served as the starting point due to the quality of the excavation method and given the stratigraphic integrity of the site, demonstrated by refits. Through this integrity, the Aurignacian and Gravettian industries of this site constitute key reference series for the early and middle Upper Palaeolithic of Central Europe.

Morehart, Christopher (Northwestern University) [13] *Configurations of Prosperity, Power and Tragedy: Cooperation and Change in the Creation, Maintenance, and Collapse of Chinampa Agriculture at Xaltocan, Mexico*

Archaeological research complicates the romanticism of past peoples as timeless stewards of their environmental milieu. This work serves as a corrective critique for modern planners who envision the reconstruction of "traditional" practices as providing a solution to contemporary problems. The relationships people established with their environment were embedded in particular historical milieus. Sustainability, thus, is fundamentally a social issue. This paper presents such an approach by examining chinampa farming at the Postclassic, central Mexican community of Xaltocan. Configurations of household autonomy, communal cooperation, and political economy were critical components in this landscape's history, including its development, persistence, and eventual collapse.

Morell-Hart, Shanti (U.C. Berkeley) [151] *Practical Re-imagining of Ancient Plant Use*
Paleoethnobotanical data emerge as a reflection of our practices, and vice versa, especially in terms of such loaded concepts as "weeds". Using daily practice as starting point, and borrowing from linguistic analogs, I here explore ways of considering plants that allow for more overlap of activities and meanings surrounding them. By slightly reshaping the conceptual framework, and retooling the methods, I detail an alternate possible set of paleoethnobotanical practices, including how data may be split and lumped, and subsequently analyzed and interpreted. I use, as case study, archaeobotanical materials recovered from the site of Currusté, Honduras.
[132] *Second Chair*

Moreno-Cortes, Jose (University of South Florida) and Christian Wells (University of South Florida) [65] *The Everyday Relevance of Cultural Patrimony and Heritage in the Naco Valley, Honduras*

The Instituto Hondureño de Antropología e Historia has enriched our understanding of cultural patrimony and heritage in Honduras by

embracing a multiethnic perspective of the past. But in what ways and to what extent does this understanding have social and economic relevance in the everyday lives of contemporary Hondurans, especially those residing alongside prehispanic ruins in rural areas? The research discussed in this paper explores perceptions about patrimony and heritage in the Naco Valley region of northwest Honduras to better evaluate municipal, department, and federal efforts toward community-based participatory preservation and conservation of archaeological remains.

Morgan, Brooke (Southern Methodist University), Brad Koldehoff (Illinois Transportation Archaeological Research Program) and Daniel S. Amick (Loyola University) [146] *Clovis Land Use Patterns in the Midwest: Evidence from the Mueller-Keck Site Complex*

The Mueller and Keck Clovis sites are located in Southwestern Illinois in the uplands along the American Bottom and occupy a shared landform. Repeated collections since the 1970s have yielded several hundred Clovis tools and waste flakes made primarily from exotic Attica chert, located 350 km to the east in west-central Indiana. Recent field and laboratory investigations document spatial patterning and context of Clovis artifacts at this complex. Though the potential for intact buried deposits is unlikely, the assemblage size and abundant non-local raw material provide critical information for evaluating models of Clovis colonization and land use in the midcontinent.

Morgan, Brooke M. [200] *see O'Brien, Lauren*

Morgan, Chris (Utah State University), Dongju Zhang (Lanzhou University), Loukas Barton (National Park Service) and Robert Bettinger (University of California, Davis) [155] *Tracking Paleolithic Behavioral Variability on the Western Loess Plateau*

Collaborative research between Chinese and American archaeologists and geomorphologists points to significant technological and settlement pattern variability between ca. 80 and 15 kya. Using core/flake quartz technology, sporadic human occupation of the plateau began perhaps as early as 100 kya. Intensified settlement of previously occupied sites and exploitation of new landscapes using bipolar quartz shatter technology developed during a warm/wet interval (MIS3) between 60 and 30 kya, after which the area saw significant depopulation and sporadic use during the Last Glacial Maximum. Later, Terminal Pleistocene/Early Holocene adaptations shifted dramatically towards an intensive hunter-gatherer adaptation focused on microlithic technology.

Morgan, Joelle (University of Oklahoma) [235] *Specialized Agriculture in the Prehistoric Casas Grandes Region*

Agricultural specialization is present in the emergence of many hierarchies. This idea that this type of economic specialization was a factor in the development of intermediate polities is examined through an analysis of the regional differences in the Casas Grandes region, one of the premier polities in the U.S. Southwest and northern Mexico. The results of the analysis of the first modern assemblage of plant remains for near Casas Grandes are discussed in relation to specialized agricultural production and anthropogenic ecology. These works complements recent work that documents the integral role plants played in Casas Grades tradition and political dynamics.

Morgan, Michele [235] *see LeBlanc, Steven A.*

Moriarty, James [86] *ARPA Undercover Investigations: One Path to Success with ARPA*

Over the past several years, the Bureau of Land Management has carried out several successful undercover investigations of ARPA violators in the Southwest. Since detecting and apprehending these violators in the act of looting archaeological sites is a rare occurrence, undercover operations targeting their illegal artifact trafficking

activities are a very effective tool in the ARPA investigation process. This presentation will review in general terms how ARPA undercover investigations are conducted and discuss how they can be more effectively carried out in the future.

Morin, Eugene (Trent University)

[16] *Diet Breadth in the early Upper Paleolithic of France*

This paper examines the evidence for changes in diet breadth during the emergence of the Upper Paleolithic in France. Data from Saint-Césaire, the Grotte du Renne at Arcy-sur-Cure, and other sites are not consistent with the hypothesis of a diet breadth expansion. These findings have implications for our understanding of the Middle to Upper Paleolithic transition.

Morin, Jesse (University of British Columbia)

[108] *Near Infrared Spectroscopy and the Trade and Exchange of Nephrite/Jade Celts in the Pacific Northwest*

Nephrite jade was a preferred material for the production of celts both in the form of small wood working tools and very large prestige objects in the Pacific Northwest from about 3000 BP to contact. Using a portable non-destructive near-infrared spectrometer, I have analyzed the mineralogy of more than one thousand such artifacts. The spatial patterns of distribution of small and large nephrite celts, and sawn nephrite cores are markedly divergent. Nephrite celts were traded and exchanged within a 400 km radius of primary production zones located along the Mid-Fraser and Fraser Canyon.

Morin, Jesse [84] see *Matson, R. G.*

Morris, Elizabeth Ann [51] see *Hays-Gilpin, Kelley A.*

Morris, John (Institute of Archaeology, Belize) [91] *Discussant*

Morris, Margaret (University of Wyoming)

[117] *Are We the Tools of our Tools? Understanding Impacts of GIS Approaches on Archaeological Research*

Archaeological investigation has been heavily affected by spatial technologies such as GIS. Although GIS and related approaches provide researchers with useful applications, there are problems. Failure to properly integrate spatial technologies potentially harms our knowledge foundation. Ongoing dialogue is necessary to discuss and understand the relationship between GIS and archaeological spatial approaches and define proper applications of the technology in archaeological investigation to ensure that the technology is properly applied. This paper investigates GIS approaches to archaeological research and seeks to understand how the program is changing how archaeologists deal with spatial data and the problems associated with current integration.

[117] *Second Chair [117]* *Second Organizer*

Morrison, Alex (University of Hawaii, Manoa)

[127] *Mapping the Structure of Communities: Landscape Scale Analysis of Community Organization, Rapa Nui, Chile*

A central goal of many archaeological research projects is to develop a framework for explaining the evolution of complex community organization. However, researchers studying the archaeological record must begin by developing a concrete definition of "community" and then use appropriate analytical methods for documenting community structure. A landscape scale analysis is necessary for understanding the articulation between social organization and characteristics of the natural environment. This paper provides a working definition of "community" and then outlines an approach for mapping "communities" across the landscape of Rapa Nui, Chile. Methods highlighted include geo-spatial statistical techniques and multi-spectral satellite imagery.

Morrison, Alex [153] see *Stark, Miriam T.*

Morrison, Alexander [206] see *Cochrane, Ethan E.*

Morrison, Kathleen (University of Chicago)

[11] *Separate Histories, Separate Archaeologies: a Political Ecology of Foraging, Farming, and Rule in South Asia*

In South Asian historical research, agrarian histories and forest histories are generally quite distinct, while the archaeological division of labor between the study of hunter-gatherers, settled agriculturalists, and states is even more distinct. In this paper, I outline some aspects of the political ecology of food and organic trade goods in South Asia -- from rice and millets to cotton, spices, wood, camphor, and dyes -- that linked these disparate worlds.

D.

Morrow, Juliet (Arkansas Archeological Survey)

[222] *Clovis in the Americas: Still the Best Theory for the Peopling of the New World*

This presentation examines the human migration patterns throughout the New World at the end of the Pleistocene, the data they are founded upon, and the models that have been put forth to explain those patterns.

[238] *Discussant*; **[146]** see *Taylor, Robert A.*; **[217]** see *Lockhart, Jamie J.*

Morsink, Joost (University of Florida)

[116] *Chiefdoms and Maisons: Socio-political Organization in the late pre-Columbian Caribbean*

The socio-political organization of the Greater Antilles in late pre-Columbian Caribbean region is often categorized as a chiefdom society. However, the neo-evolutionistic and normative principles encapsulated in this concept fail to recognize important aspects of socio-political interaction on a local level. This paper proposes a maison-perspective, a concept introduced by Levi-Strauss, as an alternative that emphasizes social interaction, kinship, and social identity. The maison-perspective applies a practice-oriented approach to local social organizations on the islands and focuses specifically on how people maintain, organize, and manipulate social relations within the existing socio-political framework before the arrival of Columbus in the Caribbean archipelago.

Mortensen, Lena (University of Toronto Scarborough)

[65] *Patrimony, Popular Imagination, and Shifting Visions of Archaeological Pasts in Honduras*

In popular imagination the Honduran past is commonly reduced to but a few well-known sites, figures, and tropes. In recent years IHAH has worked to counter this trend with new initiatives to broaden the public vision of the past, and actively engage citizens in a recalibrated sense of national patrimony. These efforts involve expanding the archaeological tourism sector, a primary mode for experiencing patrimony which also raises particular sets of complications. In this presentation I discuss some of these complications, and reflect on both the challenges and opportunities of shifting the popular archaeological vision of place in Honduras.

Morton, Shawn (University of Calgary), Gabriel Wrobel (University of Mississippi), Joshua Lynch (University of Mississippi) and Rebecca Shelton (AR Consultants, Inc.)

[99] *Ritual Circuits and Subterranean Material Assemblages in the Caves Branch River Valley, Belize*

Ritual circuits are well attested in the ethnographic and ethnohistoric records of Mesoamerica. Such circuits have been interpreted as prominent components of the ritual stable of past populations as well. In the Maya area, and in the Classic Period in particular, circuits have been suggested to be ubiquitous ritual features supporting social incorporation, political aggrandizement and accession. In this paper we employ such ritual circuits as explanatory frameworks for the material record encountered in caves and rockshelters in the Caves Branch River Valley, Belize, and tie these rituals to regional shifts in population size and political complexity.

Morton, Shawn [112] see *Andres, Christopher R.*

Moss, Madonna (University of Oregon)

[56] *Diversity in North Pacific Shell Middens – the Case of*

Kit'n'Kaboodle Cave, Alaska

Mike Glassow has built an important legacy in the study of shell middens. On the Northwest Coast of North America, most shell middens located along estuaries are dominated by clams (such as *Saxidomus*, *Protothaca*, etc.), while those on the outer coast are dominated by mussels (*Mytilus californianus*). At Kit'n'Kaboodle Cave in southeast Alaska, barnacles are unusually abundant. This paper will present data from Kit'n'Kaboodle Cave within the larger geographic context to more closely examine patterns of barnacle use by First Nations of the Pacific Northwest. While the dietary importance of barnacles is recognized in other parts of the world, particularly Europe, indigenous use of barnacles on the Pacific coast is not well-documented.

Most, Rachel (University of Virginia)

[50] *Greed, Excess and Bad Fashion: The 1980s*

Princess Diana's wedding, the first woman elected to the Supreme Court, the stock market drops 508 points, Exxon Valdez, and the severe drought of 1988. What impact did these events have on the archaeology of the 1980s and how was archaeology portrayed during this decade? With the release of the first three Indiana Jones movies and *Clan of the Cave Bear* it seems somewhat clear that both archaeologists and the past continued to be portrayed in a less than realistic fashion. And, was this the decade where we began to realize that the US could also collapse? Did archaeology gain more relevance because of a renewed concern with the environment?

Mountain, Rebecca (Boston University) and Ksenija Borojevic (Boston University)

[151] *Preliminary Analysis of Fiber Source from Ancient Cordage*
Ancient cordage discovered in a cave at a Near Eastern maritime site is examined. The cordage was well preserved due to the arid conditions of the site, and could potentially reveal important information about seafaring technology of the period. In order to determine what type of plant was used to construct the cordage the sample fibers were examined using light microscopy, thin section analysis, and scanning electron microscopy. These analyses allowed for detailed comparison of our sample to previously identified plants native to the region in antiquity allowing for a high degree of confidence in the final plant identification.

Moya, Jorge [23] see *Rivera, Mario A.*

Moyes, Holley (University of California, Merced) and Keith Prufer (University of New Mexico, Albuquerque)

[148] *The Kayuko Mound Group: A Mountain Shrine Complex*
The Kayuko Mound Group consists of six structures located directly below Kayuko Naj Tunich, an Early Classic ritual cave shrine associated with the site of Uxbenká in southern Belize. The Uxbenká Cave Project (UCP) cleared and began excavations of the group during the 2009 field season. Our work uncovered two apsidal structures and a carved glyph block. This paper presents the preliminary results from the site and discusses the relationship between the surface architecture and the cave.

[62] *Discussant*

Mraz, Veronica (University of Iowa)

[111] *Lithics at the Scott County Pueblo, Western Kansas*
This paper addresses the lithic assemblage recovered from James Gunnerson's 1960s excavations at Scott County Pueblo (14SC1) in western Kansas, apparently occupied around the late 1600's. Research goals include comparison of the types of tools being produced and lithic raw materials used at the pueblo versus the surrounding areas of the site. One future research goal is flake analysis to see which stages of production are being performed at the site.

Muchnikoff, Nicola [193] see *Eiselt, B. Sunday*

Mueller, Emily (University of Wisconsin -Milwaukee)

[124] *Accessioning Preparation of MCIG Burials, Identification and*

Treatment of Mold on Human Remains

Human burials recovered from the Milwaukee County Institutional Grounds (MCIG) in 1991-1992 under the direction of Principle Investigator, Patricia Richards total 1,649. The Wisconsin Historical Society Director determined in 2007 that human remains and other materials associated with excavations be transferred to the University of Wisconsin-Milwaukee (UWM) for final disposition. Mold has been observed on human skeletal material during the accessioning preparation process. This poster presents information on the identification and treatment of such mold as well as the subsequent affects of discovery and stabilization upon the greater accessioning preparation effort.

Mueller, Jenn (Alpine Archaeological Consultants, Inc. RPA)

[111] *The Long Knife Site (5MF5827): A Shoshone Occupation on the Fringe*

The Long Knife Site (5MF5827) is a shallow archaeological site with evidence for two Protohistoric components, one of which is a Shoshonean occupation. This occupation represents one of the southernmost Shoshonean sites in western Colorado, located south of the ethnographically indicated boundary between the Ute and the Shoshone. The Shoshonean component is the primary occupation, dating between 490-320 cal years B.P. Despite the absence of structural remains, it is a winter camp. Feature clusters allow for the inference of households or hearth groups, and an estimated population of 12 to 24 individuals. Because of its age and cultural affiliation, the large and diverse assemblage at the Long Knife site offers a rare opportunity to address Ute/Shoshonean border politics, Shoshonean group dynamics and resource use. The second component indicates a series of repeated reoccupations in the form of short term camping events occurring between 300-150 years cal B.P., which offers the chance to consider how oral history and landscape memory may structure resource use and site reoccupation.

Muenzel, Susanne (University of Tuebingen) and Michael Hofreiter (University of York, UK)

[157] *Mammalian Fauna and Human Adaptations from the Aurignacian of the Swabian Jura*

The main game species represented in the rich Aurignacian faunal assemblages of the Ach Valley include not only mammoth, horse and reindeer, but occasionally cave bears, who hibernated in the caves of the Swabian Jura and who were hunted, as butchering marks and a projectile point in a cave bear vertebra demonstrate. This study integrates an analysis of bone assemblages from Hohle Fels and Geißenklösterle with a study of cave bear population genetics to investigate seasonality, subsistence strategy and changing animal populations during the Paleolithic of southwestern Germany.

Mullane, Elizabeth (Stanford University)

[73] *Megaliths, Mounds, and Monuments: Applying Self-Organizing Theory to Ancient Human Systems*

The theory of self-organization was developed in physics and has been applied successfully to biological systems. In human groups, self-organizing systems theory can be used to understand how some traditions and practices within a culture may be implemented, changed, and maintained without direct leadership. Three archaeological case studies are the core of this analysis: Megalithic South India, the Middle Mississippi River Valley, and Roman Britain. I examine these three case studies to identify the nature of human interactions, understand how local practices can generate large-scale societal changes, and determine the role of self-organization in the creation of sociopolitical complexity.

Mullen, Kevin [34] see *Ostovich, Marta E.*

Mullen, Patrick (University of Wyoming)

[73] *Simulated Effects of Forager Demography on Diet Breadth*
In this research, I simulated the effects of fluctuations in forager demography on diet breadth through time. To do this, I used a SHPO radiocarbon database corrected for taphonomic bias as a proxy for the demographic history of Wyoming. The simulations show how

faunal prey species were included or excluded from the diet and at what relative proportions as a consequence of human population changes. This technique produced hypotheses to test using the subsistence faunal record from excavated archaeological sites in Wyoming. Although these results are particular to the prey species and demography of Wyoming, the principles are broadly applicable.

Mulligan, Connie [182] see *Kimura, Birgitta K.*

Muniz, Mark (St. Cloud State University) and Steven Holen (Denver Museum of Nature & Science)

[210] *The CW Cache: Can Production Strategies Identify Clovis Flintknappers?*

This paper examines a cache of artifacts from northeastern Colorado. Although no projectile points were included, the geomorphic setting and the condition of the bifaces indicates considerable antiquity. Metric dimensions of the bifaces and the production strategy used to make them is very similar to that documented at Clovis sites throughout the West. However, large, well-made bifaces have also been recovered from Woodland sites in the Midwest and Late Prehistoric sites on the Great Plains. This paper compares the CW cache to both Clovis and Late Prehistoric biface caches in order to determine a prehistoric cultural affiliation.

Muñiz García, David Arturo [242] see *Punzo, Jose L.*

Munoz, Cynthia (University of Texas at San Antonio), Raymond Mauldin (University of Texas at San Antonio), Robert Hard (University of Texas at San Antonio) and Stephen Smith (University of Texas at San Antonio)

[74] *Monitoring Fine-Grained Paleovegetation Shifts through Variation in Stable Carbon Isotopes of Leporids collected from Hunter-Gatherer Sites*

Stable carbon isotope analyses of cottontail (*Sylvilagus* sp.) and jackrabbit (*Lepus californicus*) bone collagen can track short-term, local vegetation conditions. Leporids occupy small territories (ca. 500 ha) and have short lives (<3 years). Their collagen reflects local, short-term vegetation conditions, and change in collagen values can track ecological shifts at these fine-grained scales. Hunter-gatherers adapt to these local, short-term ecological shifts. While large numbers of analyses are needed, shifts in collagen values from several Late Archaic and Late Prehistoric sites in Central/South Texas and other regions suggests that fine-grained ecological reconstructions may be possible through the analysis of leporid collagen.

Muñoz, Lizette (University of Pittsburgh), David Goldstein (University of South Carolina), and Nilda Condori (Proyecto Arqueológico Tuti Antiguo)

[188] *Paleoethnobotanical Studies in the Collesuyo Region: The Case of Malata*

We present the results from two hundred soil and macrobotanical samples from the habitational area of Malata, a transitional Late Horizon/Early Colonial site in the Colca Valley. Of major importance is the legacy of historical visitas that allow a potential comparison between the historical and archeological record as far as ecology, economy, and subsistence are concerned. Our dataset represents sealed features and surfaces from clearly defined architectural units (e.g., houses, workshops, religious precincts). We conclude with our preliminary insights into the impact of a major socio-political change in the production and consumption of plant resources by the Malata denizens.

Muñoz, Melissa [258] see *Hall, Lauren*

Munro, Andy (Centre for Astronomy, James Cook University)

[89] *Astronomy and the Design of Late Bonito Great Houses at Chaco Canyon*

The six Late Bonito Great Houses of Chaco Canyon stand apart from the Classic Bonito structures due to their single-phase construction to planned designs. During the 1970's it was determined that two were placed to complete formal lines of cardinality through the center of the

canyon. Research during the 1990's determined that two were sited and designed to operate as December Solstice calendrical stations. Cardinality and solstitial alignments demonstrate intentional application of astronomical observations to architectural design. New findings extend the association of astronomy and architectural design to the full set of Late Bonito Great Houses at Chaco.

Munro, Natalie (University of Connecticut) and Mary C. Stiner (University of Arizona)

[16] *Diversity Analysis of the Late Paleolithic and Mesolithic Fauna of Franchthi Cave, Greece*

Franchthi Cave in southern Greece contains one of the most important records of Late Pleistocene human diet change in Mediterranean Europe. Diversity analysis of the rich Upper Paleolithic-Mesolithic faunal series reveals a complex history of diet diversification and a dramatic shift from strictly terrestrial to marine-terrestrial foraging. Human meat diets diversified dramatically with time, first with respect to terrestrial resources as large game diversity diminished and small mammals and bird diversity increased, and subsequently a marine trajectory that began with high-yield littoral sources and expanded to include costly fishing ventures on the open sea.

Munro-Stasiuk, Mandy [160] see *Stockton, Trent*

Munson, Marit [200] see *Schleher, Kari L.*

Münzel, Susanne [157] see *Bocherens, Hervé*

Murguia Hernandez, Ana Iris

[57] *Architectural Diversity at Chalchihuites Sites in the Guadiana Valley*

The Chalchihuites culture was defined in the 1930s by Alden Mason based primarily on ceramic distributions. Investigations realized in the past five years in the Guadiana valley finally give us a large enough sample of the architectural variability present at Guadiana branch Chalchihuites sites. This paper presents an analysis of the sites in the region based on architecture, intersite relationships and their locations in the landscape.

Murray, Wendi (University of Arizona), Kacy L. Hollenback (University of Arizona) and Maria Nieves Zedeno (University of Arizona)

[228] *Central Places in the Back Country: Investment Scales and Community Formation among Blackfeet Hunters, Montana*

Among the Montana Blackfeet, the transition from bison hunting in the open prairie to elk hunting in the intermountain valleys of the northern Rocky Mountains not only required a shift in ecological and technological focus but a reorganization of "community," development of new social networks, and concomitant investment in place-making at various scales. We analyze the archaeology and geography of a central place--Beaver Lake, Lewis & Clark National Forest, Montana--and discuss its significance for the formation and persistence of the Blackfeet elk hunting community.

Myers, Ruth [252] see *Picklesimer, John W.*

Nadel, Dani (Zinman Institute of Archaeology, University of Haifa, Israel), Danny Rosenberg (Zinman Institute of Archaeology, University of Haifa, Israel), Reuma Arav (Israel Institute of technology, Haifa, Israel) and Sagi Filin (Israel Institute of technology, Haifa, Israel)

[147] *Detailed Three-dimensional Characterization of a Flint Quarrying Complex in Mt. Carmel, Israel*

A high-density complex of flint quarries in Nahal Galim (Mt. Carmel, Israel), is presented. Below dozens of natural flint exposures, there are large masses of limestone debris (quarrying by-products), commonly containing flint artifacts. The quarries are located at the immediate vicinity of many prehistoric sites, and only a few kilometers away from the famous prehistoric caves. We present a 3D documentation method, based on terrestrial laser scanning. The