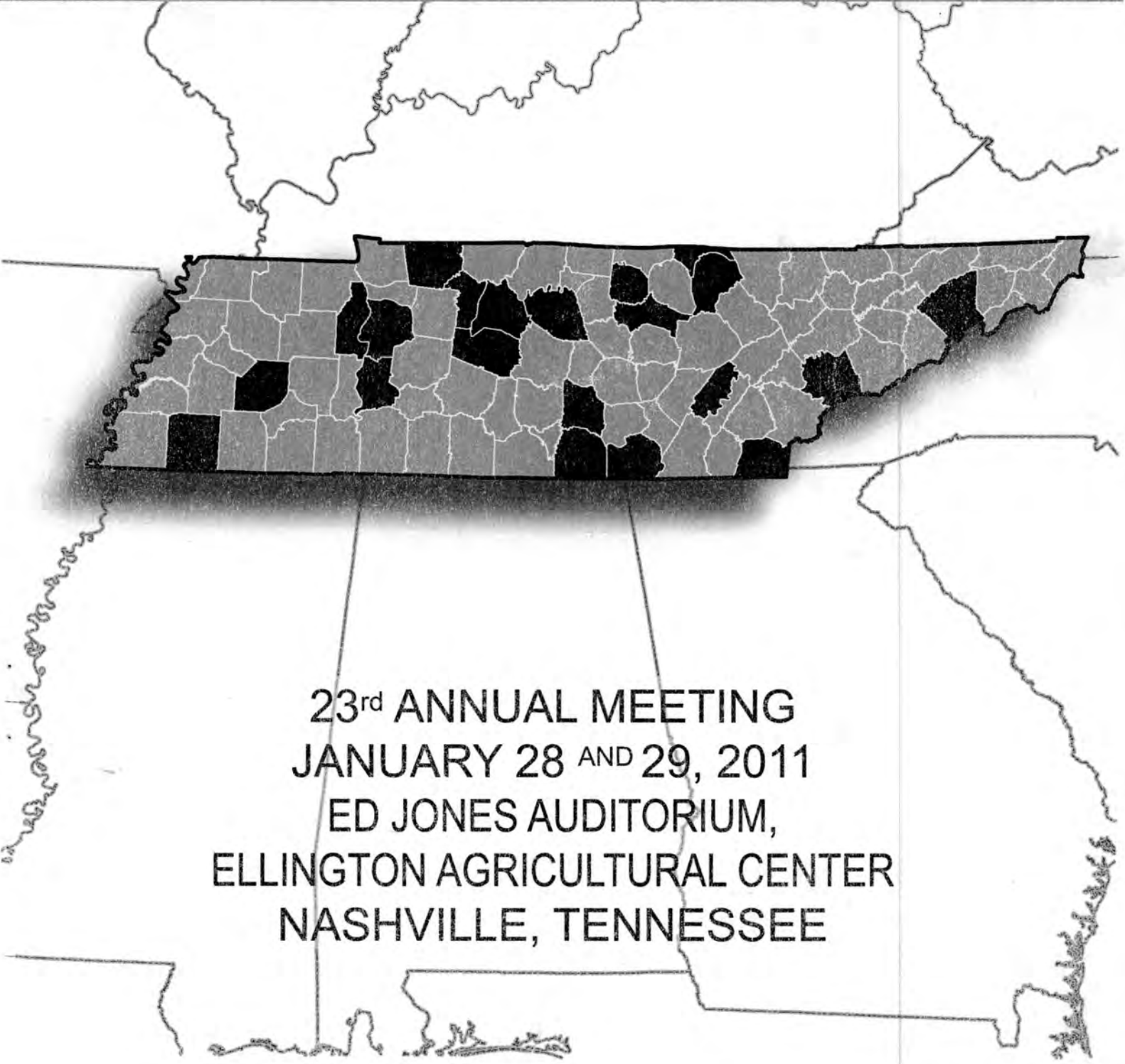




CURRENT RESEARCH in **TENNESSEE** **ARCHAEOLOGY**



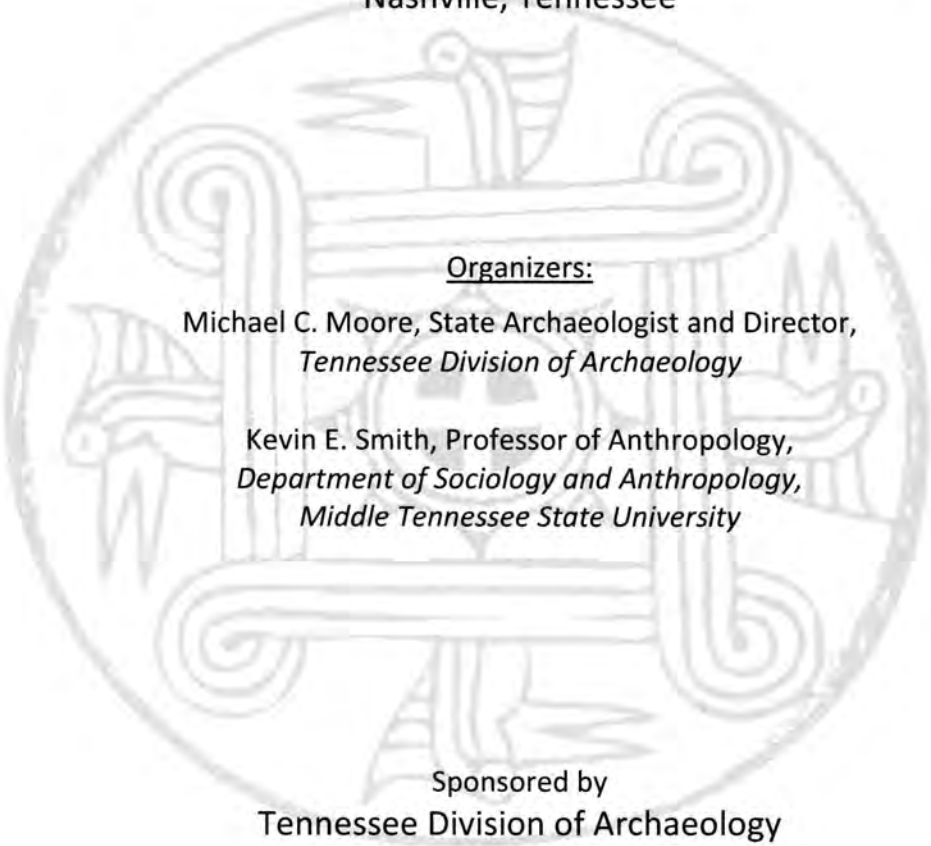
23rd ANNUAL MEETING
JANUARY 28 AND 29, 2011
ED JONES AUDITORIUM,
ELLINGTON AGRICULTURAL CENTER
NASHVILLE, TENNESSEE

CURRENT RESEARCH IN TENNESSEE ARCHAEOLOGY

23rd ANNUAL MEETING

Friday, January 28 and Saturday, January 29, 2011

Ed Jones Auditorium, Ellington Agricultural Center
Nashville, Tennessee



Organizers:

Michael C. Moore, State Archaeologist and Director,
Tennessee Division of Archaeology

Kevin E. Smith, Professor of Anthropology,
Department of Sociology and Anthropology,
Middle Tennessee State University

Sponsored by
Tennessee Division of Archaeology
and
Middle Tennessee State University

A copy of the 2011 CRITA program is posted on the
Tennessee Archaeology Network website:
<http://www.mtsu.edu/~kesmith/TNARCH/index.html>

DAILY SCHEDULE

FRIDAY, JANUARY 22

- 1:30 Governor's Archaeological Advisory Council meeting.
- 3:00 Tennessee Council for Professional Archaeology business meeting.
- 4:30 T CPA Reception, Ed Jones Auditorium

SATURDAY, JANUARY 29

- 8:25 **Welcome and Opening Remarks**
- 8:30 **Preliminary Review of Worked Crystalline Artifacts from the Middle Cumberland Region.**
Michael C. Moore, Kevin E. Smith, and Aaron Deter-Wolf
- 8:45 **Preliminary Results from Uzzelles Rockshelter: An Archaic and Woodland Upland Site in Sewanee, Tennessee.**
Sarah C. Sherwood, Stephen B. Carmody, Sierra Bow, Kandace Hollenbach, Nicholas P. Herrmann, Martin Knoll, Leila Donn, Annie Blankenship, and Alan Cressler
- 9:00 **Preliminary Report of Archaeological Data Recovery at the Flatwoods Bridge Over the Buffalo River, Perry County, Tennessee.**
Guy Weaver, Anna Lunn, and Jeremy Blazier
- 9:15 **Late Woodland Lithic Technology and Assemblage Formation at Far View Gap Bluff Shelter, Fentress County, Tennessee.**
Jeffrey W. Navel and Jay D. Franklin
- 9:30 **Mississippian Earthlodge, Council House, or Temple? Investigations of a Large Circular Structure on the Castalian Springs Plaza.**
Brandy A. Dacus, Kevin E. Smith, and Emily L. Beahm
- 9:45 **Ritual Use of Human Skulls at Castalian Springs, Tennessee.**
Shannon C. Hodge, Michael K. Hampton, and Kevin E. Smith

BREAK 10:00–10:15

- 10:15 **Our Lady of the Cumberland and the Portal to the Beneath World.**
Robert V. Sharp
- 10:30 **Paleoindian Habitation at the Burgess-Mabrey Site: 40JK267, Jackson County, Tennessee.**
Mark R. Norton and John B. Broster
- 10:45 **Archaeological Survey of Pogue Creek State Natural Area: A GIS Perspective.**
Lucinda Langston and Jay D. Franklin
- 11:00 **Using Multiple Lines of Evidence to Search for Archaeological Traces of the Battle of Franklin.**
Larry McKee
- 11:15 **The Cumberland River Emergency Archaeological Survey.**
Aaron Deter-Wolf, Tanya M. Peres, and Shannon C. Hodge
- 11:30 **The 2010 Cumberland River/Midsouth Paleoindian Survey Project: Exploring Human Occupation and Climate Change in the Late Pleistocene and Holocene Eras.**
David G. Anderson, D. Shane Miller, Tom Pertierra, Derek Anderson, Thad Bissett, Stephen Carmody, Tracy Hadlett, Erik N. Johanson, Ashley M. Smallwood, and Sarah Walters

Pick up Reilly

LUNCH 11:45–1:15

- 1:15 **Magnetometry and the Mississippian Period Landscape in Western Tennessee**
Andrew M. Mickelson, Eric Goddard, and Lee Owens
- 1:30 **Expanding the Prehistoric Rock Art Database of the Midsouth 2010: New Sites in Tennessee and North Georgia.**
Jan F. Simek, Alan Cressler, Brent Aulenbach, and Sarah C. Sherwood
- 1:45 **Recent Archaeological Investigations at Wynnewood**
Benjamin C. Nance and Samuel D. Smith
- 2:00 **The Hunting of Garden Pests by Mississippian Farmers in Middle Tennessee.**
Tanya M. Peres and Alison E. Jordan
- 2:15 **Dating the Three Mile Phase at Eva: New Interpretations of Depositional History and Site Use.**
Thaddeus Bissett
- 2:30 **A Description of Research Conducted on the Upper Hampton Farm Site (40RH41), Rhea County, Tennessee.**
Jessica Dalton-Carriger

BREAK 2:45–3:00

- 3:00 **Archaeological, Archival, and Geophysical Investigations at Arnold Air Force Base, Coffee and Franklin Counties, Tennessee**
Marc E. Wampler, Rick McWhite, Heidi Mowery, and Shawn Chapman
- 3:15 **Lithic Technology and Site Function at Early Times Rock Shelter, Upper Cumberland Plateau, Tennessee.**
Andrew D. Dye, Jay D. Franklin, and Maureen A. Hays
- 3:30 **A Rare Glimpse at Late Archaic Lithic Technology: Debitage Analysis at 40MI70 In Eastern Tennessee.**
Danny Gregory
- 3:45 **Results of Survey and Archaeological Testing of Rockshelters and Moonshine Stills on Raccoon Mountain in Marion County, Tennessee.**
Jared Barrett
- 4:00 **A Tale of Two Surveys: Lumping vs. Splitting in Cultural Resource Management.**
Karen B. Supak

POSTERS

Preliminary Research on Variations in Bone Preservation and Soil Ph at the Birdwell and Neas Sites.

Lydia L. Dorsey

Preliminary Findings of Zooarchaeological Research and Food Processing Techniques at the Fewkes Site (40WM1), Williamson County, Tennessee.

Amy Howell

Non-Destructive Provenance Analysis of a Mississippian Sword Fragment from the Link Farm Site.

Ryan M. Parrish

The Function of Flake Tools from the Townsend Project (Sites 40BT89, 40BT90, 40BT91, 40BT94), Blount County, Tennessee.

Phyllis S. Rigney

National Register Testing at the Coats-Hines Site, Williamson County, Tennessee.

Jesse W. Tune, Aaron Deter-Wolf, John B. Broster, and Tanya M. Peres

ABSTRACTS OF PRESENTATIONS

Anderson, David G. (*University of Tennessee - Knoxville*), **D. Shane Miller** (*University of Arizona*), **Tom Pertierra** (*Southeastern Paleo American Survey Inc.*), **Derek Anderson** (*University of Arizona*), **Thaddeus Bissett** (*University of Tennessee - Knoxville*), **Stephen B. Carmody** (*University of Tennessee - Knoxville*), **Tracy Hadlett** (*University of South Florida*), **Erik N. Johanson** (*University of Tennessee - Knoxville*), **Ashley M. Smallwood** (*Texas A&M University*), and **Sarah Walters** (*University of Tennessee - Knoxville*)

THE 2010 CUMBERLAND RIVER/MIDSOUTH PALEOINDIAN SURVEY PROJECT: EXPLORING HUMAN OCCUPATION AND CLIMATE CHANGE IN THE LATE PLEISTOCENE AND HOLOCENE ERAS. From July 8th – August 11th, 2010 a multi-disciplinary, multi-institutional team conducted exploratory archaeological and paleoenvironmental survey and data collection along the Cumberland River immediately west of Nashville. With funding from the Tennessee Historical Commission and support from the Davidson County Metropolitan Parks and Recreation Department and the staff of the Bells Bend Outdoor Center, a team of 25 researchers and students, assisted by numerous local volunteers, recovered archaeological, paleosubsistence, paleoenvironmental, and radiometric samples, the analysis of which is currently underway. The research was directed to locating and documenting both deeply stratified sites as well as sites in upland areas away from the river, and included the inspection and cleaning of bank profiles, controlled surface collections, and systematic shovel testing. Occupations of all time periods were examined, including a historic farmstead, three Archaic shell middens, and a number of earlier Archaic and Paleoindian lithic sites. A major goal was finding sites that would allow us to explore climate and biota locally from the terminal Pleistocene through the later Holocene eras, from ca. 15,000 to 3,000 cal yr BP.

Anderson, Derek (see Anderson, David G.)

Aulenbach, Brent (see Simek, Jan F.)

Barrett, Jared (*TRC, Inc.*)

RESULTS OF SURVEY AND ARCHAEOLOGICAL TESTING OF ROCKSHELTERS AND MOONSHINE STILL ON RACCOON MOUNTAIN IN MARION COUNTY, TENNESSEE. During the winter and spring of 2010, TRC conducted an archaeological survey of the Tennessee Valley Authority (TVA) Raccoon Mountain Pumped Storage Plant located on Raccoon Mountain in Marion County, Tennessee. The survey recorded a total of 14 previously unrecorded archaeological sites including eight prehistoric rockshelters and six moonshine stills. Several of the prehistoric rockshelters proved to be expansive and contain intact, deeply buried, cultural deposits. These were selected for additional testing through excavation of 1x1 m test units. This presentation will provide a brief overview of the field methodologies employed, materials recovered, and results of radiocarbon testing of selected features.

Beahm, Emily L. (see Dacus, Brandy A.)

Bissett, Thaddeus (*University of Tennessee - Knoxville*)

DATING THE THREE MILE PHASE AT EVA: NEW INTERPRETATIONS OF DEPOSITIONAL HISTORY AND SITE USE. The Eva site (40BN12) has represented a major touchstone for the Midsouth Archaic, but despite its significance, until recently only a single absolute chronometric determination had ever been obtained. As a result, Eva has been largely neglected as a source of new data on Midsouthern Archaic adaptations and cultural patterning. However, two recently-obtained AMS dates on the upper and lower portions of the Three Mile component provide not only additional chronological data points for this important site, but also suggest new interpretations of Eva with respect to the site's occupational and depositional history during the Middle Archaic period.

Bissett, Thaddeus (see Anderson, David G.)

Blankenship, Annie (see Sherwood, Sarah C.)

Blazier, Jeremy (see Weaver, Guy)

Broster, John B. (see Mark R. Norton)

Bow, Sierra (see Sherwood, Sarah C.)

Burgess, Dennis (see Mark R. Norton)

Carmody, Stephen B. (see Anderson, David G.)

Carmody, Stephen B. (see Sherwood, Sarah C.)

Chapman, Shawn (see Wampler, Marc E.)

Cressler, Alan (see Sherwood, Sarah C.)

Cressler, Alan (see Simek, Jan F.)

Dacus, Brandy A. (*University of Memphis*), **Kevin E. Smith** (*Middle Tennessee State University*), and **Emily L. Beahm** (*University of Georgia*)

MISSISSIPPIAN EARTHLODGE, COUNCIL HOUSE, OR TEMPLE? INVESTIGATIONS OF A LARGE CIRCULAR STRUCTURE ON THE CASTALIAN SPRINGS PLAZA. Magnetometer and ground penetrating radar surveys in 2006 and 2009 indicated a 22-m diameter circular signature on the northeastern corner of the plaza at the Castalian Springs site in Middle Tennessee. In 2010, the Middle Tennessee State University Field School explored 100 sq m coinciding with the geophysical signatures, confirming the presence of an out-sized circular wall-trench structure. The non-quotidian nature of the structure is evidenced by the virtual absence of artifacts, along with a thorough dismantling prior to burial beneath a small mound. Later, the former structure was reopened and a tableau of pits and human skulls was created at the circle's center.

Dalton-Carriger, Jessica (*University of Tennessee – Knoxville*)

A DESCRIPTION OF RESEARCH CONDUCTED ON THE UPPER HAMPTON FARM SITE (40RH41), RHEA COUNTY, TENNESSEE. The multi-component Upper Hampton Farm site (40RH41), located on the Watts Bar Reservoir, was excavated in 1940-1941 by WPA crews. This paper provides a history of these excavations and a background of occupational history based on a reanalysis of extant collections. During the Late Prehistoric Period, a complex modification of previous landscapes took place. This paper examines the way in which new occupants severed the collective memory of past populations to the built environment using a social memory model. In addition, this paper will cover aspect of the ceramic assemblage and dating methods employed to date the late prehistoric occupation.

Deter-Wolf, Aaron (*Tennessee Division of Archaeology*), **Tanya M. Peres** (*Middle Tennessee State University*), and **Shannon C. Hodge** (*Middle Tennessee State University*)

THE CUMBERLAND RIVER EMERGENCY ARCHAEOLOGICAL SURVEY. Catastrophic flooding throughout Middle Tennessee in May of 2010 resulted in substantial damage to the numerous prehistoric sites situated along the Cumberland River. The force of the flood waters eroded large sections of bank line, severely truncating and in some cases completely destroying many riverbank sites. Immediately after the floodwaters receded, a number of sites began to suffer from widespread and systematic looting activity targeting newly-exposed midden deposits. In June, MTSU and the Tennessee Division of Archaeology were awarded a Rapid Response Research Grant from the National Science Foundation to fund a survey and assessment of natural and anthropogenic damage to more than 120 previously recorded prehistoric sites located between Cheatham and Old Hickory Dams. In addition to documenting site disturbances and collecting critical and

endangered site data, the survey and ongoing site monitoring have provided an opportunity to integrate undergraduates into an active research program.

Deter-Wolf, Aaron (see Moore, Michael C.)

Donn, Leila (see Sherwood, Sarah C.)

Dye, Andrew D. (*East Tennessee State University*), **Jay D. Franklin** (*East Tennessee State University*), and **Maureen A. Hays** (*College of Charleston*)

LITHIC TECHNOLOGY AND SITE FUNCTION AT EARLY TIMES ROCK SHELTER, UPPER CUMBERLAND PLATEAU, TENNESSEE. We examine lithic technology and site function at a small upland rock shelter in a region dominated by these features. Lithic analyses at several nearby shelters indicate they functioned as residential base camps or long term repeated use camps during the Archaic period. However, analyses from Early Times Rock Shelter indicate that it served as a temporary camp. Using lithic analyses, we attempt to place the Early Times Rock Shelter assemblage into a regional *chaîne opératoire*.

Franklin, Jay D. (see Dye, Andrew D.)

Franklin, Jay D. (see Langston, Lucinda)

Franklin, Jay D. (see Navel, Jeffrey W.)

Goddard, Eric (see Mickelson, Andrew M.)

Gregory, Danny (*New South Associates*)

A RARE GLIMPSE AT LATE ARCHAIC LITHIC TECHNOLOGY: DEBITAGE ANALYSIS AT 40MI70 IN EASTERN TENNESSEE. Lithic attribute analysis was conducted on debitage samples from a data recovery excavation at 40MI70 along the Tennessee River in Marion County. Samples were collected from three stratified Late Archaic components dating to the beginning, middle, and end of the period (ca. 2500, 4000, and 5500 years BP). The components were clearly segregated by depositional episodes and dated through radiocarbon analysis. Lithic attribute analysis results were used to evaluate diachronic changes in lithic technology, material procurement, site use, mobility, and subsistence strategies throughout the entire span of the Late Archaic period in Eastern Tennessee.

Hadlett, Tracy (see Anderson, David G.)

Hays, Maureen A. (see Dye, Andrew D.)

Hampton, Michael K. (see Hodge, Shannon C.)

Herrmann, Nicholas P. (see Sherwood, Sarah C.)

Hodge, Shannon C. (*Middle Tennessee State University*), **Michael K. Hampton** (*Middle Tennessee State University*), and **Kevin E. Smith** (*Middle Tennessee State University*)

RITUAL USE OF HUMAN SKULLS AT CASTALIAN SPRINGS, TENNESSEE. Investigations of a 22-m diameter Mississippian circular wall-trench structure during summer 2010 revealed a post-structural revisiting of the locale for construction of a ritual tableau centered on the use of disarticulated human skulls. Devoid of other objects, the skulls form the principal components closing a short-term ceremonial event involving the construction, use, and burial of a series of circular and rectangular pits.

Hodge, Shanon C. (see Deter-Wolf, Aaron)

Hollenbach, Kandace (see Sherwood, Sarah C.)

Johanson, Erik N. (see Anderson, David G.)

Jordan, Alison E. (see Peres, Tanya M.)

Knoll, Martin (see Sherwood, Sarah C.)

Langston, Lucinda (*East Tennessee State University*), and **Jay D. Franklin** (*East Tennessee State University*)

ARCHAEOLOGICAL SURVEY OF POGUE CREEK STATE NATURAL AREA: A GIS PERSPECTIVE. Rock Shelters have been occupied for thousands of years on the Upper Cumberland Plateau (UCP) of Tennessee. Different from adjacent lowland regions, the UCP is unique in that rock shelters played a dominant role in prehistoric cultural adaptations due to their ubiquity in this landscape. In an effort to shed light on prehistoric rock shelter use in the region, we use GIS to analyze data from the four year Pogue Creek State Natural Area survey. Now that the survey is complete, the data are used to look at patterning of rock shelter use through time in order to elucidate diachronic prehistoric human-land relationships.

Lunn, Anna (see Weaver, Guy)

McKee, Larry (*TRC, Inc.*)

USING MULTIPLE LINES OF EVIDENCE TO SEARCH FOR ARCHAEOLOGICAL TRACES OF THE BATTLE OF FRANKLIN. In 2009, TRC conducted a search for subsurface remains of Federal defensive lines associated with the Battle of Franklin. The work focused on several properties on either side of Columbia Pike near the Carter House, the center point of the Confederate attack. As with any historic period archaeological investigation, the research drew on multiple lines of evidence. Consulted sources included maps, primary and secondary documentation, and the expertise of local scholars. In the field, methods included ground penetrating radar, trackhoe stripping, and hand excavation. This paper reviews the relative value of the consulted evidence and effectiveness of the methods applied during field work. Also discussed will be the discovery of an intact section of a Federal defensive ditch line with numerous clusters of in-situ dropped and fired ammunition.

McWhite, Rick (see Wampler, Marc E.)

Mabrey, Larry (see Mark R. Norton)

Mickelson, Andrew M. (*University of Memphis*), **Eric Goddard** (*University of Memphis*), and **Lee Owens** (*University of Memphis*)

MAGNETOMETRY AND THE MISSISSIPPIAN PERIOD LANDSCAPE IN WESTERN TENNESSEE. Over the past two years we have conducted extensive magnetometry surveys at the Ames, Denmark and Pinson sites in western Tennessee. Research at Ames revealed a substantial palisaded Mississippian settlement associated with the previously known mound complex. Similarly, geophysical prospecting at Denmark also detected several anomalies thought to be Mississippian houses or structures. Finally, a large-scale survey at the predominantly Middle Woodland period Pinson Mounds site detected hundreds of prehistoric features and one or more Mississippian period structures. The implication of this research is that Mississippian settlement in western Tennessee followed the model of nucleated village settlements with farmsteads scattered across the surrounding countryside.

Miller, D. Shane (see Anderson, David G.)

Moore, Michael C. (*Tennessee Division of Archaeology*), **Kevin E. Smith** (*Middle Tennessee State University*), and **Aaron Deter-Wolf** (*Tennessee Division of Archaeology*)

A PRELIMINARY REVIEW OF WORKED CRYSTALLINE ARTIFACTS FROM THE MIDDLE CUMBERLAND REGION.

This presentation offers some preliminary results from our on-going study of worked crystal artifacts from the Middle Cumberland region. Four specimens are known to date, with most recovered from burial contexts on Mississippian period sites across the study area. The modest sample consists of two earplugs, one effigy pendant, and one bead manufactured from calcite and fluorite crystals. Several other specimens reported from sites adjacent to the western boundary of the Middle Cumberland region are also discussed.

Mowery, Heidi (see Wampler, Marc E.)

Nance, Benjamin C. (*Tennessee Division of Archaeology*) and **Samuel D. Smith** (*Tennessee Division of Archaeology*)

RECENT ARCHAEOLOGICAL INVESTIGATIONS AT WYNNEWOOD. In February 2008 the Wynnewood State Historic Site suffered extensive damage in a tornado. Subsequent stabilization and repair of the main house, outbuildings, and grounds necessitated ground disturbance, potentially destroying archaeological deposits. To minimize the loss of archaeological information, the Tennessee Division of Archaeology has been working with the contractors restoring the site, monitoring some of the earth moving activity and screening the soil once it has been excavated. This process will continue until the restoration is complete.

Navel, Jeffrey W. (*East Tennessee State University*) and **Jay D. Franklin** (*East Tennessee State University*)

LATE WOODLAND LITHIC TECHNOLOGY AND ASSEMBLAGE FORMATION AT FAR VIEW GAP BLUFF SHELTER, FENTRESS COUNTY, TENNESSEE. Far View Gap Bluff Shelter was recorded in March 2006 and sondages were begun. ETSU archaeologists returned to the site in March 2007 and conducted intensive Phase II testing. While the site is multi-component, its most obvious feature is a Late Woodland midden. In this paper, we present the Late Woodland archaeology of Far View Gap Bluff Shelter with particular focus on lithic technology and assemblage formation. We then make some regional comparisons for the Late Woodland period on the Upper Cumberland Plateau of Tennessee.

Norton, Mark R. (*Tennessee Division of Archaeology*), **John B. Broster** (*Tennessee Division of Archaeology*), **Dennis Burgess** (*Gainesboro, TN*), and **Larry Mabrey** (*Gainesboro, TN*)

PALEOINDIAN HABITATION AT THE BURGESS-MABREY SITE: 40JK267, JACKSON COUNTY, TENNESSEE. The Burgess-Mabrey site (40JK267) is located on a terrace above the Cumberland River in Jackson County, Tennessee. Numerous Paleoindian projectile points including Clovis, Cumberland, Beaver Lake, and Quad have been recovered. Other Paleoindian artifacts include blade cores, unifacial blade tools, and overshot flakes. The artifact assemblage is comprised of the locally available Fort Payne and Bigby-Cannon cherts. Nodules and cobbles of these high quality cherts are found eroding out of the limestone formations above the site and surrounding region. Although smaller in size, the Burgess-Mabrey site is very similar to the Sinclair Clovis Quarry site in Wayne County, Tennessee

Owens, Lee (see Mickelson, Andrew M.)

Pertierra, Tom (see Anderson, David G.)

Peres, Tanya M. (*Middle Tennessee State University*) and **Alison E. Jordan** (*Middle Tennessee State University*)

THE HUNTING OF GARDEN PESTS BY MISSISSIPPIAN FARMERS IN MIDDLE TENNESSEE. Cultivation is an intensive strategy for food production and requires large inputs of time and energy. By adopting a garden hunting scheme, farmers were be able to hunt with no special preparation, as was required for communal hunting parties, since it took place in cultivated fields and home gardens. It was far less time-consuming because it happened while performing other cultivation requirements. Garden-hunting was also low risk, and reduced the competition for a farmer's resources by killing the larger pests that could destroy the crops. Farmers could be more selective in the animals hunted when crop harvests were good. When crops failed,

farmers may have used a “take what you can get” approach to hunting animals in and around their fields. These strategies can be seen in the archaeological record through patterns in the zooarchaeological data. We use faunal data from Brandywine Pointe (40DV247), Rutherford-Kizer (40SU15), and Fewkes (40WM1) to determine the extent and type of garden-hunting employed during the Mississippian period in the Nashville Basin.

Peres, Tanya M. (see Deter-Wolf, Aaron)

Sherwood, Sarah C. (*Dickinson College*), **Stephen B. Caromdy** (*University of Tennessee - Knoxville*), **Sierra Bow** (*University of Tennessee - Knoxville*), **Kandace Hollenbach** (*University of Tennessee - Knoxville*), **Nicholas P. Herrmann** (*Mississippi State University*), **Martin Knoll** (*Sewanee, University of the South*), **Leila Donn** (*Sewanee, University of the South*), **Annie Blankenship** (*University of Tennessee - Knoxville*), and **Alan Cressler** (*National Speleological Society*)

PRELIMINARY RESULTS FROM UZZELLES ROCKSHELTER: AN ARCHAIC AND WOODLAND UPLAND SITE IN SEWANEE, TENNESSEE. This paper reports on the Sewanee Environmental Institutes (SEI) field school excavations of an upland Warren Point Sandstone shelter. We present the preliminary results from the pottery, archaeobotanical, lithic, geoarchaeological and radiocarbon analyses. The analyzed pottery represents the Early, Middle and Late Woodland periods, and is composed primarily of limestone tempered plain, plain/scraped and check stamped wares. The projectile points span the Early Archaic through Late Woodland periods. The botanical analysis has revealed diverse seeds, nuts and wood charcoal suggesting the occupants exploited a variety of environments during the late summer through early winter. The deepest deposits in the shelter represent an Early Archaic Bifurcate occupation. The geoarchaeological analysis focuses on site formation processes, mainly the variability and accumulation of sediments and the post depositional processes that impact the archaeological deposits.

Sherwood, Sarah C. (see Simek, Jan F.)

Sharp, Robert V. (*Art Institute of Chicago*)

OUR LADY OF THE CUMBERLAND AND THE PORTAL TO THE BENEATH WORLD. This presentation begins with a review of a select group of ceramic female effigy bottles recovered from numerous sites throughout the middle Cumberland River basin. It then establishes a connection between the symbolic motif that often appears on these vessels through the resist technique of negative painting and one of the most familiar icons of the Mississippian world, a motif that is not only widespread throughout the prehistoric Southeast but also one that appears on various media including ceramic, shell, copper, stone, and wood. The presentation posits a source for this symbolic motif in the natural world, and then building on that, establishes an interpretation of this motif and of the female effigy bottles themselves.

Simek, Jan F. (*University of Tennessee - Knoxville*), **Alan Cressler** (*USGS Atlanta*), **Brent Aulenbach** (*USGS Atlanta*), and **Sarah C. Sherwood** (*Dickinson College*)

EXPANDING THE PREHISTORIC ROCK ART DATABASE OF THE MIDSOUTH 2010: NEW SITES IN TENNESSEE AND NORTH GEORGIA. In 2010, the University of Tennessee Cave Archaeology Research Team investigated a few new rock art localities in Tennessee and North Georgia. A petroglyph at Burgess Falls, first thought to be prehistoric, probably has a 19th Century historic origin. A second site in the South Cumberlands conforms in its context to a number of localities nearby. A third striking locality represents a new type of site in a so-called “Rock Town” feature on the top of Lookout Mountain; the implications of this site for Mississippian religious landscapes, and for other potentially similar sites in Tennessee and elsewhere will be discussed.

Smallwood, Ashley M. (see Anderson, David G.)

Smith, Kevin E. (see Dacus, Brandy A.)

Smith, Kevin E. (see Hodge, Shannon C.)

Smith, Kevin E. (see Moore, Michael C.)

Smith, Samuel D. (see Nance, Benjamin C.)

Supak, Karen B. (*BHE Environmental, Inc.*)

A TALE OF TWO SURVEYS: LUMPING VS. SPLITTING IN CULTURAL RESOURCE MANAGEMENT. Between 2006 and 2010, a single parcel within Training Area 02 (Montgomery County) at Fort Campbell, TN-KY, was surveyed twice, by two different cultural resource management firms using almost identical methodologies. This paper compares the results of both studies with particular reference to historic site 40MT1171, the Mallory/Taylor farmstead, and examines the implications of “lumping” versus “splitting” when defining historic site boundaries, particularly at the survey level.

Walters, Sarah (see Anderson, David G.)

Wampler, Marc E. (AMEC), Rick McWhite (Arnold AFB), Heidi Mowery (Arnold AFB), and Shawn Chapman (ATA) ARCHAEOLOGICAL, ARCHIVAL, AND GEOPHYSICAL INVESTIGATIONS AT ARNOLD AIR FORCE BASE, COFFEE AND FRANKLIN COUNTIES, TENNESSEE. Over the past three years, AMEC Earth & Environmental conducted four cultural resource investigations at Arnold Air Force Base, located in south-central Tennessee. AMEC conducted archaeological surveys in 2008-09 of the 16,825 acres on base that previously had not been surveyed. AMEC then completed archaeological test excavations at four prehistoric sites, archival research for the former World War II African-American barracks locale (Camp Forrest), and geophysical investigations at the Huffar Cemetery in 2010. We will summarize these investigations and related research implications in this presentation.

Weaver, Guy (Weaver and Associates, LLC), Anna Lunn (Weaver and Associates, LLC), and Jeremy Blazier (Weaver and Associates, LLC)

PRELIMINARY REPORT OF ARCHAEOLOGICAL DATA RECOVERY AT THE FLATWOODS BRIDGE OVER THE BUFFALO RIVER, PERRY COUNTY, TENNESSEE. In the fall of 2010, Weaver & Associates conducted archaeological data recovery for TDOT at three prehistoric sites (40PY288, 40PY289 and 40PY290) located on the Buffalo River in Perry County, Tennessee. This report provides a brief summary of the excavations and on-going analysis.

ABSTRACTS OF POSTERS

Dorsey, Lydia L. (University of Tennessee - Knoxville)

PRELIMINARY RESEARCH ON VARIATIONS IN BONE PRESERVATION AND SOIL pH AT THE BIRDWELL AND NEAS SITES. Sites 40GN228 and 40GN229 are located on the Nolichucky River on modern day agricultural land in Greene County, Tennessee. During the 2009 phase III excavation, the Birdwell site (40GN228) produced a variety of animal bone ranging in preservation from excellent to extremely poor. Located directly across the river, concurrent excavations at the Neas site (40GN229) yielded only a small amount of poorly preserved faunal material. Where bone is concerned, one of the most important chemical factors of soils is the degree of acidity, which is indicative of calcium levels. If calcium is lacking in the soil's chemical composition, it is less likely that bone will be preserved within the matrix. The ability to measure this key element through soil sampling and chemical analyses offers both predictive and explanatory measures in site formation processes. The goal of this research is to not only clarify the behavioral patterns at the Birdwell and Neas sites, but to also identify a more general pattern of bone preservation as it relates to soil chemistry.

Howell, Amy (*Middle Tennessee State University*)

PRELIMINARY FINDINGS OF ZOOARCHAEOLOGICAL RESEARCH AND FOOD PROCESSING TECHNIQUES AT THE FEWKES SITE (40WM1), WILLIAMSON COUNTY, TENNESSEE. The Fewkes site is a Mississippian complex of five mounds dating to A. D. 1050-1250. Faunal remains from the site have been examined for evidence of a variety of food processing techniques; here the focus is on spiral fractures that indicate bone marrow extraction and cut marks that indicate butchery. The possibility of pot polish, bone grease rendering, and digestion of bone is also addressed. Bone marrow extraction is interpreted as a standard part of processing animals for food, instead of the traditional interpretation of this practice as evidence of nutritional stress. Large mammals and large avians are analyzed for cut marks that show evidence of skinning, disarticulation, or defleshing. The frequency and location of faunal elements that show evidence of marrow extraction or cut marks is analyzed to estimate patterns of butchery and transportation. Data is gathered by reanalyzing previously identified as well as unidentified faunal remains from the Fewkes site, and photographing cut marks for study.

Parrish, Ryan M. (*University of Memphis*)

NON-DESTRUCTIVE PROVENANCE ANALYSIS OF A MISSISSIPPIAN SWORD FRAGMENT FROM THE LINK FARM SITE. Reflectance spectroscopy potentially provides a fast, non-destructive, and accurate technique to source chert artifacts back to their geologic place of origin and subsequent prehistoric procurement location. The current study utilizes Fourier Transform Infrared (FTIR) reflectance spectroscopy to build a chert spectral database of Dover and Fort Payne chert in order to: (1) test the techniques ability to differentiate the two visually similar material types; and (2) determine the geologic source of a Mississippian "sword" fragment recovered during excavations at the Link Farm site (40HS6). Though the scope of the pilot study is limited, results highlight the fast, non-destructive, accurate capabilities of reflectance spectroscopy and the limitations of visual chert identification.

Rigney, Phyllis S. (*Brockington and Associates, Inc.*)

THE FUNCTION OF FLAKE TOOLS FROM THE TOWNSEND PROJECT (SITES 40BT89, 40BT90, 40BT91, 40BT94), BLOUNT COUNTY, TENNESSEE. The purpose of this study was to examine flake tools from Archaic, Woodland, Mississippian, and Cherokee components at the Townsend project (sites 40BT89, 40BT90, 40BT91, and 40BT94) in Blount County, Tennessee and to determine the function(s) of these flake tools and whether these tools were used expediently. Also, any changes that may have occurred through time in the function of these tools were assessed, as well as how these changes might apply to surrounding archaeological sites. A stepwise microwear examination was conducted, which included three levels of analysis: macroscopic examination, stereoscopic examination, and incident light examination. All 1,723 flake tools were examined macroscopically, 883 flake tools were examined stereoscopically, and only 82 flake tools were examined using the incident light microscopic examination. It was found that the flake tools from the Townsend project can be divided into two different modes of flake tools, selected tools and shaped tools.

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NATIONAL REGISTER TESTING AT THE COATS-HINES SITE, WILLIAMSON COUNTY, TENNESSEE. In 2010, TDOA archaeologists were awarded a Historic Preservation Grant through the Tennessee Historical Commission and the National Parks Service to conduct archaeological testing at the Coats-Hines site. Previous excavations at Coats-Hines have recovered Pleistocene faunal material and documented rare evidence of human-mastodon predation. Archaeological testing was conducted in October with the aid of Dr. Tanya Peres, Zooarchaeology students from MTSU, and Texas A&M doctoral candidate Jesse Tune. The excavations identified an intact Pleistocene bone bed approximately 10 feet below ground surface, and have generated data to support nomination of the site for inclusion in the National Register of Historic Places.