



# **1st Annual Oklahoma Archaeology Conference**

**October 21-22, 2016  
Norman, Oklahoma**



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## **Acknowledgements**

**Conference Host:** The Oklahoma Public Archaeology Network, a program of the University of Oklahoma

**Conference Organizer:** Dr. Bonnie Pitblado

**Program Organizer:** Dr. Bonnie Pitblado

**Conference Committee:** Meghan Dudley, Allison Douglas, Jaden Edwards, Maddie Currie

**Support Services:** Kristin Trammell and OU Conference Services; Laura Boekennoogen and the Sam Noble Oklahoma Museum of Natural History; and Sarah Sheely and Embassy Suites

## **Conference Sponsors**

We would like to thank those who have generously sponsored the 1<sup>st</sup> Annual Oklahoma Archaeology Conference.

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## Conference Schedule

### *Friday, October 21*

- 2 PM Registration Opens (Conference Room A, Thurman J. White Forum Building)
- 3-5 PM \*Professional Development Workshop: Introduction to Photogrammetry (Conference Room A, Thurman J. White Forum Building)
- 6-8 PM Opening Reception and Poster Session (W. R. Howell Pleistocene Plaza, Sam Noble Oklahoma Museum of Natural History)

### *Saturday, October 22*

- 8 AM Registration Opens (Conference Room A, Thurman J. White Forum Building)
- 8 – 8:30 AM Oklahoma Anthropological Society Meeting (Conference Room A, Thurman J. White Forum Building) – For OAS Board Members Only
- 9 AM – 12:30 PM Symposia about the Past and Present of Oklahoma Archaeology and Heritage, with a morning break (Conference Room A, Thurman J. White Forum Building)
- 12:30 – 2 PM Lunch Break
- 2 – 4:30 PM Forum about the Future of Oklahoma Archaeology and Heritage, with an afternoon break (Conference Room A, Thurman J. White Forum Building)
- 6 – 8 PM \*Conference Banquet, with keynote speaker, Kary Stackelbeck (Oklahoma's State Archaeologist) (Conference Room A, Thurman J. White Forum Building)

\*Pre-registration required to attend.

## **Friday Afternoon Events**

*Conference Workshop: Introduction to Photogrammetry*

3 – 5 PM

Conference Room A, Thurman J. White Forum Building

Join us for an introduction to archaeological photogrammetry! This increasingly popular technique is used to digitally preserve sites, features, and artifacts by creating 3D models from digital photographs. Come give it a "shot!"

*Poster Session and Conference Mixer*

6 – 8 PM

W. R. Howell Pleistocene Plaza, Sam Noble Oklahoma Museum of Natural History

Enjoy poster presentations on current research in Oklahoma, the Great Plains, and the Southeast, while socializing friends and networking with colleagues.

## **Saturday Morning Session**

### *Symposium 1. The Past of Oklahoma Archaeology and Heritage*

9 – 10:15 AM

Conference Room A, Thurman J. White Forum Building

Prior to the passage of the National Historic Preservation Act in 1960, professional and avocational archaeologists worked hard to preserve the archaeological record and the cultural heritage in Oklahoma. The research conducted and the sites saved ensured that future generations could enjoy and learn from them. This session includes presentations highlighting the accomplishments of archaeologists and citizens working together as stewards and scientists of some of Oklahoma's premier archaeological and historical properties.

- 9:00 Bonnie Pitblado: *Introduction*
- 9:15 Chris Cojeen: *Energy-Related Archeological Consulting in Oklahoma from 1980 to the Present*
- 9:35 Susan Vehik: *Academic Archaeology and the National Historic Preservation Act (NHPA)*
- 9:55 Towana Spivey: *Journey to Medicine Bluffs—A Personal Perspective*

## **Morning Break**

### *Session 2. The Present of Oklahoma Archaeology and Heritage*

10:30 AM – 12:30 PM

Conference Room A, Thurman J. White Forum Building

The preservation of Oklahoma's past continues today as archaeologists continue to do active research on the Southern Plains and in the Southeast. Thanks to the National Historic Preservation Act, archaeology and preservation is now carried out by the various stakeholders in our state's archaeological community. Students conduct research for their degrees; academic professionals run projects to aid in their research; government and private professionals manage cultural resources from potential destruction from construction projects; and descendant communities protect their heritage from abuse and misuse. Each of these stakeholders plays an integral role in the preservation of Oklahoma's cultural resources and heritage, and in this session you will hear just how from several such stakeholders.

- 10:30 Matt Oliver: *Obsidian through Time and Space in Oklahoma*
- 10:50 Veronica Mraz, Briggs Buchanan, and Metin I. Eren: *Pressure versus Percussion: An Experimental and Statistical Assessment of How*

- Flakes are Identified in the Archaeological Record*
- 11:10 Brian N. Andrews: *Holocene Hunters of Eastern Oklahoma: Recent Investigations at Goodson Shelter*
- 11:30 Debra Baker: *NHPA and Museums Today*
- 11:50 Nicholas Beale, Scott Hammerstedt, and Amanda Regnier: *Geophysical Investigations at the Prehistoric Jewett Cemetery: Collaboration of Regulatory and Research Archaeologists*
- 12:10 Brittany McKane: *#NoDAPL: The Continuing Fight for Land, Heritage, and Indigeneity*

## **Saturday Afternoon Session**

*Forum. The Future of Oklahoma Archaeology and Heritage*

2 – 4:30 PM

Conference Room A, Thurman J. White Forum Building

The future of Oklahoma's cultural heritage rests in the hands of its archaeological community. This community consists of many diverse stakeholders, each with their own relationships with and goals for Oklahoma's past. Those stakeholders include (but are not limited to!) professional archaeologists, students, descendant communities, and avocational archaeologists. Together, we will address questions and concerns about carrying on the preservation of Oklahoma's past into the future.

Discussants:

Amanda Regnier (Oklahoma Archeological Survey)

Cate Wood (State Historic Preservation Office)

Dean Afrendas (Afrendas Archaeology, LLC)

Robert Cast (Choctaw Tribal Historic Preservation Office)

Gerald Franklin (Oklahoma Anthropological Society)

Bonnie Pitblado (University of Oklahoma)

**Afternoon Break**

## **Paper and Poster Abstracts**

**Andrews, Brian N.** (Rogers State University)

*Holocene Hunters of Eastern Oklahoma: Recent Investigations at Goodson Shelter (Symposium 2)*

Goodson Shelter is a small sandstone overhang located in Craig County, approximately 10 miles northeast of Chelsea, Oklahoma. The site was discovered by a local collector who brought it to our attention in 2012. Initial excavations indicated dense and deeply buried deposits, and thorough excavations were conducted from 2014 through 2016. Thirteen square meters were excavated to a depth of over 2 meters below surface, and a large assemblage of stone tools, debitage, bone tools, bone beads, faunal remains, and pottery was recovered. Radiocarbon and OSL dating indicates the site was first occupied approximately 6500 years, with a mostly continuous record of occupation until the late prehistoric. Analysis of the assemblage is underway, but preliminary results suggest the site served primarily as a short-term deer hunting and field processing locale over the course of its occupation.

**Baker, Debra** (Museum of the Great Plains)

*NHPA and Museums Today (Symposium 2)*

Since the National Historic Preservation Act was enacted in 1966, major amendments, primarily additions, to expand the effects of the law and to also clarify its implementation were addressed in 1980 and 1992. The 1992 amendments to the Act further strengthen the requirements that were laid out for Federal Agencies, but also set out specific benchmarks for Federal Agencies preservation programs that directly relate to Museums today. Where does the NHPA fit in to Museums today?

**Beale, Nicholas** (Oklahoma Department of Transportation), **Scott Hammerstedt** (Oklahoma Archeological Survey), and **Amanda Regnier** (Oklahoma Archeological Survey)

*Geophysical Investigations at the Prehistoric Jewett Cemetery: Collaboration of Regulatory and Research Archaeologists (Symposium 2)*

The Oklahoma Department of Transportation (ODOT) Cultural Resource Program is housed at the Oklahoma Archeological Survey (OAS), as part of an interagency agreement between ODOT and the University of Oklahoma. This arrangement provides opportunities for transportation archaeologists, research archaeologists, and graduate students with mutual interests to collaborate, while providing results in a timely, cost-effective manner. In addition, transportation projects involving significant archaeological resources can provide young archaeologists access to technology and real-world experience, while being overseen by trained professionals. Finally, this collaborative relationship ensures that both transportation and research needs are being met, as regulatory and

research needs are being met, as regulatory and research archaeologists have a mutual interest in the outcome. This unique relationship is highlighted on a recent project where ODOT engaged OAS research faculty to conduct non-invasive geophysical testing to investigate and assess the potential for buried features at the NRHP-listed Jewett site (34GD81). These investigations identified anomalies consistent with a prehistoric cemetery. ODOT was able to provide the results to designers in an effort to avoid intact deposits associated with the site.

**Cojeen, Chris** (Cojeen Archaeological Services, LLC)

*Energy-Related Archeological Consulting in Oklahoma from 1980 to the Present (Symposium 1)*

Management practices and changes both in fieldwork and in agency considerations over a 35-year period will be examined with specific examples of projects throughout the State of Oklahoma. Development of improved management practices and field techniques as time progressed allow for the review the evolution of energy industries and how we got to where are today. Knowledge of both local archeology and the industry needs are required to protect cultural resources and make a project successful both for the client and the reviewing agency.

**Deere, Bobi** (University of Tulsa)

*Southeastern Iconography: A Quantitative Study (Poster Session)*

The Southeastern Ceremonial Complex (SECC) is a phenomena in the American Southeast that is a religious complex that encompasses a large, heterogenous region that can be seen and studied through its iconography. A pilot study was conducted on SECC iconography from the Craig Mound at Spiro Mounds in Oklahoma in order to create a workable method for quantifying data about styles, themes and motifs used in recovered objects at that site. At total of 337 plates from Phillips and Brown's 1978 three-volume work entitled Pre-Columbian Shell Engravings from the Craig Mound at Spiro, Oklahoma were coded in a binary format. The Braden and Craig styles were compared and assessments made about their differences and similarities.

**Edwards, Jaden** (Oklahoma Public Archaeology Network and University of Oklahoma) and **Maddie Currie** (Oklahoma Public Archaeology Network and University of Oklahoma)

*Preserving Your Private Collection: Cataloging the Hartig Collection (Poster Session)*

Private collections are essential to archaeology, yet they are often overlooked due to many collections lacking documented information associated with the artifacts and the use of unconventional curation methods. These problems often decrease the likelihood of private collections being used in archaeological research. Using the lithic artifacts from Texas collected by avocational

archaeologist, David Hartig, we created a simple system to repackage and label the artifacts and to create a catalog of the sites with artifact descriptions, based on the notes that were provided by the collector. This system, which could be implemented by avocational archaeologists to ready their collections for professional use, made it possible for the artifacts to be documented and curated for the long-term.

**Luthman, Sarah** (University of Oklahoma), **Chris Dial** (University of Georgia), **Claire Lutrick** (University of Georgia), **Jim Rooks** (Georgia Gwinnett College), **Stefan Brannan** (University of Georgia), and **Jennifer Birch** (University of Georgia)

*Chasing the Palisade: Identifying Social Spaces at Singer-Moye (Poster Session)*

Magnetometry data and excavations in 2015 identified a linear palisade adjacent to the largest mound at Singer-Moye — a Mississippian Period site located in the Lower Chattahoochee River Valley. We excavated two separate units, the first to ascertain if the palisade continued beyond a clear termination point in the magnetometer data, and the second to determine if it intersected with a perpendicular palisade segment identified in earlier excavation. Our results indicate that the palisade extends beyond the magnetometer results but does not intersect with the second palisade, suggesting that the two palisades were not contemporaneous.

**Marcum-Heiman, Alesha** (University of Oklahoma), **Leland Bement** (University of Oklahoma), and **Kristen Carlson** (Augustana University)

*Reconstructing Ravenscroft (34BV198): Assessing the Benefits of 3D Digital Photogrammetry at a Late Paleoindian Bison Bonebed (Poster Session)*

Digital photogrammetry is increasingly utilized to document and digitally preserve archaeological sites, features, and artifacts. This poster presents the results of a case study geared toward increasing the temporal efficiency and spatial accuracy of archaeological site documentation procedures utilizing this method. Automated photogrammetry software was used to produce a 3D model of the 6 x 2 meter block excavated at Ravenscroft Paleoindian bison kill site (34BV198) in the summers of 2015 and 2016. The total time for completion and accuracy achieved from this model is compared with standard methods employed in the field. Additional benefits of the method within the context of bonebed excavation and materials analysis are presented.

**McKane, Brittany** (Muscogee [Creek] Nation, University of Oklahoma)

*#NoDAPL: The Continuing Fight for Land, Heritage, and Indigeneity (Symposium 2)*

I am a member of the Muscogee (Creek) Nation and a student attending the University of Oklahoma, majoring in anthropology. This semester, I am taking a class called "Principles of Archaeology," where we have learned about the



National Historic Preservation Act and its goal of protecting important archaeological sites and sacred places. Also this term, I have taken two trips to the Standing Rock Reservation to show my opposition to the Dakota Access Pipeline (DAPL) that we have all heard about in the news. I am concerned about the environmental impacts of the pipeline, but I am also disturbed by the violation of federal heritage laws written to protect places that are important to indigenous people. I will offer my viewpoint of the situation I have experienced first-hand, and I will also share a short video that shows Standing Rock Sioux Chairman Dave Archambault II answering a question I asked him about Section 106 and the DAPL project.

**Mraz, Veronica** (University of Tulsa), **Briggs Buchanan** (University of Tulsa), **Metin I. Eren** (Kent State University)

*Pressure versus Percussion: An Experimental and Statistical Assessment of How Flakes are Identified in the Archaeological Record (Symposium 2)*

The introduction of the pressure flaking technique is generally thought to have improved the ability of flintknappers producing bifaces to make smaller tools and to rejuvenate dull edges with minimal loss of stone. It signifies an important innovation in that accuracy of flake removal is maximized. Identifying stone tool production techniques in the archaeological record can inform on prehistoric economy, time budgets, shared cultural practices, and the spatiotemporal occurrence of technological innovations and adaptations. This research shows that pressure flakes are on average lighter, shorter, narrower, and thicker than soft hammer percussion flakes. Discriminant analyses indicate that pressure flakes can be correctly classified at a rate of 70 percent in a mixed sample and the findings validate the assumption that pressure flakes are less variable in form compared to soft hammer percussion flakes. Based on our results we suggest quantitatively reevaluating the presence of pressure flaking in the archaeological record.

### **Oklahoma Department of Transportation Cultural Resource Program**

#### *The 101 Ranch Project (Poster Session)*

The historic 101 Ranch is a National Register of Historic Places (NRHP) listed Historic District and National Historic Landmark in Kay County, Oklahoma. The remains of the headquarters area, consisting mostly of foundations is maintained and restored by the 101 Ranch Old Timers Association (OTA). In 2008, ODOT proposed replacing the 1924 SH-56 truss bridge over the Salt Fork of the Arkansas River adjacent to the headquarters area. Though the project was not directly impacting the remains of the headquarters, the ODOT Cultural Resources Program determined that the 1924 truss bridge was a contributing element to the NRHP listed District and that its removal would adversely affect the 101 Ranch Historic District.

As part of the mitigation for the adverse effect, the ODOT Cultural

Resources Program in collaboration with the 101 Ranch Old Timers Association conducted a study of the headquarters area which, due to the loss of most of the buildings over time had become an archeological site. The study included an archeological survey of the headquarters area to document all remaining surface features as well as a geophysical survey to locate any subsurface features that may remain. The study also conducted archival research regarding the early 20th century development of the ranch and document when and where buildings were constructed. In addition, architectural historians documented the standing structures and provided the 101 Ranch OTA with guidance on the preservation and restoration of the remaining structures and above ground foundations.

**Oliver, Matt** (University of Oklahoma)

*Obsidian through Time and Space in Oklahoma (Symposium 2)*

Obsidian is not native to Oklahoma and the nearest source is in New Mexico, over 300 miles away. While rare, obsidian still appears in the archaeological record in Oklahoma from the Paleoindian period onward. Geochemical sourcing of obsidian artifacts reveals what lava flow the material originated from, allowing researchers to approach social interaction through the movement of artifacts. Research into Oklahoma's obsidian has been limited, with less than 25% of sites having obsidian being sourced. Data already available shows differences in obsidian sources with much of the obsidian previously studied originating from northern sources in Yellowstone, as well as closer sources in New Mexico. With more data I hope to clarify these patterns and reveal new ones, if any. Temporal and spatial differences in obsidian functionality and source will illuminate large scale social interaction and exchange both within the Southern Plains and between adjacent regions.

**Perkins, Stephen** (Oklahoma State University), **Richard R. Drass** (Oklahoma Archeological Survey), **Susan Vehik** (University of Oklahoma), and **Sarah Trabert** (University of Oklahoma)

*Current Research at the Deer Creek Site, An Early Eighteenth-Century Fortified Wichita Village (Poster Session)*

Deer Creek (34KA3) is a National Landmark site and the least disturbed of only a few known early historic Wichita fortified villages in the central and southern Plains. Since the 1970s when the Corps of Engineers acquired Deer Creek, it has remained fallow eventually resulting in a change of ground cover from a native grass prairie to a forest with dense brush understory. A cooperative agreement between the Corps of Engineers, the Oklahoma Archeological Survey, Oklahoma State University, the University of Oklahoma, the Oklahoma Anthropological Society, and the Wichita Tribe has resulted in recent preservation efforts that included safely removing trees and brush from a portion of the site with subsequent remote sensing and test excavations to evaluate the features and cultural deposits at Deer Creek. This paper presents preliminary results from this

project which was centered on the fortification including ditches, an entryway, and trash mound.

**Phillips, Mel** (Oklahoma Anthropological Society)

*Little Skin Bayou Survey: Current Research Status (Poster Session)*

Little Skin Bayou is located in the southeast corner of the Boston Mountains of eastern Oklahoma. It starts as a seep spring atop Jeremiah Mountain and runs approximately eleven miles south to the Arkansas River flood plain. Because the Oklahoma Archeological Survey had no recorded sites for the Little Skin Bayou drainage, I could not tell who was there, what they were doing or if they had any connection with the Spiro people just across the Arkansas River. I decided to approach this problem by performing a pedestrian survey on both sides of the entire stream. I began in 2012, spending a half day or more each month and finished the survey in 2015. I recorded 103 sites. I thought I might find pottery, but I found none. Most of the sites I recorded were likely hunter/gatherer camps. I found that the few sites that were used repeatedly occurred near the transition zone from the Arkansas River floodplain to edge of the Boston Mountains. I have identified thirty-five point types dating from the Early Archaic through the Late Woodland. My research has progressed from a survey to archeological testing by the Oklahoma and Arkansas Archeological Surveys and has helped shed some new light on 10,000 years of Oklahoma prehistory.

**Spivey, Towana**

*Journey to Medicine Bluffs—A Personal Perspective (Symposium 1)*

This presentation focuses on a bureaucratic and cultural conflict regarding the preservation of a major landmark on the National Register of Historical Places in Comanche County, OK in 2008-09. The sacred Medicine Bluffs are a major historical and cultural site on the Fort Sill Military Reservation administered by the US Army. When plans were improperly developed by the army for several construction projects within the affected bounds of the site, the ensuing efforts to protect it from desecration led to significant legal and cultural conflicts between the government and Native American tribes including archeological and museum personnel. The failures in consultation led to some unusual legal and cultural activities straight out of the 19th century ending with a successful conclusion. The primary participant, Towana Spivey is a retired cultural historian, archeologist and preservationist with a unique perspective on this subject.

**Vehik, Susan** (University of Oklahoma)

*Academic Archaeology and the National Historic Preservation Act (NHPA) (Symposium 1)*

I started college in the fall of 1965. NHPA came into force in 1966 when I was a sophomore and had begun taking archaeology classes. Consequently, I have no direct experience with academic archaeology prior to NHPA. While I

took numerous archaeology classes during my undergraduate career I do not remember any discussion of NHPA until I was in graduate school. As my Master's thesis and Ph.D dissertation were on European prehistory, NHPA was not part of class work. I then worked in South America. Thus, until I came to OU my experience with NHPA was indirect, mostly helping my late husband with contract archaeological surveys and excavation analyses and write-ups in Wisconsin and North Dakota. My direct experience with NHPA therefore dates over a decade after the law was enacted-when I came to OU in 1977. My discussion will address how academic archaeology may have changed with enactment of NHPA and how NHPA impacted my archaeological activity.

**Walters, Michael** (University of Oklahoma)

*Shaft Tombs in the Caddo World (Poster Session)*

Shaft tombs are an interesting McCurtain Phase (1300-1700 ACE) mortuary ritual in the Caddo region. The tombs are dug into the center of preexisting mounds and around 8-10 individuals are supine, primarily interred, and facing the same direction. The shaft tombs could have been constructed as a revitalization ceremony after a period of abandonment from a site. Alternatively, the tombs could have functioned as a termination event at the end of an occupation for these sites. However, the purpose of the tombs are unclear. The goal of this project is to compile data from all shaft tombs in the Caddo region to test hypotheses about the place-making function of shaft tombs. Variables such as the date the shaft tomb was constructed and periods of settlement will help to address this question. Other variables (age, sex, artifacts, etc.) will be used for further inquiries. Data will be gathered from all known published sources.

**Younger-Mertz, Stewart Bragg** (University of Oklahoma), **Quentin Lemasson** (C2RMF-Centre de recherche et de restauration des musées de France), **Laurent Pichon** (C2RMF-Centre de recherche et de restauration des musées de France), **Brice Moignard** (C2RMF-Centre de recherche et de restauration des musées de France), **Lee Bement** (Oklahoma Archeological Survey), **Robert Brooks** (Oklahoma Archeological Survey), **Amanda Regnier** (Oklahoma Archeological Survey), **Susan Vehik** (University of Oklahoma), **Richard Drass** (Oklahoma Archeological Survey), **Claire Pacheco** (C2RMF-Centre de recherche et de restauration des musées de France)

*Evaluating the Distribution of Fluorine in Siliceous Archaeological Materials using  $\mu$ -PIGE: A Contribution to the Development of Fluorine Diffusion Dating (Poster Session)*

The purpose of this work is to further develop the method of Fluorine Diffusion Dating (FDD) for determining the age of siliceous archaeological materials. Siliceous rocks, such as chert and flint, are the most abundant materials in the archaeological record. Archaeologists generally rely on stylistic and regional typologies to determine the age of chert artifacts, typically without the

aid of instrumental methods of analysis. Thermoluminescence dating is occasionally used to determine the age of stone artifacts, however, this method is only applicable to artifacts that were heat-treated in the past. There are no universally applicable instrumental methods for determining the age of stone artifacts presently used in standard archaeological practice. Herein, the distribution of fluorine has been evaluated for 20 chert artifacts using elemental fluorine maps generated using Particle Induced Gamma-ray Emission Spectrometry using the AGLAE nuclear microprobe. The artifacts are associated with multiple time periods, ranging from 10,500 B.C. to the present, thereby representing the full range of human occupation in the state of Oklahoma. The results demonstrate that fluorine is homogenously distributed across individual artifacts, thereby providing additional support for the validity of Fluorine Diffusion Dating. The results warrant continued research for the development of Fluorine Diffusion Dating.

## Notes



