

Arkansas Archeological Survey

Annual Report for 2017–2018



A Division of the University of Arkansas System

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Contents

Introduction.....	1
Highlights for 2017–2018.....	2

Reports of the Survey Research Stations

Toltec Mounds Archeological State Park.....	20
Parkin Archeological State Park.....	26
University of Arkansas at Fayetteville.....	32
University of Arkansas at Fort Smith.....	40
Winthrop Rockefeller Institute.....	45
University of Arkansas at Pine Bluff.....	51
University of Arkansas at Monticello	56
Henderson State University.....	61
Southern Arkansas University.....	67
Arkansas State University.....	72

Reports of the Coordinating Office, Fayetteville

The Survey Director	82
The State Archeologist.....	84
The Survey Registrar	87
Sponsored Research Program	91
Computer Services and Archaeogeophysical Applications	98
Publications Program.....	108
Photographic and Graphic Arts Support.....	111
Educational Outreach.....	112
Partners in Preservation	116
Accounting & Administrative Staff	122
How to Contact the Arkansas Archeological Survey	123
Appendix 1. Reports & Publications by ARAS Staff, 2017–2018	124
Appendix 2. Presented Papers, Symposia & Workshops, 2017–2018.....	127
Photo Identifications & Credits.....	130

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University of Arkansas System

Arkansas Archeological Survey

Introduction

The Arkansas Archeological Survey (ARAS) is a part of the University of Arkansas System. Our mission is to study and protect archeological sites in Arkansas, to preserve and manage archeological information and collections, and to communicate what we learn to the people of Arkansas. Cooperative agreements with seven state university campuses, two state parks, and the UA System's Winthrop Rockefeller Institute enable scholars at research stations around the state to carry out this mission. The Survey has been a model for statewide archeological programs in the United States and around the world.

Our coordinating office (CO) in Fayetteville is the ARAS administrative body. The Director, the State Archeologist, the ARAS registrar, the fiscal office, publications staff, and outreach programs operate from the CO. The registrar maintains a central archive of all archeological site records for the state. The coordinating office building also contains the University of Arkansas Museum Collections Facility. The Survey acts as a repository for archeological collections originating from state and federally funded projects in Arkansas, our own research, private consulting firms, and donations. Also at the coordinating office are our sponsored research program (SRP) and computer services program (CSP) which support themselves in part through grants, contracts, and cost-share agreements with local, state, and federal agencies. The CSP maintains several websites with educational information on Arkansas archeology and frequently updated stories about our projects. The CSP also supplies research support through our archaeogeophysical program, employing the latest technologies for nondestructive detection of subsurface features at archeological sites.

Professional archeologists at our research stations teach college courses in anthropology and assist their university museums, or develop materials for public interpretation at the state parks, in addition to conducting basic research in their areas. Survey archeologists help to increase our knowledge of the past and its relationship to the present by working closely with local, state, and federal government agencies, American Indian tribes, college students, school teachers and K-12 students, tourists, fellow scholars, land owners and managers, amateur archeologists, and all Arkansas residents interested in archeology, prehistory, and the early history of the state.

At the Survey, science and service go hand-in-hand.

George Sabo III, Ph.D.
Director

Highlights for the Year



Scientific Achievements & Archeological Mission 2017–2018

- Survey staff authored or coauthored **47 print or digital publications and reports**, and presented **55 papers or posters at meetings and conferences** in 2017–2018.
- The Survey's **AMASDA database (Automated Management of Archeological Site Data in Arkansas)** is **one of the oldest and best computerized site file systems in the country**. Our computer services program and registrar's office personnel are constantly working to expand and upgrade the AMASDA system to add new functionality. The system is now available online (password protected) for qualified researchers. Contractors may subscribe per project or for an annual fee.
 - **527 new archeological sites** were recorded, bringing the total number of sites in Arkansas site files to **49,306**.
 - **135 new archeological projects** were entered into the database, bringing the projects total to **7206**.
- The Survey registrar facilitated **2100 requests for information** from the Arkansas site files by students, researchers, and project managers. This included **19 graduate student and academic research** projects. We assisted **local, state, and federal entities**, six **American Indian Tribes**, and **46 private firms** conducting projects in Arkansas.
- We conducted projects supported with **new funds generated by grants and cost-share agreements totaling \$107,040**.
- **Volunteer participation** in our projects, totaling **14,146 hours**, continued to show a high level of interest in archeology.
- **Digital Data Collection Initiative.** A DDCI working group within ARAS led by Carl Drexler (ARAS-SAU) developed an "action plan" to transition us from paper records filled out by hand to use of a digital platform for creating all of the records collected during fieldwork and uploading those records from the field to our servers. This involved making digital versions of the many forms we use (excavation unit level records, feature forms, profile forms, Field Serial Number log sheets, photo record sheets, special sample forms, etc.), selecting associated hardware platforms (weatherized tablets for use in the field), and developing software for uploading the data. Other members of the group were Elizabeth Horton (ARAS-TMRS), Jamie Brandon (ARAS-UAF), Emily Beahm (ARAS-WRI), John Samuelson (ARAS-CSP), and Teka McGlothlin (ARAS-Registrar).
 - Team members worked to create an interactive fieldwork database using iPads for data entry. The group determined that FileMaker and iPads were the best options for ARAS. With input from the group, Samuelson wrote a proposal to the ARAS Director for internal funding for a pilot project. This was approved. A Mac server was created to manage the ARAS iPads and the FileMaker software was installed on the archeology.uark.edu server. The team worked together to create a database and interface for the fieldwork data. The system was tested by Carl Drexler in the field at Pea Ridge during summer 2018, with positive results. The team plans to expand the use of this system for lab data entry next year.

- Our **publications program** is thriving with a new Research Series volume published in 2017, another scheduled for 2018, two Popular Series volumes in production, and two more accepted for publication.
 - A major development took place this year for ARAS-Publications with the long-awaited implementation of an **online ordering system** facilitated by the University of Arkansas. Patrons may now order books from a web-based storefront that is linked directly from the publications webpages on our website. Deborah Weddle (ARAS-CSP) and Rachel Whitman (Assistant Director for Financial Affairs) worked closely with Matt Rolniak and others in the University's Financial Affairs Technology Group to make this happen. Deborah Sabo (ARAS-Publications) provided abstracts and images for the eCommerce ordering webpage.
- In conjunction with our 50th year in 2017, we embarked on a **major initiative to create a systematic archive of all our accumulated project documentation, including digitization of paper records for long-term preservation**. We also started to inventory and organize our collections at the coordinating office and all ten research stations to ensure that records are complete and storage is according to modern curatorial standards. Kathleen Cande has been leading this effort from the coordinating office, while Elizabeth Horton oversaw a complete inventory and reorganization of three decades' worth of records at the Toltec Mounds research station.
 - This year Cande reviewed and inventoried a large collection of published, field, and archival maps stored at the ARAS-ASU research station, creating an Excel spreadsheet, a storage system in acid-free portfolios, and seeing that all maps not previously digitized were scanned at the coordinating office.
 - Cande also undertook a reorganization of ARAS-SRP administrative records to improve tracking and accessibility and to update information that is required for the ARAS registrar's office files.

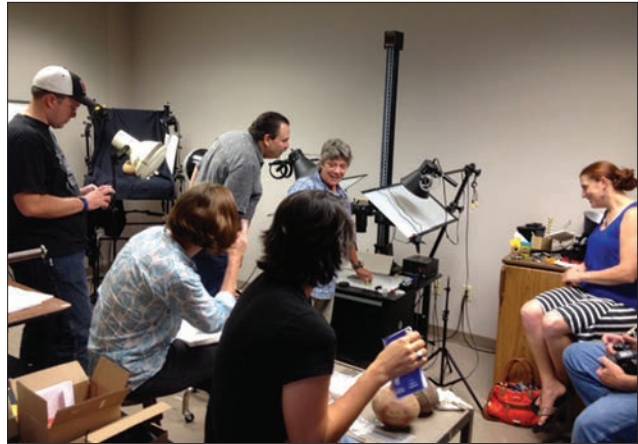
Staff News

At the end of 2017 ARAS-UAF Research Station Assistant **Jerry Hilliard retired after 38 years of service**. Hilliard had been with the Survey since 1979, and he made an incredible impact on the organization as both archeologist and mentor. Hilliard originally hails from North Carolina. After receiving his B.A. in anthropology from East Carolina University, he moved half-way across the country to get his M.A. from the University of Arkansas. Hilliard began working for the Arkansas Archeological Survey almost immediately—first as an assistant compliance officer (1979–1983), then as the Survey Registrar (1983–1994), and finally, with the UAF research station (1994–2017). He was also an asset to the Arkansas Archeological Society. He helped found the Koko-ci Chapter of the Arkansas Archeological Society in the mid-1990s, often taught mapping and site survey seminars at the summer training program, and coordinated the Society's certification program for more than a decade. Listing all the contributions that Hilliard made to the Survey (and to Arkansas archeology in general) would be impossible here, but some of his standout projects and publications include: his thesis on nut utilization in Ozark bluff shelters; excavations at Mount Comfort Church; reanalyzing bluff shelter collections from Craddock, Brown Bluff, and the Narrows; excavations at the Narrows; locating the Confederate encampment at Cross Hollows; excavations at Van Winkle's Mill; analysis of collections from the Spradley Field site; and excavations at Prairie Grove Battlefield. He was a huge asset to other projects such as Dr. George Sabo's NEH-funded Arkansas rock art and Carden Bottoms projects.



Jerry Hilliard at The Narrows rock art site with Environmental Dynamics Program Ph.D. student Kaelin Groom

M. Jane Kellett retired at the end of 2017 after 40 years of service with ARAS. Jane's role as graphic artist and photographer has been central to the work of archeology in the state, providing photographic documentation of artifacts and other visual aids to interpret sites and to illustrate research for publications, exhibits, educational products, and presentations. Jane also created many Archeology Month (or Archeology Week) posters, t-shirt designs, and other graphics used by the Arkansas Archeological Society over the years, photographed many Survey and Society events, and taught photography seminars at the training programs. Jane's work to organize and maintain the Survey's photo archive materially assists the publications program, documentation, all research, and innumerable requests from colleagues and the public. The Survey undertook a search for a new graphic artist during 2018, and hired **Rachel Tebbetts** (BFA, University of Arkansas), to begin work in July 2018.



Jane Kellett (center) teaching a digital photography workshop to ARAS staff in 2014.

Jared Pebworth and Michael Evans were promoted to Research Associate and became the “new” Station Assistants at the UAF research station in January 2018. Mike and Jared are no strangers as they have worked for the Arkansas Archeological Survey since 1991. For almost 30 years, as an integral part of the Survey's sponsored research program, Pebworth and Evans have done archeology in virtually every corner of the state and in parts of Louisiana, Mississippi, and Oklahoma. Both are well versed in field and laboratory logistics, historic and prehistoric material culture, advanced mapping technologies, metal artifact conservation, and the reproduction of traditional technologies. Even before they came to work at the UAF research station, Evans and Pebworth have collaborated on many projects with the UAF station—recently this included fieldwork at Pea Ridge National Military Park, Breckenridge Shelter, and Cane Hill, as well as work with older collections from Saltpeter Cave.



Jared Pebworth at Pea Ridge National Military Park.



Michael Evans mapping during an initial site visit to a bluff shelter in Washington County.

Nancy Smith was promoted to Fiscal Support Specialist in November 2017. She began at ARAS in 2014 as an Administrative Assistant. In her new position, Ms. Smith works closely with Assistant Director for Fiscal Affairs, Rachel Whitman, performing a variety of fiscal related tasks with efficiency, and helping to keep the organization running smoothly.

Robert Scott (ARAS-UAPB station assistant) was awarded his Ph.D. in Anthropology from Southern Illinois University – Carbondale in June 2018.

Melissa Zabecki (Ph.D., University of Arkansas) joined the Survey as our new **Educational Outreach Coordinator** in January 2018. Mel received her B.A. in anthropology from Mount Holyoke College in Western Massachusetts after spending her Junior Year Abroad at the American University in Cairo, Egypt. She then interned for a year in Cairo before returning to the U.S. to study bioarcheology at the University of Arkansas, Fayetteville, receiving her M.A. in anthropology in 2001. For a few years, she worked as an archeologist and lab director at the University of Kentucky and then returned to the University of Arkansas to enter the doctoral program in anthropology. After earning her Ph.D. in 2009, she taught as an adjunct at both UAF and UAFS. In 2012, Mel moved to eastern Arkansas to become a park interpreter at Parkin Archeological State Park, where she gained ample experience in sharing archeology with the public. Over six years as park interpreter, she interacted with thousands of school kids, as well as many adult visitors, and produced archeological and historic programs for all ages and walks of life.



Archeological Projects Around Arkansas 2017–2018



- The Survey is developing an organizational focus on **the study of early agriculture in Arkansas and the Southeast**, and public education about this topic.
 - Our ***Gathering, Gardening, and Agriculture: Plant-based Foodways in the Southeastern United States*** 5th grade social sciences curriculum is available free of charge online <https://archeology.uark.edu/gga/>.
 - The **Plum Bayou Garden** at Toltec Mounds Archeological State Park is the first such project to celebrate and teach about the indigenous plants that were domesticated locally and cultivated by Native people in the eastern United States. It is in its second full year and is a permanent feature at the park.
 - **The Mississippian Garden** at Parkin Archeological State Park focuses on the “three sisters” crops (corn, beans, squash) imported from Central America that formed dietary staples of the later Mississippian cultures that dominated pre-Columbian economies at the time of European arrival, and that contributed much to the Columbian Exchange.
 - The ARAS-WRI station has both **Mississippian and Woodland Native American Teaching Gardens**, and offers visitors a chance to engage in gardening activities, including experimenting with a replicated set of implements.

- This year **Mel Zabecki (Educational Outreach Coordinator)** joined with **Emily Beahm (ARAS-WRI)** to guide a group of **Faulkner County homeschoolers** as they worked through the GGA curriculum at the WRI research station, including extensive hands-on activity in the gardens. Read more on pp. 48, 113.
- Meanwhile, **Elizabeth Horton (ARAS-Toltec)**, who took her garden-based research to the journal *Nature* in a 2017 co-authored article “Growing the Lost Crops of Eastern North America’s Original Agricultural System,” joined a multi-disciplinary, multi-year project funded by the Smithsonian’s Core Sciences program that will **study the role of genetic plasticity on the domestication of three of these plants**: sumpweed, erect knotweed, and goosefoot. Horton will be a collaborator in the study, which is awarded to Logan Kistler (National Museum of Natural History) and Natalie Mueller (Cornell University). Read more on pp. 21–23.



- The Survey has partnered with **National Park Service, Midwest Archeological Center**, to conduct archeological inventory at **Pea Ridge National Military Park**. This is a four-year project. In 2016 geophysical survey, Geographical Information System (GIS) spatial analysis, and artifact collection took place at Ruddick’s Field Civil War Battlefield within the park. In 2017, geophysical survey, GIS, and excavations at Leetown, a Civil War era civilian hamlet, were carried out in conjunction with a University of Arkansas archeological field school, and Survey staff also participated as instructors in a NPS-sponsored workshop prior to the field school. In 2018 the work continued with another University of Arkansas archeological field school, coinciding with this year’s jointly sponsored Survey and Society Training Program (see pp. 34–35, 68, 101–102) at Leetown, and at domestic sites that figured in the battlefield landscape. Staff from across the Survey have been involved in the NPS-supported Pea Ridge project, with **Jamie Brandon, Carl Drexler, and Jami Lockhart** as principal investigators.
- **Tim Mulvihill (ARAS-UAFS)** continued follow-up work on the Mulberry River project that began with archeological explorations at two Woodland period sites in Franklin County in a partnership with the Forest Service and Arkansas Archeological Society volunteers. Additional excavations were carried out at 3FR46, where a unique prehistoric agricultural storage feature had been identified in the previous field season. Read more on p. 41.
- At the **ARAS-UAPB research station**, several projects relate to the Osotouy Unit of Arkansas Post National Memorial. Flotation samples were sorted by UAPB student Jamaal Courtney as part of an Independent Study. **John House** gave a paper at the Southeastern Archaeological Conference on the recent work. See pp. 52–53.
- **Jodi Barnes (ARAS-UAM)** has continued to work at **Hollywood Plantation**, developing a focus on **the archeology of health and foodways**, especially representing **the lives of women**, both the wife of the plantation family and the enslaved women who worked in its kitchen and cared for their owners’ children. Read more on pp. 57, 58–59.
- **Mary Beth Trubitt and Chelsea Cinotto (ARAS-HSU)** advanced their research on **Caddo lifeways in the Saline and Ouachita river valleys**. With accumulated evidence from past excavations at several sites, a picture of how these ancestral Caddo communities used the land and resources is being built. Conference presentations, journal articles, and a book manu-

script bring the results to colleagues. Meanwhile, the upland aspect of Ouachita area land use is explored through the station's novaculite tool production and exchange research project, presented to the public on our website. Trubitt has written a manuscript on "Ouachita Mountains Archeology" for the ARAS Popular Series, and co-authored a volume on the "Archeology of Quarry Landscapes" (in preparation) for Oxbow Books. Read more on pp. 62–64.

- With an emphasis on Civil War era sites, and some homefront sites of the World War I and World War II years, **conflict archeology** is another emerging research focus within ARAS. **Carl Drexler (ARAS-SAU)** has a long-term research interest in this topic and experience in battlefield archeology, and has been exploring a number of Civil War related sites in southwest Arkansas (Elkins' Ferry, Dooley's Ferry, Wallace's Ferry). This year Drexler became involved in efforts to establish safe procedures for dealing with unexploded ordnance unearthed at archeological contexts or during development. Often these objects can be handled in a way to gain information from them, rather than treated as imminent hazards to be destroyed. Drexler also took on **field investigations at Prairie D'Ane battlefield in Nevada County**, and has been involved as a principal investigator in the Pea Ridge Battlefield Landscape project. Read more on p. 68.
- **Juliet Morrow (ARAS-ASU)**, with research station assistants Brandy Dacus and Sarah Stuckey, continued to work on Morrow's project to create a comprehensive **database of Paleoindian fluted points from Arkansas**. This included visits to collections, adding more specimens, and investigating questions of typology. A distribution map of known find locations in Arkansas has been generated based on site file data. Also relevant to Paleoindian research in the state was a revisit to the King Mastodon project to explore pathologies on the animal's skull. Another topic of research at the ARAS-ASU station has been **paleoseismology at the Old Town Ridge site**, a later prehistoric fortified village in Craighead County where stratigraphy may reveal features caused by ancient earthquakes. Read more about all these projects on pp. 73–75, 76–78.

Contributions to Higher Education in Arkansas 2017–2018

- **George Sabo III**, Survey Director since 2013 and **Professor of Anthropology**, serves as **Co-Director of the Environmental Dynamics Interdisciplinary Ph.D. Program**, which is part of The Graduate School and International Education at the University of Arkansas.
- Ten Survey archeologists held **research faculty titles in the Department of Anthropology** at the University of Arkansas in 2017–18: Jodi Barnes, Emily Beahm, Jamie Brandon, Carl Drexler, Ann Early, Elizabeth Horton, John House, Jami Lockhart, Jeffrey Mitchem, Juliet Morrow, and Mary Beth Trubitt.
- Survey archeologists **taught 22 courses for 293 students enrolled at 9 university campuses** in Arkansas: East Arkansas Community College, UAF, UAFS, UAPB, UAM, UALR, ASU, HSU, SAU, and Hendrix College. This included **two online courses** for University of Arkansas and Arkansas State University Midsouth.



UAFS Introduction to Archeology students learning the process of flintknapping (ARAS-UAFS DSC_1963, Digital Photo by Tim Mulvihill).

- Courses taught by Survey archeologists fulfill **basic education requirements** and contribute to **several undergraduate majors and graduate degree programs** at Arkansas universities, including Anthropology, History, Geosciences, and Environmental Dynamics at UAF; Heritage Studies at ASU; Historic Interpretation Program at UAFS; and African Studies at UAPB.
- Survey archeologists contributed numerous **guest lectures, demonstrations of geophysical technologies, field and lab instruction including mapping, ethnobotanical, and other specialized processing, and tours of facilities** to college and university students in Arkansas.
- Elizabeth Horton (station archeologist at Toltec Mounds) participated with Dr. Krista Lewis (UALR) in the **Land of Frankincense Archaeological Project at Al Baleed**, a UNESCO Heritage site in Oman.
- Survey archeologists served on **25 thesis or dissertation committee positions (member or chair) for UAF graduate students** in Anthropology and Environmental Dynamics, **1 committee for a UALR student's M.A. degree**, and **1 Ph.D. committee for an out-of-state institution** (Southern Illinois University at Carbondale).
 - In addition Survey archeologists served on **3 undergraduate Honors committees** for students studying anthropology at UAF.
- Survey archeologists at all research stations and the coordinating office provided opportunities for **hands-on research experience** in archeological fieldwork and laboratory analysis for undergraduate and graduate students at host campuses.
- The Survey provided **employment to students at UAF, UAFS, and UAPB**.
- **Additional service to Arkansas college and university campuses** included:
 - participation in course and program development for host departments
 - membership on campus and departmental committees, curatorial functions and exhibit development for campus museums and libraries
 - assistance with historic properties and artifact collections owned or managed by the universities: the Joint Educational Consortium's Hodges Collection (HSU); Lakeport Plantation (ASU); Drennen-Scott Historic Site (UAFS); Willhaf House (UAFS); Camp Monticello (UAM); the Taylor House/Hollywood Plantation (UAM); development of SAU Museum; ongoing UA Museum Collections research and on-campus exhibit development (UAF); the Gregoire collections and Arkansas Tech Museum (ATU)

Graduate Student Research

The Arkansas Archeological Survey supports graduate students working on internship, thesis, and dissertation projects both at the coordinating office and at our research stations. Support is provided through employment when available and for assistantships paid out of our base funding and through grants or other special project funds. We also work closely with the Anthropology Department and the J. William Fulbright College of Arts and Sciences at the University of Arkansas to host students who receive support through the Hester A. Davis Internship in Public Archeology and the Charles R. McGimsey III Endowment for Cultural Resource Management. Our graduate students work on a wide variety of research, preservation, and educational initiatives and thus make valuable contributions to our mission within the University of Arkansas System.

Graduate Student Research & the Coordinating Office

- **Jessica Cogburn** is a Ph.D. student in the Anthropology Department at the University of Arkansas Fayetteville, where she is supported by a Survey graduate assistantship. She has been working on a database for the State Historic Preservation Office regarding archeological site eligibility for the National Register of Historic Places. Her dissertation research is on late prehistoric and protohistoric sites in the Central Arkansas River Valley, primarily focusing on the Isgrig site (3PU15), which is located south of Little Rock. Jessica Cogburn's dissertation advisor is Dr. John House.
- **Michelle Rathgaber** is a Ph.D. student in the Environmental Dynamics program at the University of Arkansas Fayetteville. Her research focuses on the New Madrid seismic zone in NE Arkansas/SE Missouri and how earthquakes may have affected life in the Middle-Late Mississippian cultural period (around AD 1200s–1500s). She will be using archeological excavations at two sites (Manley-Usrey and Eaker) as well as larger scale views of the landscape and environment to study this problem. She is supported by a Distinguished Doctoral Fellowship as well as a graduate assistantship through the Arkansas Archeological Survey. Michelle Rathgaber's dissertation advisor is Dr. George Sabo III.

- **John Samuelsen** is a Ph.D. student in the Anthropology Department at the University of Arkansas Fayetteville. He is employed full-time at the Survey coordinating office as server administrator in our computer services program. John's dissertation research involves strontium and lead isotope analysis of samples from a unique skull and mandible cemetery at the Crenshaw site in the Caddo archeological area of southwest Arkansas to help determine whether the people buried were of local origin, and the meaning of the cemetery. With permission of the Caddo Nation of Oklahoma, he applied for and received a \$14,750 Doctoral Dissertation Research Improvement Grant this year. His project will aid the Caddo Nation in determining the cultural affiliation of the human remains at the site. John Samuelsen's dissertation advisor is Dr. George Sabo III.

Graduate Student Research & the UAF Station

- **Victoria Jones** is a graduate student on the archeology track in the Anthropology Department at the University of Arkansas Fayetteville. She is working on a M.A. thesis using 2017 field school data collected at the Leetown hamlet in Pea Ridge National Military Park. Her thesis will look at the function and chronology of Leetown structures and will investigate Ozark tourism using material from these excavations. Ms. Jones served as the teaching assistant for the 2018 University of Arkansas archeological field school, worked as a seasonal ranger on the Buffalo National River, and will serve as laboratory director for the Pea Ridge Project during the 2018–2019 academic year. Victoria Jones's thesis advisor is Dr. Jamie Brandon.
- **Lydia Rees** is a M.A. student in the Anthropology Department at the University of Arkansas Fayetteville. The subject of her thesis is prehistoric ceramics in the Arkansas Ozarks. She is looking at spatial and temporal patterning in hopes of understanding prehistoric communities of practice in the region. Ms. Rees received an Outstanding Achievement in Preservation Education Award from Preserve Arkansas for her work on the Bluff Shelters of the Arkansas Ozarks website. She is also the recipient of the Hester A. Davis Internship in Public Archeology. Lydia Rees's thesis advisor is Dr. Wesley Stoner (UAF Department of Anthropology).



Lydia Rees works with Jared Pebworth photographing artifacts from Saltpeter Cave in the ARAS-UAF lab. IMG-3253 by Jamie Brandon.

- **Breanna Wilbanks** was the first anthropology major to graduate from the University of Central Arkansas, and is now a M.A. student in the Anthropology Department at the University of Arkansas Fayetteville. Ms. Wilbanks' research interests include folk medicine and feminist archeology. Her thesis will examine these issues using material the ARAS-UAF research station excavated in 2004 from the nineteenth-century Sisters of Mercy convent in Fort Smith. Breanna Wilbanks' thesis advisor is Dr. Jamie Brandon.

Contributions to Public Schools and K-12 Education 2017–2018

- **Gathering, Gardening & Agriculture – 5th Grade Social Sciences Curriculum.** With funding from multiple sources (the Southeastern Archaeological Conference, the Arkansas Archeological Society, the Arkansas Humanities Council, and the National Endowment for the Humanities), Jodi Barnes (ARAS-UAM), Emily Beahm (ARAS-WRI), and Elizabeth Horton (ARAS-TMRS) developed a 5th grade social sciences curriculum that is now available free on the ARAS website at <https://archeology.uark.edu/gga/>. Each year, hundreds of 5th grade educators teach their students about pre-Columbian societies and early European exploration in North America, a period known largely through archeology. This lesson and instruction package is aligned with the 5th grade Arkansas Department of Education (ADE) Social Studies Curriculum Framework. It presents the history of early Arkansas by comparing foodways and plant-based cultural traditions of Native Americans, European settlers, and African Americans. Archeological evidence from Arkansas is used to illustrate and to show how science can explore these topics. Lesson plans, exercises, and PowerPoints may be downloaded directly from the Gathering, Gardening, and Agriculture webpages, which also include background information and updates on teacher workshops to help educators implement the curriculum. A hardcopy workbook is available to Arkansas educators on request.

- **Emily Beahm used the GGA curriculum to work with a group of homeschoolers** at the ARAS-WRI research station throughout the school year. Students were able to augment the activities in the workbook with tending, harvesting, and processing crops from the experimental gardens at WRI.

Other unique and creative educational activities that Survey archeologists were involved with this year:

- **Project Dig.** ARAS-WRI station staff, cooperating with Winthrop Rockefeller Institute, again presented Project Dig, a semester-long program for gifted and talented 5th and 6th graders that uses archeological concepts and active learning to teach about culture, using critical thinking and the scientific method. **Thirty students** from Dardanelle, Perryville, and Pottsville participated, along with their teachers and some parents. Read more on pp. 46–47.
- **GT Archeology Unit.** Emily Beahm, with assistance from Larry Porter (ARAS-WRI), visited 3rd grade gifted and talented classes at London Elementary in Russellville, where teacher Lindsey Drain used a year-long archeology curriculum. Over the course of the school year, Beahm gave presentations on archeology and soil science, culture, excavation, and data recording. She led the students in related activities including stratigraphic sand art, a Munsell color chart exercise, and a mock excavation. **Forty-four students** participated. Read more on p. 48.
- **Basic Excavation for Youth at the Training Program: Thaden School.** A group from the Thaden School in Bentonville attended the joint Arkansas Archeological Survey/Arkansas Archeological Society Training Program at Pea Ridge National Military Park in June. Society executive committee member Gary Knudsen and Survey Educational Outreach Coordinator Mel Zabecki worked to develop a youth version of the “Basic Excavation” class for this group of students. Basic Excavation is a combined classroom and fieldwork approach that teaches participants basic archeological concepts plus a practical hands-on introduction to excavation techniques and methods working under professional supervision and alongside experienced excavators. The students also learned about the particular project at Pea Ridge and how the field school would contribute to scientific research and park interpretation of the battlefield landscape.
- **Teacher Workshops.** George Sabo (ARAS Director) taught 24 participating teachers about Caddo Indian culture at a teacher workshop at Caddo Mounds State Historic Site in Texas. ARAS Educational Outreach Coordinator Mel Zabecki made arrangements with Educational Cooperatives for five teacher workshops that were offered in summer 2018 around the state.
- **Classroom Materials.** We offer a series of **educational fliers** on many topics available as downloadable PDFs that can be used for teacher preparation or as classroom handouts. Our new Educational Outreach Coordinator, Mel Zabecki, is working to reorganize these in a presentation that will be more useful for Arkansas educators.
- **School Visits, Programs & Tours.** Survey archeologists gave **talks and demonstrations** on archeology, American Indians, and early Arkansas history, including **Career Day** presentations, Project Dig, projects with homeschoolers, summer reading programs, and tours at our main office, to **approximately 2000 K–12 students** and their teachers at schools, parks, libraries, and other venues across the state.
- **4H Programs.** ARAS staff participated in **4H “Day of Archeology”** camps in McGehee, Helena/West Helena, Monticello (Taylor House/Hollywood Plantation Cemetery clean-up for Martin Luther King, Jr. Day), and State 4H State O’Rama Workshop at the Survey coordinating office. About **135 youth and accompanying adults** learned about archeology in Arkansas at these events.

Michael Evans and Jared Pebworth demonstrating replicated traditional technologies to 4-H members taking part in State O’Rama at the Survey coordinating office in Fayetteville. ARAS-UAF digital photo.



Public Service and Outreach 2017–2018

- **State and Federal Agencies.** The Survey works closely with **state and federal agencies** whose responsibilities under environmental and cultural preservation statutes include the management and protection of archeological sites:
 - Arkansas Highway and Transportation Department
 - Arkansas Department of Parks and Tourism/Arkansas State Parks
 - Arkansas Game and Fish Commission
 - Department of Arkansas Heritage and the Arkansas Historic Preservation Program
 - National Park Service
 - USDA Forest Service
 - U.S. Natural Resources Conservation Service
 - U.S. Army Corps of Engineers
 - U.S. Fish and Wildlife Service
- **NAGPRA Documentation.** We continued our **NAGPRA compliance program** in cooperation with several American Indian Tribes. The federal Native American Graves Protection and Repatriation Act (NAGPRA) requires institutions such as museums and universities to inventory their archeological and ethnographic collections of human remains, funerary objects, sacred artifacts, and items of cultural patrimony. These remains and objects must be repatriated to modern representatives of the appropriate culturally affiliated American Indian Tribe. The Survey's activities are essential for compliance with this federal law. We also curate, under contract, collections owned by various government entities that are subject to NAGPRA.
 - **What is NAGPRA documentation?** Under the federal NAGPRA law, institutions are obligated to provide an inventory of all items in their collections that are subject to repatriation. This is done by researching and providing a summary of all existing records for each artifact collection in order to establish the geographical origin, cultural affiliation, and other basic information about how the items were acquired and accessioned.
 - **ARAS Reaches Near Up-to-Date Compliance on Notices of Inventory Completion.** As of 2017–2018 the ARAS has substantially completed the steps necessary to be in compliance with our NAGPRA obligations for collections that we currently curate. This process has taken a number of years, and has been overseen by the ARAS registrar's office, with Sarah Shepard in charge of preparing the Notices of Inventory Completion (records that are required to be published in the Federal Register). As our research stations inventory their own collections, some additional materials have come to light that need to be inventoried, and new donations have been received, but most of the material covered by NAGPRA has now been documented. Once the Notices are published, the affiliated Tribe determines further disposition of the remains and objects.

Culturally Affiliated Tribe	Human Burial (minimum number of individuals)	Associated Funerary Objects	Unassociated Funerary Objects	Remarks
Quapaw	837 mni	2203	59	
Osage	112 mni	4		
Caddo	581 mni	107	10	
Tunica	271 mni	106		physically repatriated to Louisiana in August 2018
Total	1801 mni	2420	69	

- **Public Programs & Presentations.** Survey staff gave **59 public lectures, workshops, tours, and other presentations** reaching audiences of **over 1765 Arkansans**. An additional **30 public talks to chapters of the Arkansas Archeological Society** reached combined audiences of **575**. Staff participation in **12 archeology fairs and community events or festivals**, reached audiences of **2870**. These outreach activities together had **combined audiences of 5210 individuals**.
- **Training Program & Field School.** **108 members of the Arkansas Archeological Society** attended our jointly sponsored annual **training program for amateur archeologists** in June. The **2018 "Society Dig"** took place at Pea Ridge National Military Park and was part of an ongoing cooperative research project supported by a cost-share agreement between the Survey and the National Park Service. Carl Drexler (ARAS-SAU) directed fieldwork, while Jami Lockhart (ARAS-CSP) organized

archaeogeophysical survey prior to the excavations. Twenty ARAS staff members contributed to the program. The Northeast Benton County (NEBCO) Community Center provided assistance and facilities for teaching space, lab, and headquarters. Visitors had an opportunity to observe excavations in progress during a scheduled open house. A group from the Thaden School in Bentonville participated in a special youth version of the Basic Excavation class. This year's Dig also took place in conjunction with the University of Arkansas archeological field school, attended by 10 enrolled students. (See pp. 34–35, 101–102, and 120 for more information about the training program and field school.)

- **Historic Cemeteries.** Survey archeologists provided consultation and advice to groups and individuals working on projects to document and protect **historic cemeteries, especially African-American cemeteries.**
- **Encyclopedia of Arkansas.** As of 2018, Survey staff have contributed **58 articles** and reviewed many others for the Butler Center's *Encyclopedia of Arkansas History & Culture*.
- **Public Contacts.** Survey staff members respond to thousands of **requests for information** from members of the public every year, by telephone, email, and in person.
- **Exhibits & Museums.** Survey staff have created or assisted with a number of **exhibits** around the state:
 - Jeffrey Mitchem (ARAS-Parkin) consulted with staff at the **Museum of the Mississippi Delta** (Greenwood, Mississippi) on development of new exhibits.
 - Faye Futch (ARAS-Parkin) served on a committee that brought an exhibit called “**Home Town Teams**” from the Smithsonian to the Cross County Museum.
 - ARAS-WRI staff Emily Beahm and Larry Porter participated in the WRI sponsored art installation “**Art in the Natural State**” with an open house and art-themed archeology activities.
 - Jodi Barnes (ARAS-UAM) worked with students and ARAS staff to identify items in the collection of the **Drew County Historical Museum** for a redeveloped and updated exhibit in the museum's Archeology Room. The new exhibit, “**Our Past: Arkansas Indians in Drew County**,” opened in September 2017. Barnes also installed a small exhibit on Hollywood Plantation in the Memorial classroom building at UAM.
 - Chelsea Cinotto (ARAS-HSU) installed **rotating monthly exhibits at Huie Library on the HSU campus.** These “Pieces of the Past” exhibits feature different items, prehistoric and historic, from Arkansas and from around the world, in the ARAS-HSU curated collections. Cinotto maintained other exhibits at Ouachita Baptist University's Hickingbotham Library and the Clark County Historical Association Museum in Arkadelphia that display objects from the Joint Educational Consortium's Hodges collection.

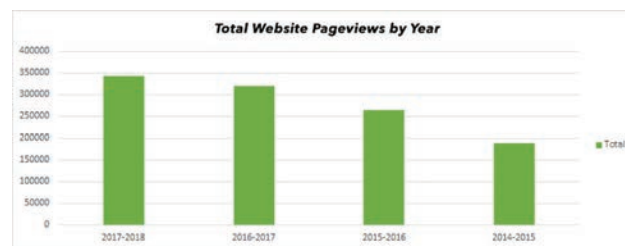


Visiting a landowner to look at a wooden object he recovered from the Ouachita River. Mary Beth Trubitt (ARAS-HSU), Historical Society members, and local residents studying the object. ARASHSUD_K13155, photo by Chelsea Cinotto).



Tunican Chapter members, Cheri and Russ Miller, looking at the flint-knapping display, reorganized with help from Jodi Barnes (ARAS-UAM), at the Drew County Historical Museum. ARAS-UAM photo DSC_0096.

- George Sabo was curator for a permanent exhibit on “**Arkansas Native Americans**” installed at the Arkansas Union on the UAF campus.
- Other assistance for exhibit development or programs at museums was provided to Delta Gateway Museum and ASU Museum (Julie Morrow); Parkin (Jeffrey Mitchem) and Toltec Mounds (Elizabeth Horton) State Parks Visitors Centers; Davidsonville Historic State Park (Kathleen Cande); Turner Neal Museum at UAM (Jodi Barnes); Old Statehouse Museum (Carl Drexler); Pine Bluff-Jefferson County Historical Museum (John House); The Gilcrease Museum (Ann Early); Shiloh Museum of Ozark History (Jamie Brandon, Lydia Rees); and University of Arkansas Museum Collections (Jamie Brandon, George Sabo, and others).
- **Website and Social Media.** Our new website was launched in July 2015. Designed and implemented by our own computer services program staff (Deborah Weddle and John Samuelsen), the new website offers a modernized, graphic home page that is easy to navigate, rotating content that emphasizes interesting information about archeological research and discoveries in Arkansas, and educational materials for public and schoolroom use. We also maintain **additional focus-topic websites for the general public and fellow scholars.** Traffic to our websites has increased steadily. Graphic by John Samuelsen.



- With **115,089 page views**, traffic to our main website at <http://archeology.uark.edu>, increased again this year.
- A “**50 Moments**” web series (<http://archeology.uark.edu/who-we-are/50moments/>) of weekly articles during 2017, our 50th anniversary year, outlined our accomplishments and some of the things we have learned in half a century of research, education, and service to the people and heritage of Arkansas.
- **Indians of Arkansas** (<http://archeology.uark.edu/indiansofarkansas/index.html>) provides content and lesson plans about the Native Americans who have resided in Arkansas. It remains our most popular focus-topic website, with over **85,000 page views** in 2017–18.
- **Rock Art in Arkansas** (<http://archeology.uark.edu/rockart/index.html>) is a companion website to our Popular Series book and provides articles, lessons, and a picture gallery covering one of Arkansas’s most important archeological landscape resources. It receives steady traffic with **23,000 page views** in 2017–18. An update to this website is planned.
- **Arkansas Novaculite: A Virtual Comparative Collection** (<http://archeology.uark.edu/novaculite/index.html>), authored by ARAS-HSU research station archeologist Mary Beth Trubitt and her associates, provides resources for the study of Arkansas Novaculite as a raw material that was exploited for toolmaking and trade since ancient times. It had over **11,000 page views** in 2017–18.
- **Bluff Shelters of the Arkansas Ozarks** (<http://archeology.uark.edu/ozarkbluffshelters/>) was written by Lydia Rees (anthropology graduate student at UAF) and Jamie Brandon (ARAS-UAF) as part of an ANCRC-funded project to update and preserve excavation records from the 1930s and to provide information to the public. It sees steady traffic and won an award from Preserve Arkansas in 2017.
- **Gathering, Gardening, and Agriculture** (<https://archeology.uark.edu/gga/>) presents all the content, in free downloadable PDFs and PowerPoints, for our 5th grade social studies curriculum. This website was written by Jodi Barnes, Emily Beahm, and Elizabeth Horton, with technical assistance from Deborah Weddle and John Samuelsen. Teacher workshops are offered to help educators who wish to use the curriculum. Visitor traffic totaled **1,375 page views** from 573 users.
- The new **Sloan Photo Gallery** was developed as an accompaniment to the University of Arkansas Press reprint of *Sloan: A Paleoindian Dalton Cemetery in Northeast Arkansas*, by Dan F. Morse. First published by the Smithsonian Institution Press in 1997, the new reprint is the first available paperback edition. Sloan is the oldest open air cemetery site in North America. The ARAS web gallery offers all new photographs of these important artifacts, taken by Survey photographer Jane Kellett. High resolution versions of the images may be obtained for re-use by submitting a permission form (also available on the website). Launched in fall 2017, the website had **5,628 page views** from 862 users this year.

- **AMASDA Online** provides password-protected, web-based access to our archeological site database for qualified researchers. Contractors pay a fee per project or by annual subscription. More information is in this Annual Report in the registrar's office section and the computer services section. AMASDA Online had **87,772 page views** in 2017–18.
- The Survey and its research stations increased the use of **social media** to provide information about Arkansas archeology, our projects and discoveries, and local volunteer opportunities. Our new Educational Outreach Coordinator took over the social media administrative functions for the main accounts. Each research station also has its own Facebook page.
- **Survey staff work with local landowners** who are concerned about site looting and trespassing on their property. We respond to requests from concerned landowners to investigate and to recover information from sites that have been damaged by unauthorized digging.
- Survey staff serve on a number of **Boards and Commissions** in Arkansas and beyond:
 - Ann Early (State Archeologist): Vice Chairman of the **State Review Board for Historic Preservation**; board member of the **Arkansas Genealogical Society**; board member of the **Arkansas Women's History Institute**; Vice President of the **National Association of State Archaeologists**.
 - Jamie Brandon (ARAS-UAF): Chair, **State Review Board for Historic Preservation**; board member, **Arkansas Humanities Council**; Secretary (2017), **Preserve Arkansas**; Vice-Chair, **City of Fayetteville Woolsey Farmstead Steering Committee**.
 - Jodi Barnes (ARAS-UAM): President (2017), Secretary and Chair of Governance Committee (2018), **Preserve Arkansas**; board member, **Arkansas Preservation Foundation**; board member **Drew County Historical Society and Museum Commission**.
 - Kathleen Cande (ARAS-SRP): Board of Directors, elected Corresponding Secretary (2018), **Washington County Historical Society**.
 - Carl Drexler (ARAS-SAU): Board of Trustees, **Arkansas Historical Association**; board member, **Friends of the Arkansas State Archives**.
 - Faye Futch (ARAS-Parkin): Board member, **Cross County Historical Society**.
 - Jami Lockhart (ARAS-CSP): **Northwest Arkansas Open Space Plan Steering Committee**.
 - Jeffrey Mitchem (ARAS-Parkin): Advisory Board, **Alliance for Weedon Island Archaeological Research and Education**, St. Petersburg, Florida; Director-at-Large, **Florida Public Archaeology Network**.
 - Marilyn Knapp, Deborah Sabo, and Melissa Zabecki (ARAS-CO): Executive Committee members of the **Arkansas Archeological Society**.

Professional Service 2017–2018

- **Jeffrey Mitchem (ARAS-Parkin) was elected to the Board of Directors of the Archaeological Conservancy**, beginning in the fall of 2017. Mitchem has served the organization for many years as a tour leader and lecturer, and (along with other ARAS archeologists) has partnered to assist the Conservancy's mission of investigating sites that may be protected through purchase, and helping to negotiate this process. The Parkin site, now preserved within Parkin Archeological State Park, was purchased by the Conservancy and donated to the State of Arkansas for this purpose. Over 500 important archeological sites have so far been saved by the Conservancy. Read more on p. 27.
- Survey staff provided **consultation, advice, or other assistance** to over **130** agencies, firms, museums, schools, parks, civic groups, and other bodies, in addition to service rendered to research station host institutions.
- Several Survey archeologists serve as editors or members of editorial boards for professional journals.
 - Mary Beth Trubitt serves as **Editor** of the journal **Southeastern Archaeology**. She is also on the editorial board for the **Caddo Archaeology Journal** and the **Journal of Texas Archeology and History**.

- Jodi Barnes serves as Associate Editor of the journal *Historical Archaeology*. She also is on the editorial board for the *Journal of Undergraduate Research in Anthropology*, and was Assistant Editor for the *Drew County Historical Journal* in 2017.
- Jeffrey Mitchem is on the editorial board for the journal *The Florida Anthropologist*.
- Kathleen Cande serves as Gulf States current research editor for the Society for Historical Archaeology.
- Survey staff served as officers, members of various committees, or in other service capacities for **professional organizations**:
Society for American Archaeology – Society for Historical Archaeology – Caddo Conference Organization – Southeastern Archaeological Conference – The Archaeological Conservancy – Florida Anthropological Society – Arkansas Historical Association – Society of Bead Researchers – Florida Archaeological Council – Friends of the Arkansas State Archives – National Association of State Archeologists – National Association for Interpretation – Cross County Historical Society – Washington County Historical Society
- The Survey posts “**Guidelines for Fieldwork and Report Writing in Arkansas**,” an appendix to the Arkansas State Plan, on its website for access by agency and private firm archeologists.

Grants & Cost-Share Agreements 2017–2018

- \$600 grant from the Arkansas Archeological Society’s Archeological Research Fund, awarded to Timothy Mulvihill (ARAS-UAFS), Mary Brennan (USFS), and Elizabeth Horton (ARAS-TMRS) for a radiocarbon date from 3FR46.
- \$900 grant from the Arkansas Archeological Society’s Archeological Research Fund, awarded to Ann Early (State Archeologist) for three AMS radiocarbon dates, “Dating the Cremation Cemetery at the Johnny Ford Site, 3LAS.”
- \$720 grant from the Arkansas Archeological Society’s Bill Jordan Public Outreach fund, awarded to Jodi Barnes (ARAS-UAM) for “Hunting in the Past,” a public education activities program.
- \$800 donation from Jamie Kitchens of Little Rock and Jeff Nalley of Benton to the Arkansas Archeological Survey to support John House’s research in Arkansas.
- \$400 mini-grant from the Cahokia Archaeological Society to Mary Beth Trubitt for “Sharing Results from the West Cahokia Project,” to produce a portable display banner interpreting results of 1997 Cahokia investigations, and also to allow Trubitt to travel to Illinois to deliver the completed banner and present a public talk.
- \$1,875 from the Joint Educational Consortium to support NAGPRA documentation of human remains and funerary objects in their collection (Sarah Shepard, ARAS Registrar’s office, coordinator).
- \$30,324 from the Arkansas Historic Preservation Program for Archeological Survey of the Battlefield at Prairie D’Ane (Carl Drexler, principal investigator).
- \$47,000 from National Park Service for Year 3 archeological inventory at Pea Ridge National Military Park: geophysical survey, GIS, and excavation at Leetown Civil War era hamlet (Jamie Brandon, Carl Drexler, and Jami Lockhart, principal investigators).
- \$12,371 from the Department of Arkansas Heritage for geophysics, GIS, and excavation at the historic Wolf House (Jami Lockhart and Jamie Brandon, principal investigators).
- \$14,750 Doctoral Dissertation Research Improvement Grant from the National Science Foundation for John Samuelsen’s dissertation project, “An Isotopic Assessment of Late Prehistoric Interregional Warfare in the Southcentral U.S.” (Dissertation Chair/George Sabo III, principal investigator).
- George Sabo III (ARAS Director) is a co-principal investigator (with Claire E. Terhune, Wenchao Zhou, Paul M. Gignac, and Haley D. O’Brien) on “MRI: Acquisition of a micro-computed tomography system for advanced imaging and interdisciplinary multi-user access for the University of Arkansas and the US Interior Highlands” (\$687,161 grant from the National Science Foundation for 2017–2020) <https://micro.uark.edu>; <https://researchfrontiers.uark.edu/researchers-test-new-microct-imaging-system/>.
- George Sabo III (ARAS Director) is a co-principal investigator (with Kathryn Sloan, Michael Pierce, Kim Sexton, Robert Cochran, David Fredrick, Sean Teuton, and Eric Funkhouser) on “Arkansas Stories of Place and Belonging” (\$88,735 grant from the University of Arkansas Chancellor’s Discovery, Creativity, Innovation, and Collaboration Fund for 2018–2019).
- Elizabeth Horton (ARAS-TMRS) is a collaborating researcher on “The Palette for Selection: Growing and Sequencing Lost Crops to Understand the Role of Plasticity in Plant Domestication.” Smithsonian Institution Grant Program, awarded to Logan Kistler (NMNH) and Natalie Mueller (Cornell University) for 2017.

Honors & Awards 2017–2018

- 2017 **Certificate of Achievement** in recognition of service as President of **Preserve Arkansas** to Jodi Barnes (ARAS-UAM).
- Carl Drexler (ARAS-SAU) received two awards for his article “The Little Rock Picric Acid Plant in World War I,” published in the *Pulaski County Historical Review*:
 - the **Walter L. Brown Award** for Best Business History from the **Arkansas Historical Association**
 - the **Peggy Smith-Mary Worthen Award** from the **Pulaski County Historical Society**
- 2018 **Diamond Award for 50 years of contributions** to understanding Arkansas history, presented to the Arkansas Archeological Survey by the Arkansas Historical Association.
- 2017 **Excellence in Heritage Preservation Award** from Preserve Arkansas to *Gathering, Gardening, and Agriculture: Plant-Based Foodways in the Southeastern United States*, a 5th grade social studies curriculum developed by Jodi Barnes (ARAS-UAM), Emily Beahm (ARAS-WRI), Elizabeth Horton (ARAS-Toltec), and George Sabo (ARAS Director).
- 2017 **Outstanding Achievement in Preservation Education Award** from Preserve Arkansas to *Bluff-Shelters of the Arkansas Ozarks*, a new public-oriented website developed by ARAS, written by Lydia Rees (UAF Anthropology graduate student) with contributions from Jamie Brandon (ARAS-UAF).
- 2017 **Forest Supervisor’s Award for Partners and Community Engagement** presented to the Arkansas Archeological Survey and Arkansas Archeological Society by the Ozark-St. Francis National Forests.



Finding Creative Solutions to Persistent Challenges

The Survey recognizes a number of ongoing challenges in fulfilling our mission of research, service, and education. We are committed to evaluating our programs from within and seeking ever more creative and more efficient ways to meet our goals.

- **Site Destruction.** Damage to sites and the loss of Arkansas’s irreplaceable archeological heritage due to changing land use patterns and vandalism remains an important issue.
 - The pressure of land development threatens sites in the state’s growth regions. Land-leveling for agriculture also destroys large numbers of sites. **The Survey works successfully with landowners and tenants to employ the latest technologies to rescue archeological information without impeding normal land use.**
 - Rock shelters in the Ozarks have increasingly been exploited as illicit methamphetamine labs, with attendant vandalism of archeological deposits. **The Survey works with various law enforcement agencies to assist investigations and prosecutions.**
 - **The Archaeological Conservancy** purchased 8 archeological sites in Arkansas between 2001 and 2014. The Survey continues to work closely with the Conservancy to identify additional sites that can be secured for future preservation. This past year, **erosion control and rehabilitation of Cavanaugh Mound in Fort Smith** was completed and **Dr. Jeff Mitchem (ARAS-Parkin) was elected to the Conservancy’s Board of Directors.**
- **Funding for Backlog of Reports.** It is often easier to obtain funding for the more “glamorous” fieldwork phase of an archeological project than for specialized laboratory work and report-writing. Yet, excavations mean little until what we learn from them becomes available to our colleagues, to students, and to the interested public. To support the “lab and desk work” necessary to bring our research to full fruition, the Survey has sought **grants from the Arkansas Natural and Cultural Resources Council.**

We have now completed 16 ANCRC-supported reports on existing collections, leading to 3 major publications and a new website that is now online. We also have several graduate students working with previously excavated material for their thesis and dissertation projects.

- **Public Education and Heritage Tourism Opportunities.** Even after 50 years of effort by the Survey, many Arkansans still do not know that Arkansas possesses archeological sites recognized for their importance by professionals throughout the United States and around the world. **We are improving how we tell the stories of Arkansas history and prehistory through the “voice” of archeology.**
 - We recently hired an **Educational Outreach Coordinator** (see pp. 5, 112–115). This is a new position in our organization, to help us in our goal **to produce more educational materials using archeological examples to provide STEM and STEAM learning exercises** for mathematics, language arts, and science topics.
 - Our **5th grade social sciences curriculum** “Gathering, Gardening, and Agriculture” is available for free to Arkansas educators on our website.
 - We are working to create **more Popular Series volumes for general readers.**
 - Our **Indians of Arkansas website** is a significant educational resource for learning and teaching about archeology and anthropology in Arkansas and the South. A new website on **Bluff Shelters in the Arkansas Ozarks** also was developed for the public. **We want to continue to add more educational content and resources to our website.**
 - Arkansas has only a few archeology-themed parks where the public can visit interpreted archeological sites. **We are working with State Parks, the Forest Service, and the National Park Service to develop archeological heritage tourism.**
 - Archeologists from the Survey’s coordinating office and UAF research station are conducting **investigations at Pea Ridge National Military Park in cooperation with the National Park Service Midwest Archeological Center.** New information about various parts of the battlefield landscape will aid interpretation at the Park. This is a federal Cooperative Ecosystem Studies Units (CESU) project. In addition, Carl Drexler (ARAS-SAU) has worked to **assist Civil War site preservationists in southwest Arkansas and other parts of the Southeast.**
 - In 2018 **the annual training program sponsored jointly by the Survey and the Arkansas Archeological Society was held at Pea Ridge National Military Park**, in conjunction with the collaborative research project between ARAS and the National Park Service, and coinciding with the University of Arkansas field school in archeology.
 - Jami Lockhart and John House, assisted by staff from the coordinating office and ARAS-UAPB station, joined archeologists from the Midwest Archeological Center of the National Park Service to conduct **new investigations at sites in the Osotuooy Unit of Arkansas Post National Memorial.** This study, also conducted under the federal Cooperative Ecosystem Studies Units (CESU) program, will increase our understanding of the development of Quapaw culture in eastern Arkansas and their interactions with early French settlers.
 - Other recent training programs were held at **the Richards Bridge site** near Earle, to investigate a Parkin phase village site that will contribute new information **for interpreting Parkin Archeological State Park.**
 - We continue to provide archeological support for development at **Davidsonville, Historic Washington, Prairie Grove Battlefield, and other State Parks**, in addition to the regular programs of research at **Toltec Mounds and Parkin State Parks**, with new projects such as the **Plum Bayou Interpretive Garden at Toltec Mounds.**
 - We now have **educational/experimental gardens** at three research stations exploring plant use in prehistoric and pioneer Arkansas—two of these are at state parks (Parkin and Toltec Mounds) and the other is at the UA System’s Winthrop Rockefeller Institute campus.
- **Budget Constraints and Institutional Issues.** Survey employees earn significantly less than their comparably qualified colleagues at universities, federal agencies, and private cultural resource management firms. This has made it harder to recruit new station archeologists and to keep good station assistants.

Jamie Chad Brandon, station archeologist for the Survey's research station at University of Arkansas Fayetteville, passed away on December 24, 2018, aged 47, after a brief and hard-fought battle against cancer. His wife, Lydia Rees, and his entire family were by his side.

Dr. Brandon's career in archeology spanned three decades, involving fieldwork throughout the Southeast on sites ranging in age from the late Pleistocene to the early 20th century. He produced research on a wide range of topics that included race and ethnicity in the American South, historical memory, and the prehistory of the Southeast. Beyond producing an impressive record of scholarly research, Jamie is well-remembered for his unparalleled devotion to outreach activities for the general public about archeological discoveries and their relationship to understanding modern society. He was a popular teacher and mentored a host of students through internship, thesis, and dissertation projects.

Jamie worked for the Arkansas Archeological Survey first in Magnolia, where he was research station archeologist for nine years, and then in Fayetteville where he taught in the Anthropology Department at the University of Arkansas. In Fayetteville, he continued his studies of Civil War history through projects at Prairie Grove State Park and Pea Ridge National Military Park. With Lydia, he developed a series of research projects on archeological collections from Ozark bluff shelter sites, with a focus on important collections curated by the Survey and the University of Arkansas Museum. An enduring legacy of this effort is Rees's and Brandon's "Bluff Shelters of the Arkansas Ozarks" website.

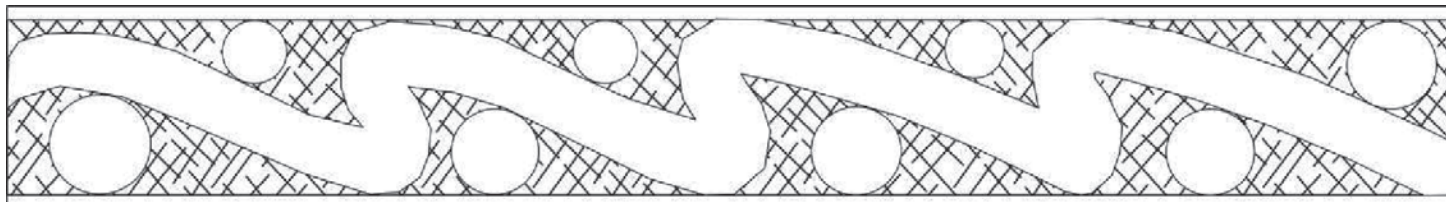
Jamie will be remembered most of all for his love of people. Jamie never met a stranger, and in fact invited us all to share his passion for his profession as well as his general love of life, through his charming and prolific social media presence. He was a generous person with his time, willing to travel all over the state to support historic preservation and the humanities in Arkansas. His enthusiasm, cheerfulness, and constant support of others in the pursuit of common goals will be sorely missed.



Photo courtesy of Lydia Rees



Research Station Reports





The Toltec Mounds research station is located at Toltec Mounds Archeological State Park in Scott. The Toltec Mounds site is a National Historic Landmark. Survey staff carry out ongoing research at the site, providing the primary resources for development of interpretive programs at the park. The Toltec Mounds site was the religious, social, and political center for people of the Plum Bayou culture of central Arkansas. Built and occupied between AD 650 and 1050, it is one of the largest and most complex American Indian sites in the Mississippi Valley. Archeologists who visited the site more than 100 years ago found 16 mounds inside a 5298-foot-long ditch and earthen embankment. Though many of the mounds have been plowed down or mined for fill dirt, several remain visible today, along with remnants of the embankment. Most of the mounds were square, flat-topped earthen structures built by carrying basket-loads of dirt. Several of the mounds were arranged around an open plaza and aligned according to astronomical observations. The two largest were built in stages, and stand today at 39 and 49 feet high. The site had a small permanent population of religious and political leaders and their families, but most Plum Bayou people lived in scattered villages and hamlets in the surrounding countryside, only gathering at the site for religious and community activities. The Plum Bayou people grew a variety of native domesticated crops, harvested nuts, hunted, and fished.

Elizabeth Horton (Ph.D., Washington University in St. Louis, 2011) is the Survey's Research Station Archeologist for Toltec Mounds Archeological State Park, and Research Assistant Professor of Anthropology for the Department of Anthropology, University of Arkansas Fayetteville. She came to the Survey in 2010 as a postdoctoral researcher at the coordinating office, and began the position at the Toltec Mounds research station in July 2011. Horton's doctoral dissertation focused on Pre-Columbian fabric technology and plant fiber use in the Southeast, Arkansas in particular, using assemblages from the University of Arkansas Museum Collections. Her specialization in paleoethnobotany brings needed skills to the Survey. She is working to establish a paleoethnobotany lab at the Toltec research station that can serve the entire organization.

Katherine Gregory (M.A., Florida Atlantic University, 2006) joined the Survey as station assistant at ARAS-UAM in October 2014. In October 2016 she transferred to the Toltec Mounds research station. She earned her B.A. in Anthropology from Marquette University and previously worked for the Seminole Tribe of Florida Tribal Historic Preservation Office.

Marilyn Whitlow has been assistant at the Toltec Mounds research station since 1985. She works with the station archeologist on many aspects of station management, including daily operations, research (field and lab), processing and cataloging artifacts, and outreach, including hosting lab days for volunteers.

Archiving Five Decades of Research Station Records

Staff of the Toltec Mounds research station, with help from volunteers, continued the ongoing project to stabilize, rehabilitate, sort, scan, and inventory nearly 50 years of archeological and research records and documents. To date this project has resulted in 27 additional AMASDA project numbers, and covered 232 discrete binders, map drawers, or archival photo boxes. This amounts to over 2,744 records in the Filemaker Archive database created for this project, comprising, by the summer of 2017, over 25,653 individual pages, photos, maps or other archival objects (and we aren't quite finished yet). In addition, over 4,000 files were transferred from old, out-dated storage technologies (such as zip-disks) and saved to the station's server. Ongoing work includes entering photo records into the database, as well as assessing and stabilizing decades of color slides, and sorting of records scanned at both the station and the coordinating office into folders that match the contents of the physical archive records.

Progress with DDCI

As a part of the digital data collection initiative, Elizabeth Horton worked closely with John Samuelsen (ARAS-CSP), Carl Drexler (ARAS-SAU), and other committee members to create and implement the first field-ready version of a Filemaker database that allows ARAS archeologists, students, and volunteers to collect, record, and save excavation and survey data while in the field.

The Plum Bayou Garden and the Palette for Selection: Growing the “Lost Crops”

Since the Plum Bayou Garden (references for this section are in Appendix 1) was established in 2015, Dr. Horton has observed, and shared with colleagues in the Lost Crops Network, a series of intriguing changes in the height, growth, and flowering of the *Iva annua* (sumpweed) in the garden. Sumpweed, one of the “Lost Crops” of eastern North America (Mueller et al. 2017 <https://www.nature.com/articles/nplants201792>), was fully domesticated by the Native peoples of the Midsouth and Southeast. While wild-type sumpweed appears in the archeological record of eastern North America, the significant increase in seed size from sites across the Southeast after about 4,000 years ago indicates its full domestication. By the late Archaic and Early Woodland, about 3,000 years ago, sumpweed is ubiquitous in eastern North American archeobotanical assemblages, including many of the bluff shelter assemblages of the Ozark Plateau, and was used well into the late prehistoric period. While wild sumpweed exhibits mean lengths of 2.5–3.2mm, archeologically recovered seeds can exceed 6mm in length and 4mm is generally considered the cutoff for domesticated versus wild seed in archeological assemblages. This dramatic change in seed size in ancient sumpweed is a well-documented characteristic of what is referred to as the “domestication syndrome”—a suite of physical changes and traits in target species that arise from the process of domestication.

Domestication is a formative human process that has occurred numerous times independently through time and across space. Today, archeologists, agronomists, and historians often refer to the “Independent Centers of Domestication” to talk about these geographically and chronologically disparate areas of the world where people fundamentally altered human histories. This

agricultural revolution facilitated by domestication underpins population growth and social reorganization, drives land use changes impacting the environment, leads to biodiversity shifts in the anthropogenic ecosystem, and irreversibly reshapes basic human-environment interactions. The domestication process—the evolution of cultigen species from wild counterparts in response to human selection pressures—is a symbiosis of plants adapting to the anthropogenic environment resulting in mutual benefits. The associated physiological and morphological changes in plants, the “adaptive syndrome of domestication,” include a convergent set of traits across cultigen species including loss of natural dispersal mechanisms, synchronization of maturation, an increase in edible mass, and loss of germination dormancy (Kistler and Mueller 2017).

But the global-scale journey for both plants and people between point A (wild plants under unconscious or conscious selection by gatherers and hunters) and point B (fully domesticated crops under cultivation by early farmers) is still not fully understood. Current research indicates that the capacity of plants to express a wide variety of characteristics according to environmental conditions (phenotypic plasticity) may have played a critical role in the short-term interactions between early farmers and plant species under conscious and unconscious selection. These questions about the role of the adaptive potential in plant plasticity is also of considerable interest in other domains of research, especially given contemporary concerns about food security, biodiversity, and climate change. Understanding to what degree plastic responses to environment create the phenotypic variation (a “palette for selection”) on which both natural selection and human selection operate is critical not only for understanding our shared human past, but also our future. And Arkansas as both a part of a prehistoric independent center of domestication in the southeastern U.S., and as source for research materials into these processes, has had, and continues to have, a key role in the research into processes of domestication.

In 2017, Horton became a collaborator in a multi-disciplinary, multi-year study to examine in what ways the interaction between plant plasticity and human manipulation of the environment creates the phenotypic conditions for the onset of domestication. The study, “The Palette for Selection: Growing and Sequencing Lost Crops to Understand the Role of Plasticity in Plant Domestication” (PI, Logan Kistler, Co-PI, Natalie Mueller) is funded by the Smithsonian's Core Sciences program and utilizes three key “lost crops,” sumpweed, erect knotweed, and goosefoot, to examine the fundamental role of plasticity in domestication. The two-year study incorporates multiple researchers and collaborating institutions, with growth experiments and gene sequencing of both modern and archeological plant samples to test several hypotheses about these



Experimental sumpweed (*Iva annua*) plots at Toltec Mounds State Park in March (left) and in August.

three ancient crop species. This trio of plants has both an extensively documented archeological record in the Midsouth and Southeast and an intensively documented set of morphological changes observable in the archeologically recovered remains. In addition, Horton, Patton, Mueller, and Williams have been growing these crops in three separate archeobotanical research gardens over the last three years, providing substantial experimental populations under varied cultivation approaches.

Wild and Cultivated Sumpweed at Toltec Mounds State Park

Observed and documented maximums of sumpweed in the wild indicate that this annual member of the sunflower family, under the best conditions, can reach heights of about 6 feet, with flowering onset in the late summer to early fall, producing an oil-rich seed averaging about 2.5–3.2mm in length. In prime conditions, sumpweed will reseed where it falls, creating large dense stands. In less ideal conditions, the plants will be smaller and more scattered, seeking to optimize nutrients, water, and access to sun. From 2015 to 2017, the sumpweed grown in the Plum Bayou Garden demonstrated extreme phenotypic plasticity with only minimal manipulation of the environment. These changes included increasingly extreme maximum plant heights, as well as earlier onset of flowering than seen in the existing nearby “parent population” (from which the original seed was collected in 2014), and indications that there were potential changes in seed size.

While the original build of the garden incorporated 3 to 4 inches of commercially available mulch and compost, in the ensuing years the sumpweed was not provided with artificial irrigation or fertilizers, and there has been no use of herbicides or pesticides. The sole intervention has been sporadic thinning of the stands of sumpweed, and the plants have been allowed to self-propagate in place with seed that drops or is incidentally scattered during fall harvests. While it is not unusual for native plants to “do better” in a garden environment where growth conditions are often optimal, unlike native perennial wildflowers, sumpweed, an annual plant, is not able to draw

from an existing rootstock but theoretically “re-zeros” every year. While the nearby wild populations of sumpweed have remained relatively constant year to year—achieving maximum heights of about 1.5m (4 to 4.5 feet tall), with onset of flowering occurring in late August/early September—the Plum Bayou Garden sumpweed has increased in overall size each successive year from 6.5 feet, to 8 feet, to 9.5 feet in 2015, 2016, and 2017 respectively. This exceeds all known observed height maximums for wild sumpweed. In addition, the plants growing in the garden have consistently preceded the wild populations in onset of flowering (pollination) by approximately 1–2 weeks.

The *Iva annua* work packet for the “Palette for Selection” research program seeks to examine this extreme plasticity over a short (3-year) period of time as a model for understanding how

rapid and dramatic response to minimal human intervention could easily attract the attention of early cultivators, encouraging subtle management behaviors with consequences for selection and the evolution of stable domestication ... [and proposes] that the domestication-like traits in Plum Bayou Garden sumpweed result from gene expression changes driven by modest soil enrichment and tending. The changes are cumulative and intergenerational, and likely mediated by heritable genomic methylation (Kistler and Mueller 2017).

This portion of the research will utilize the local wild population, the Plum Bayou Garden sumpweed, four experimental plots at Toltec Mounds State Park, and greenhouse-grown sumpweed (supplied by Natalie Mueller, Cornell University) to carry out total-RNA transcriptome sequencing (RNA-seq) across a developmental series to quantify changes in gene expression.

As the first portion of this project, four experimental plots were created at Toltec Mounds State Park and seeded in December 2017. Data collection on growth conditions and rate for plants in these plots, and for the local wild population and the Plum Bayou Garden population commenced when the plants germinated and continued until onset of flowering in August 2018. These data are being collected with assistance from ARAS-TMRS paleoethnobotany intern Jenna Bracas (Hendrix College) and station assistant Katherine Gregory, using a Filemaker database data collection system developed by

Dr. Horton. In addition, Bracas collected over 3,000 sumpweed seed measurements from a random sample of seed from the 2015 wild and 2015, 2016, and 2017 garden sumpweed populations. This project will extend into 2018–2019, when the four plots will be used again for additional comparative growth data of both wild and “cultivated” sumpweed. In addition, during the 2019 growing season, apical tissue samples will be collected on a monthly basis and sent to the Smithsonian for genetic (RNA-seq) analysis.

To date, the 3,000 seed measurements collected by Bracas indicate that alongside the dramatic changes in plant size and rate of growth, there has been a subtler, but observable shift upward in the range of seed sizes from the wild population and first year garden sumpweed and the subsequent generations of sumpweed in the Plum Bayou Garden, as shown in the table (rounded figures).

Table 1. Cultivated sumpweed seed measurements from Plum Bayou Garden, 2015–2017

Length mm	2015	2016	2017	Width mm	2015	2016	2017
Average	2.6	3.1	3	Average	2.1	2.6	2.4
Minimum	1.5	1.4	1.5	Minimum	0.8	1.3	1.3
Maximum	4	5.3	5	Maximum	3.4	4.4	4

Notes

The ‘Plum Bayou Garden’ is a collaborative project between the Arkansas Archeological Survey and Arkansas State Parks funded by a grant from the Arkansas Humanities Council and the National Endowment for the Humanities. The Plum Bayou Garden was created by Horton in 2015 as a permanent “living exhibit” and active research garden at Toltec Mounds Archeological State Park. It serves as a functional seed bank open to state, federal, and educational institutions, as well as federally recognized tribes/nations.

The ‘Lost Crops Garden Network’ is a multidisciplinary group of researchers (Natalie Mueller, Elizabeth T. Horton, Paul Patton, Daniel Williams, and Logan Kistler) interested in growing modern plants and integrating archeology and other methods to better understand domestication and the history of food production in eastern North America. This informal collaborative relationship has resulted in more formal collaborations including a 2016 SEAC symposium on plant domestication and paleoethnobotany in Southeastern United States, as well as the “Palette for Selection” research program.

The ‘Palette For Selection Research Team’ is an interdisciplinary research team combining expertise in anthropology, paleoethnobotany, genomic and transcriptomic methods, plant breeding, plant biology, nonmodel organism bioinformatics, and domestication.

- Logan Kistler (PI): NMNH curator of archeobotany and archeogenomics: specializes in combining genomic computational methods with the archeological record to study human-environment interactions with a focus on domestication.
- Natalie Mueller (Co-PI): NSF Postdoctoral Fellow at Cornell University: paleoethnobotanist and leading expert on eastern North America (ENA) domestication, editor of “Forage,” the Society of Ethnobiology blog. (<https://ngmueller.net> and <https://ethnobiology.org/forage/blog>)
- Elizabeth T. Horton, University of Arkansas: ENA paleoethnobotanist and specialist in teaching/outreach gardens for archeological education (<http://archeology.uark.edu/learn-discover/current-research/plum-bayou-garden/> and <https://www.facebook.com/PlumBayouGarden/>)
- Paul Patton, Ohio University: ENA paleoethnobotanist with a focus on Chenopodium and other lost crops, running extensive Chenopodium cultivation field trials.
- Benjamin Blackman, UC Berkeley: plant biologist interfacing extensively with the SI Youth Engagement through Science (YES!) program for engagement with genomics among high school interns, specialist in sumpweed and Asteraceae domestication genomics.
- Vanessa Gonzalez: Smithsonian Global Genome Initiative bioinformatician with RNA-seq wet lab and computational expertise, lead SI scientist on sumpweed genomics for the YES! program and sumpweed genome assembly.
- Daniel Williams, Ohio University: anthropology graduate student focusing on Chenopodium plasticity, breeding, and domestication, and active driver of lost crops outreach through a webpage (<http://lostcrops.org>) and the @LostCrops twitter feed.

Toltec Mounds Research Station — Academic & Service Activities

Grants, Honors & Awards

- Elizabeth Horton (ARAS-TMRS) is a collaborating researcher on “The Palette for Selection: Growing and Sequencing Lost Crops to Understand the Role of Plasticity in Plant Domestication.” Smithsonian Institution Grant Program, awarded to Logan Kistler (NMNH) and Natalie Meuller (Cornell University) for 2017.
- 2017 Award for Excellence in Heritage Preservation from Preserve Arkansas for the Gathering, Gardening, and Agriculture 5th Grade Social Science Curriculum written by Jodi Barnes, Emily Beahm, Elizabeth Horton, and George Sabo.
- \$600 grant from the Arkansas Archeological Society’s Archeological Research Fund, awarded to Timothy Mulvihill (ARAS-UAFS), Mary Brennan (USFS), and Elizabeth Horton (ARAS-TMRS) for radiocarbon dates from 3FR46.

Teaching & Higher Ed

- **UALR Anthropology Program.** Though not a faculty member, Horton maintains an active collaboration with area universities and colleges, to create hands-on opportunities and help train archeology students in central Arkansas. Below are her contributions for the 2017–2018 fiscal year.
 - Summer Internship in Ethnobotany and Paleoethnobotany for Hendrix College student, Jenna Bracas.
 - 2017–2018 Al Baleed Field School, UALR; PI – Dr. Krista Lewis (UALR), Co-directors, Kristy Miller (Estralla Mountain College) and Elizabeth Horton (ARAS) (3 trainees with one UALR student enrolled for credit).
 - Guest Lecturer: ANTH 3320, Buried Cities and Ancient Lives, UALR Department of Anthropology. Lecture Title, “From Foraging to Farming in Eastern North America; Understanding Pathways to Domestication” (22 students).
 - M.A. thesis committee member for Patrick Solomon, MALS program, University of Arkansas, Little Rock.
 - Presentation on “Integrating Public Archeology and Paleoethnobotany in the Plum Bayou Garden” to the Department of Anthropology Colloquium Series, University of North Carolina, Chapel Hill (97), and on-site consultation with administrators, faculty, and campus groups at UNC Research Laboratories of Archaeology about a Campus Native Gardens project.

Service to State Parks & Toltec Mounds Archeological State Park

- **Programs & Presentations.** Site tours of the park and Plum Bayou Garden for students from University of Central Arkansas and Hendrix College (15); Artifact ID Day at the park (3).
- **Archeological Consultation and Testing.** Ongoing monitoring of site-wide flooding issues at the park. Monitoring and mitigation, where needed, at several park development and infrastructure projects (septic tank installation; erosion cut in Plum Bayou Trail; erosion on Mound P; clearing overgrowth, topographic mapping by Katy Gregory, and remote sensing by Dr. Jami Lockhart on Mound L).
- **Education & Park Development.** Consultation with park staff on seasonal displays and public programming; Boy Scout projects at the park; maintenance of the Plum Bayou Garden; podcast and blog interview for Arkansas State Parks.

Professional Service

- **Professional Organizations.** Horton served as a member of the SEAC (Southeastern Archaeological Conference) Executive Board, as Chair (outgoing November 2017) of the SEAC Patty Jo Watson Award for Publication Excellence Committee, and provided peer review of works submitted to the journal *Southeastern Archaeology*.
- **ARAS.** Horton served on the ARAS Publications Committee and on the ARAS Digital Data Collection Initiative (DDCI) working group.

Public Service & Outreach

- **Programs & Presentations.** Horton helped host a reception at Toltec Mounds State Park for the Joint Arkansas and Oklahoma National Guard and Tribal Historic Preservation Officers Annual Consultation Meeting, giving a presentation to the group on “The First Farmers and Lost Crops: Integrating Experimental Archeology, Paleoethnobotany, and Public Archeology,” and tours of the Toltec Mounds site and Plum Bayou Garden (32); set up a demonstration booth on fiber and textile research at the ARAS coordinating office in Fayetteville for Celebrate Archeology Day during Archeology Month (220 visitors); Keynote speaker at the annual meeting of Arkansas Master Gardeners (about 100); artifact identifications for visitors to the park (4); assisted with the 4H Day of Archeology in McGehee (30).

- **Historic Cemeteries.** Assisted ARAS-UAPB research station in survey of the Hickory Grove Cemetery; assisted Natural Resources Conservation Service (NRCS) in site assessment at Nelson Cemetery 3PU528 in Pulaski County.
- **Plum Bayou Garden Seed Bank.** Requests fulfilled to the Eastern Band of the Cherokee, University of North Carolina Healthy Native Network, University of Tennessee, Cornell University, Ohio University; seed bank request and advising for two high school science fair projects in Illinois and Connecticut (re: *Chenopodium berlandieri* as a commercial crop).
- **ArcheOlympics.** A day of outdoor games allowing student teams to try their hand at ancient technologies such as spear-throwers (atlatls), and other games testing archeological knowledge. The 4th annual event was again coordinated by Horton and UALR's Krista Lewis, with help from Katy Gregory, and hosted by ARAS-TMRS at Toltec Mounds State Park. This is a popular Arkansas Archeology Month event.
- **Media Outreach.** Horton administers Facebook pages for the Toltec Mounds research station (www.facebook.com/ARASTMRS) and for the Plum Bayou Garden project (<https://www.facebook.com/PlumBayouGarden/>). Both are used to disseminate information about activities and research by the Arkansas Archeological Survey and Arkansas Archeological Society, and also other public archeology entities throughout the Southeast. The Plum Bayou Garden page has provided opportunities to increase public awareness about Arkansas's role within the American Southeast as a center of plant domestication, and to discuss ways in which this research can inform our understanding of relationships among people, plants, and landscapes in the past, present, and future.
 - Horton was interviewed on-air for "Good Afternoon Arkansas," KATV Channel 7.
 - Horton wrote a contribution for the Survey's Artifact of the Month web series.

Service to Arkansas Archeological Society

- **Chapter Presentations.** Horton gave a public talk at the Ark-Homa Chapter in Fort Smith (6) and led a Plum Bayou Garden and Toltec Mounds site tour for attendees of the 2017 Annual Meeting (20).
- **Central Arkansas Chapter.** Research station staff assist the Chapter as a liaison with statewide activities; the station hosted volunteer lab days for the Chapter and collaborated on several public outreach events through the year, including an archeology booth and intermission presentation at the Arkansas Symphony at the Movies "Raiders of the Lost Ark" concert.
- **Training Program.** Horton taught the basic excavation class at the 2018 training program at Pea Ridge.

Volunteer Hours

- Volunteers contributed 519 hours working on station research projects in the field, paleoethnobotany lab, and collections and archives during 2017–2018.



Parkin Archeological State Park Research Station

The Parkin research station was established in 1990 at Parkin Archeological State Park in Cross County. Its primary mission is to study the Parkin site and related sites in the region and to aid State Parks staff in interpreting and presenting this research to the general public. The Parkin site is a 17-acre Mississippian American Indian village located on the banks of the St. Francis River, and lies entirely within park boundaries. It has a large flat-topped earthen mound surrounded by hundreds of buried house remnants, and was enclosed by a log palisade and moat. Excavations in the 1990s showed that the site was settled as early as AD 1000 and was occupied at least until 1541, when the expedition of Hernando de Soto passed through the area. Parkin is believed to be the Indian village of Casqui that was visited by the Spaniards and described in the four written accounts left by survivors and chroniclers of the expedition.

Jeffrey M. Mitchem (Ph.D., University of Florida, 1989) is the Survey's Research Station Archeologist for Parkin Archeological State Park, and Research Associate Professor of Anthropology for the Department of Anthropology, University of Arkansas Fayetteville. He joined the Survey in 1990 to establish the Parkin research station, following appointments at Florida State University and Louisiana State University. His specializations include late prehistoric and early historic archeology of the Southeast and the Mississippi Valley, early Spanish contact sites in the New World, ceramic technology, glass bead studies, beads of Jordan and the Levant, Florida archeology, and the history of archeology in the Southeast. He is past President of the Society of Bead Researchers, and was recently elected to the Board of Directors of The Archaeological Conservancy.

E. Faye Futch earned an Associate of Arts degree in 2002 from Mid-South Community College and a B.A. in Interdisciplinary Studies with a Minor in African-American Studies from Arkansas State University in 2005. She joined the Survey staff in 1990. She helps process artifacts in the laboratory, greets visitors to the park and station, and is involved with the African American cemetery preservation initiative. Ms. Futch is working toward a Master's degree in History, with an emphasis in Public History, at Arkansas State University. She was promoted to Research Assistant in 2008, and now pursues local history research in northeast Arkansas.

Processing and Analysis of Richards Bridge (3CT11/22) Site Excavation Materials

In the summers of 2015 and 2016, Dr. Mitchem directed the joint Arkansas Archeological Survey and Society training programs, held in those years at the Richards Bridge site in Crittenden County. The overall project was co-directed with Timothy S. Mulvihill (ARAS-UAFS research station) and Dr. Jami J. Lockhart (ARAS-CSP). The two field seasons produced a very large amount of excavated material, all of which must be washed and sorted before it can be finally analyzed. Temporary laboratories in both seasons washed and sorted a great deal of material, but the site yielded large quantities of fired clay fragments along with artifacts, animal and plant remains, and soil samples that are still being processed at the Parkin research station.

Richards Bridge is important because it is located near the edge of what archeologists believe to be the boundary of Parkin phase territory. The investigations revealed that it was different from other known Parkin phase settlements in terms of layout, house form, and especially defensive features. Radiocarbon dates indicate that most of the site dates from as early as AD 1290, and some structures may have been built or occupied as late as AD 1615.

Washing and sorting of excavated material continues. This proceeds slowly because it is labor intensive, and it is difficult to get volunteers in the rural Parkin area. Most of the burned clay fragments are discarded at the site after being examined. This reduces the volume of the collections by a substantial amount, easing the burden of crowded storage conditions at the Parkin research station.

So far, the results from Richards Bridge call its identification as a Parkin phase village into some question. On the other hand, it does not readily resemble “typical” Nodena phase sites either. These uncertainties are probably related to the time of its occupation. In terms of current interpretations of northeast Arkansas prehistory, it was probably settled before well-defined chiefdoms developed in the region and before continuous warfare necessitated strategically located fortified villages.

Dr. Mitchem Elected to the Board of Directors of The Archaeological Conservancy

In the fall of 2017, Parkin research station archeologist Jeffrey M. Mitchem was elected as a member of the Board of Directors of the national site preservation organization The Archaeological Conservancy (<https://www.archaeologicalconservancy.org>). The Conservancy, founded in 1980, is dedicated to saving significant archeological sites in the United States. It accomplishes this by buying them or acquiring them by donation, retaining ownership and protecting them in perpetuity or until a suitable public entity can take over ownership. To date, over 500 archeological sites have been saved in this manner, including the Parkin site.

The Board of Directors is the group that decides what sites will be acquired. These decisions must be made considering a

number of factors, including archeological significance, potential for future research, and availability of funds. Dr. Mitchem has worked with the organization many times since he was hired by ARAS in 1990, both in the acquisition of sites and in helping to conduct tours, either by accompanying them as a guide or giving introductory talks.

The President of The Conservancy, Mark Michel, considers the Parkin site one of the organization’s best success stories. After its acquisition during the 1980s, the site was transferred to Arkansas State Parks, and not only was it included in Parkin Archeological State Park, which is open to visitors year round, but there is also ongoing research at the site that has yielded significant archeological and historical data. Dr. Mitchem looks forward to helping The Conservancy preserve more archeological sites in Arkansas and the rest of the country. Unfortunately, he missed his first Board meeting because he was in the hospital having his gall bladder removed!

Ms. Futch Completes National Register of Historic Places Nomination for Birdeye

The Birdeye Historic District Project was completed in the summer of 2018. The project began during the 2016 training program with Faye Futch, ARAS-Parkin research assistant, along with Arkansas Archeological Society members Debra Morse and Wendy Brooke. The aim was to nominate the historic Birdeye area west of Parkin to the National Register of Historic Places.

The project involved surveying seven Smith Family houses that included ancillary structures and features. Some of the ancillary structures included servant housing, storage, a party house for the children, tree houses, bulldog kennels, and an orchid house.

In addition, the Smith family’s commercial district consisted of six businesses. The commercial district included a business office and a grocery and clothing store that also served



Aerial photo of Birdeye (ca. 1927).



The time bell at Smith Farms in Birdeye.

as a post office with a zip code, as well as a Black Angus cow auctioning office. The Smiths ran a cotton business with an office, a gin that included a loading dock, and weighing scales. Several ancillary structures and features remain such as the propane storage pad used to fuel tractors and combines, an open shed used to store the farm equipment, a tower time bell to let employees know what time to go to work, go to lunch, return to work, and the end of the work day. There are remnants of a kerosene storage shed, a farm equipment repair shop, three large cow barns and a large multipurpose barn, two grain storage bins, an active horse stable, farm chemical storage shed, and the remnants of the first general store built in 1925.

In religion and education, there was once a Rosenwald School for the African American children of Birdeye, and two African American churches. In addition, the Spring Hill African American Cemetery is located at the intersection of Highways 163 and 42 at Birdeye.

The survey and documentation included taking photographs of the housing from all angles including the roof lines,



The old Post Office at Birdeye.

completing the resource and ancillary forms, determining the period of the housing, recording the geographic locations and UTM coordinates, use of Google Earth, etc. There were drawings of the roofs, windows, and doors, and each photograph included the historic name, address, and property owner, and resource numbers provided by the Arkansas Historic Preservation Office.

Smith family member Betty Cooper asked if she could finish writing the nomination. She was given the rest of the information and contact numbers, in case she needs assistance.

Dr. Mitchem Studies and Records Spanish Contact Collections in Florida

In June of 2018, Jeffrey M. Mitchem took advantage of a rare opportunity to study and record some private collections of Florida artifacts that could be evidence of sixteenth-century Spanish contact. These artifacts were excavated many years ago in uncontrolled conditions, and some have been bought or sold, further confusing where they were found and in what



A sixteenth-century Spanish helmet in a private collection in Florida.



An iron or steel lance head from Florida.



A sixteenth-century Nueva Cadiz Twisted glass bead strung with some shell beads. Possibly from Florida.

contexts. The owners are often secretive about these collections due to their monetary value and the danger of theft if they publicize that they own them. Dr. Mitchem was able to study the objects, agreeing to keep the owners' names confidential while also sharing the results of his analysis.

Dr. Mitchem has maintained a specialty in beads, armor and weapons, and other early Spanish contact artifacts since the 1980s. There are many unsubstantiated stories about discoveries and also artifacts looted from Peru and elsewhere for sale that continue to impede scientists studying legitimate artifact discoveries. Staying at the AWIARE Research Station on Weedon Island in St. Petersburg, Florida, he was able to visit private collectors and take the time to properly record information about these artifact collections, including details about when and where they were found. Some assemblages previously considered early contact artifacts were found to date much later. On the other hand, authentic early artifacts were also present that bolstered evidence from previously known early contact archeological sites.

As these collectors age, they are increasingly selling off large artifact collections, which unfortunately means that provenience information will be lost for many of them. While the collectors themselves knew a great deal of information about where each object was found, in most cases nothing was written down, which means that information is in danger of being lost or miscommunicated to subsequent owners. Dr. Mitchem will share artifact and site information with the Florida Master Site File as he finishes compiling the results of his study.

Parkin Research Station — Academic & Service Activities

Teaching & Higher Ed

- Mitchem supplied a guest lecture for Juliet Morrow's (ARAS-ASU) Introduction to Archeology and Introduction to Cultural Anthropology classes at Arkansas State University (combined, 30 students).
- Ms. Futch taught PSC 2003 44 American Government at East Arkansas Community College, Political Science Department, during the 2016–2017 fall semester (8 students).
- Mitchem shared information and photographs of artifacts from Cross County with a University of Memphis graduate student.

Service to State Parks and Parkin Archeological State Park

- Both Mitchem and Futch answer questions and assist park visitors on an as-needed basis.
- Mitchem helped with training two new Park Interpreters.
- Mitchem organized and led a meeting with architects, Arkansas State Parks personnel, and ARAS personnel regarding planning for two ANCRC-funded projects at the park: constructing a ca. AD 1500s house based on archeological information; and constructing a portion of the defensive palisade that once surrounded the Parkin site, along with interpretive panels.

Professional Service

Jeffrey Mitchem

- Editorial Board of *The Florida Anthropologist*.
- Florida Archaeological Council.
- Peer review for the journals *Southeastern Archaeology*, *The Florida Anthropologist*, and *American Archaeology*, The University Press of Florida, and for The National Science Foundation; read and commented on a new preface for a book to be reprinted by The University of Georgia Press.
- Publications Committee, Society of Bead Researchers.
- Director at Large (out-of-state), Board of Directors of the Florida Public Archaeology Network (FPAN).
- Elected to membership, Board of Directors of The Archaeological Conservancy; appointed to the Finance Committee.

Faye Futch

- Board member of the Cross County Historical Society.

Public Service & Outreach

Jeffrey Mitchem

- Advisory Board of the Alliance for Weedon Island Archaeological Research and Education in St. Petersburg, FL.
- Presented talks to a senior church group from West Memphis, Arkansas (17); the Spring River Gem and Mineral Club, Cherokee Village (60); and the Independence County Museum (30).
- Led tours at Parkin Archeological State Park for Scott Coopwood, Editor of *Delta* magazine (Mississippi) as background for a possible story; and members of the Spring River Gem and Mineral Club (16).
- Participated in an Artifact, Fossil, and Mineral ID Day at Parkin Archeological State Park (53 visitors) and an Artifact ID Day at Delta Gateway Museum in Blytheville (9 visitors) during Archeology Month.
- Consultation and assistance to the Museum of the Mississippi Delta (Greenwood, Mississippi) on development of new exhibits; the Arkansas Historic Preservation Program on planned construction of a communications tower in the city of Parkin; and the Mayor of Blytheville, a local citizen, and the Southeast representative of The Archaeological Conservancy concerning possible acquisition of the Chickasawba site.
- At the request of a collector in Florida, examined a collection purported to contain Arkansas artifacts.
- Prepared brief text for a sidebar on a Florida archeological site for an updated textbook being prepared by Dean Snow (Pennsylvania State University).
- Visited Florida to study and record private collections of early Spanish contact artifacts from sites in the Tampa Bay area (near where the Hernando de Soto expedition came ashore).

- Visited the Safety Harbor site (in a county-run park) in Safety Harbor, Florida to study archives housed there, and the Safety Harbor Museum (a city-run museum) to see exhibits and to consult with personnel.

Faye Futch

- Presented a talk at the Jonesboro Public Library Genealogy Night Lock-In, based on her research project “The History of an African American Historic Commercial District, Jonesboro, AR: 1910–1960.”
- Served as a member of the committee to bring an exhibit called “Home Town Teams” from the Smithsonian to the Cross County Museum.
- Continued to be involved with the African American Cemetery Preservation Initiative, working with the Scott Bond, Mt. Olive-Bedford, and St. Mark-Wittsburg cemetery projects, as well as local history research in northeast Arkansas.
- Presented programs on the history of the Northern Ohio School and Farm to 120 students in Arkansas schools during Black History Month and assisted at other stations, when necessary.

Service to the Arkansas Archeological Society

- **Programs & Presentations.** Mitchem gave public presentations to the Central Mississippi Valley Chapter in Jonesboro (15), and participated in a panel discussion “Arkansas Archeological Survey 50 Year Anniversary: What Have We Learned in 50 Years?” at the annual meeting in North Little Rock.



University of Arkansas at Fayetteville Research Station

The ARAS-UAF research station is located at the Survey coordinating office in Fayetteville, with additional office space in the Anthropology Department on the UAF campus. The station archeologist teaches in the Department of Anthropology at UAF and performs other faculty service to the Department and campus. The UAF station territory covers 12 counties and lies almost entirely within the Ozark Mountain region of northwest Arkansas. The archeology of the Ozarks is justly known for the excellent preservation of organic material such as basketry, textiles, woven sandals, and plant food remains in dry rock shelters. Large collections of such remains, excavated in the past from sites now inundated by reservoirs, are housed in the UA Collection Facility awaiting modern analysis. Station research in the last 40 years has broadened the archeological understanding of the region by focusing on ceremonial mound sites that link the Ozarks to the Mississippian and Caddo cultures. Other projects have emphasized historical sites left by pioneer Arkansans, Civil War related sites, and environmental history.

Jamie C. Brandon (Ph.D., University of Texas at Austin, 2004, Station Archeologist) has over 25 years of experience in the field of archeology, working at all stages of investigation and on sites dating from the Pleistocene to the twentieth century. He has been involved with projects in 13 southeastern states, and has authored or coauthored publications and/or technical reports on research in seven of those states. Dr. Brandon has worked with the Arkansas Archeological Survey in various capacities since 1997. He was the Survey's Research Station Archeologist at SAU/Magnolia for nine years before moving to the UAF station beginning with the Fall 2014 semester. He is also Research Associate Professor of Anthropology for the University of Arkansas Fayetteville and teaches on the UAF campus. His research interests include historical archeology of the 19th century South, prehistoric and historic cultures of the Midsouth and Arkansas Ozarks, Ozark bluff shelters, cultural resource management, historical memory, and working with descendant communities.

Jerry E. Hilliard (M.A., University of Arkansas, 1980, Research Associate) moved to the position of Research Associate for the UAF station in 1994 after 15 years with the Survey doing public archeology, records management (he was a former Survey registrar), and research on prehistoric and historic sites in the Ozarks. His specializations include American Indian rock art and historic archeology in northwest Arkansas, especially Civil War related sites and Fayetteville area sites. He also worked closely with local volunteers from the Ko-ko-çi Chapter of the Arkansas Archeological Society. Hilliard retired at the end of calendar 2017 after 38 years of service to the organization.

Michael Evans (Research Associate) has been with the Survey since 1991, working with the sponsored research program on projects throughout Arkansas and in neighboring states. He has developed specialized skills including advanced mapping technologies, GIS, AutoCAD and Surfer map production, data editing and management, geophysical fieldwork and data interpretation, archeological fieldwork planning and supervision, project background research, and report production. Evans is interested in flintknapping, traditional methods of construction and architecture, blacksmithing, and primitive technology and replication. Beginning January 2018 he was reassigned from ARAS-SRP to become one of the UAF station assistants. He will continue to lend his skills to other collaborative projects around Arkansas.

Jared Pebworth (Research Associate) is a member of the Choctaw Nation of Oklahoma and has been with the Survey since 1991, working with the sponsored research program on projects across Arkansas and in several neighboring states. Pebworth is well versed in field and laboratory logistics, geophysical fieldwork, site mapping, historic and prehistoric material culture, metal artifact conservation, and the reproduction of traditional technologies. Pebworth is interested in historic archeology and traditional Ozark architecture as well as lithic raw material studies and replication. He is also an excellent artifact photographer. Beginning January 2018 he was reassigned from ARAS-SRP to become one of the UAF station assistants. He will continue to lend his skills to other collaborative projects around Arkansas.

Jerry Hilliard Retires

At the end of 2017 ARAS-UAF research station assistant Jerry Hilliard retired after 38 years of service. Hilliard had been with the Survey since 1979, and he made an incredible impact on the organization as both an archeologist and mentor.

Hilliard originally hails from North Carolina. After receiving his B.A. in anthropology from East Carolina University, he moved halfway across the country to get his M.A. from the University of Arkansas. Hilliard began working for the Arkansas Archeological Survey almost immediately—first as an assistant compliance officer (1979–1983), then as the Survey registrar (1983–1994), and finally, with the UAF research station (1994–2017).

He was also an asset to the Arkansas Archeological Society. He helped found the Ko-ko-ci Chapter of the Arkansas Archeological Society in the mid-1990s, he often taught mapping and site survey seminars at the annual training program, and he coordinated the certification program for more than a decade.

Listing all the contributions that Hilliard has made to the Survey (and to Arkansas archeology in general) would be impossible here, but some of his standout projects and publications include: his thesis on nut utilization in Ozark bluff shelters; excavations at Mount Comfort Church; reanalyzing bluff shelter collections from Craddock, Brown Bluff, and The Narrows; excavations at The Narrows; locating the Confederate encampment at Cross Hollows; excavations at Van Winkle's Mill; analysis of collections from the Spradley Field site; and



Jerry Hilliard spelunking at Devil's Den State Park.

excavations at Prairie Grove Battlefield. He was a huge asset to other projects such as Dr. George Sabo's NEH-funded Arkansas rock art and Carden Bottoms projects.

The UAF Research Station Welcomes Jared Pebworth and Michael Evans

The ARAS-UAF research station formally welcomes our “new” station assistants—Jared Pebworth and Michael Evans. Mike and Jared are no strangers as they have worked for the Arkansas Archeological Survey since 1991. For almost 30 years, as an integral part of the Survey’s sponsored research program, Pebworth and Evans have done archeology in virtually every corner of the state and in parts of Louisiana, Mississippi, and Oklahoma. Pebworth and Evans are well versed in field and laboratory logistics, historic and prehistoric material culture, advanced mapping technologies, metal artifact conservation, and the reproduction of traditional technologies.

Evans and Pebworth already had collaborated on many projects with the UAF station; recent examples include our fieldwork at Pea Ridge National Military Park, Breckenridge Shelter, and Cane Hill, and our work with older collections from Saltpeter Cave (see below). We are pleased that they have made a home under the ARAS-UAF research station banner.



Michael Evans and Jared Pebworth visiting with a landowner about artifacts found on his property (ARAS-UAF digital photo).

Archeology at Pea Ridge National Military Park

This year the UAF research station (in conjunction with the ARAS computer services program and the SAU research station) continued our multi-year research effort on the Pea Ridge National Military Park. The park commemorates and interprets the Civil War battle that took place on the site in 1862. Some



Dr. Carl Drexler (ARAS-SAU) showing U of A student Jamie Middleton how to use the digital field data capturing system during a pilot project at Foster’s Field at Pea Ridge (ARAS-UAF digital photo).

16,000 Confederate soldiers from Arkansas, Missouri, Texas, and Louisiana fought 10,500 troops from Ohio, Illinois, Iowa, and Indiana for control of northwest Arkansas. The battle earned the nickname “the Gettysburg of the West,” not only for the fierceness of the fighting, but also for the strategic implications of the battle—by losing at Pea Ridge the Confederates effectively ceded control of Missouri (and all-important St. Louis) for the duration of the war.

This project is a collaborative endeavor with the National Park Service and is a part of the federal Cooperative Ecosystem Studies Units (CESU) program. The first phase was a pilot project in 2015–2016 that tested a methodology combining large-scale remote sensing with traditional battlefield archeology techniques to gain a picture of the cultural resources on the battlefield at Ruddick’s Field. In the second year (2016–2017) of the CESU, our focus shifted to Leetown hamlet. Leetown was a small community on the western edge of the battlefield during the Civil War. It played an important role during the battle as a hospital for the numerous wounded, but the town faded away before the turn of the century, leaving little in the way of accurate maps. A limited amount of archeology was conducted at the hamlet in the 1960s as part of the initial National Park Service assessment, and 12 years ago an M.A.



Volunteers excavating at the Lee/Mayfield House during the ARAS/AAS Summer Training Program at Pea Ridge National Military Park (ARAS-UAF digital photo).

thesis attempted to explore the site with a combination of aerial and ground-based remote sensing techniques. However, neither of these projects were conclusive about the number and types of buildings present at Leetown during the battle of Pea Ridge. Our work at Leetown in 2016–2017 used a combination of historic maps, remote sensing data, and test excavations to identify the location of historic structures in the Leetown vicinity, and to assess their function and dates of occupation.

This year we continued our work at the Leetown hamlet and expanded to investigate two other farmsteads—Foster’s and Clemens’ farms. In addition, we investigated battlefield areas north and east of the Elkhorn Tavern and Foster’s field—the origin point for the battle.

Spring 2018 Battlefield Archeology and Geophysical Surveys

In March of 2018 we initiated two concurrent projects—one oriented toward battlefield archeology and one conducting remote sensing in advance of summer excavations. Jared Peabworth and Mike Evans assisted Dr. Jami Lockhart (ARAS-CSP) with magnetometry surveys at Foster’s Field and the Clemens house site. Meanwhile, Dr. Brandon, students, and over 40 volunteers assisted Dr. Carl Drexler (ARAS-SAU) with battlefield

archeology along the broad ridge to the northeast of Clemens’ Farm (38 acres) and the terrace to the north of Elkhorn Tavern (14 acres). This work recovered almost a thousand Civil War-related artifacts and identified an artillery position whose location had been debated by historians.

Summer 2018 University of Arkansas Field School and Arkansas Archeological Society Training Program

The 2018 Arkansas Archeological Society and Arkansas Archeological Survey Summer Training Program was held at Pea Ridge National Military Park in northwest Arkansas. Between June 9th and 24th, over 100 volunteers from the Arkansas Archeological Society worked alongside the staff of the Arkansas Archeological Survey to investigate several sites around the park—including portions of the battlefield and farmsteads that were occupied during the battle. The dig was co-directed by Dr. Jamie Brandon (ARAS-UAF) and Dr. Carl Drexler (ARAS-SAU). The training program was held in conjunction with the 2018 University of Arkansas archeological field school (May 29–June 29) directed by Dr. Drexler.

Society training program volunteers concentrated on expanding excavations at Leetown and conducting initial excavations at the Clemens Farm. We identified important architectural features of the 1840s Lee/Mayfield House, home to the founder of the Leetown settlement, and explored the detached kitchen and several other outbuildings with the intent of identifying their function and dates of occupation. At the Clemens Farm site limited testing has revealed evidence that will change the public interpretation of the site. The foundations currently interpreted as the Clemens House in fact represent a barn dating to the early twentieth century, while a rubble zone to the west of these well-defined foundations appears to have been the nineteenth-century Clemens family home.

The 2018 University of Arkansas archeological field school explored possible locations of the Foster Farmstead and conducted battlefield archeology across Foster’s Field. Society volunteers assisted with these tasks during the second field session of the training program.

Ongoing Artifact Analysis

Artifact analysis and write-up of the Pea Ridge materials will continue through the next fiscal year. A number of undergraduate interns, directed by Dr. Brandon and graduate student Victoria Jones, will be working through the fall 2018 semester to analyze the material recovered this summer.

Bluff Shelters in the Arkansas Ozarks

Despite our deep and continued involvement in the archeology at Pea Ridge battlefield, we found time to continue our region-wide research into Ozark bluff shelters. Prehistoric occupations in Ozark bluff shelters are a unique and important resource not only for Arkansas, but for the entire mid-continent. It is very rare that perishable remains like textiles, seeds, and basketry are preserved in archeological contexts, and dry bluff



Jerry Hilliard and Jared Pebworth discussing the projectile points from Saltpeter Cave (Photo Jamie Brandon).

shelters in Arkansas have more of these preserved items than most places in North America. At the same time, these precious sites, many considered sacred by Native American groups, are increasingly endangered by looting. Through continuing and new research projects, the UAF station is working to document bluff shelters in the region, and to interpret existing bluff shelter collections for the public.

Saltpeter Cave

Last fiscal year we completed an ANCRF-funded project to conduct limited analysis, rehabilitation, and interpretation of collections excavated from Saltpeter Cave (3NW29). The Arkansas Archeological Survey conducted excavations at Saltpeter Cave in Newton County in 1969 and 1970. Ken Cole, the first research station archeologist for ARAS at Arkansas Tech (then Arkansas Polytechnic College) conducted two seasons of excavation into this shelter, which had been visited previously by the University of Arkansas Museum in 1934. Cole excavated nine test units, the deepest of which contained almost 14 feet (4.11 m) of archeological deposits representing at least 9,000 years of Arkansas history. This deep, stratified deposit is all the more important to researchers as it is one of the few Arkansas bluff shelters investigated using modern excavation techniques. Thus, unlike the materials from the Dellinger excavations of the 1930s, researchers have detailed stratigraphic records, along with approximately 450 diagnostic hafted bifaces, and 42 radiocarbon samples. Unfortunately, Cole left the Arkansas Archeological Survey shortly following these excavations, leaving the collection curated but largely untouched for 47 years.

This year we continued our work with the Saltpeter Cave collections beyond the scope of the initial grant. In the fall, a series of four radiocarbon assays were obtained in order to confirm the integrity of the stratigraphy of the deep deposits and to date the Early Archaic square-stemmed horizon (containing Rice Lobed and Taney projectile points and other variants), the appearance of side-notched (White River) points, and a depositional discontinuity that lies in between. ("Horizon" is an archeological term that refers to the appearance of a distinctive cultural trait at about the same time over a wide area; the horizons mentioned in this paragraph are changes in stone projectile point styles that may indicate other social or adaptive change, or even population shifts.) These radiocarbon determinations date the early portion of this stemmed horizon to between 9010 and 8774 calibrated radiocarbon years before present and the side-notched horizon (directly above the discontinuity) at 7839–7689 calibrated radiocarbon years before present. This is the first date on strata with a substantial Taney occupation, and we hope that it is just the beginning of research with the Saltpeter Cave collections. The results from this work were reported in a paper at the Southeastern Archaeological Conference (see below) and are being prepared for publication. Additionally, planning is under way for a thesis project using the faunal remains from Saltpeter Cave.

Arkansas Bluff Shelter Symposium

Dr. Brandon and Lydia Rees organized a symposium called "Bluff Shelters: Past Present and Future Research" for the 74th annual meeting of the Southeastern Archaeological Conference in Tulsa, Oklahoma. As we rapidly head toward 100 years of Ozark bluff shelter archeology, this session aimed to take stock, summarize the history of investigations, discuss current work, and contemplate the directions that future inquiry may take.

The symposium included nine papers and a discussant (Dr. George Sabo) ranging from large overviews of the archeology (Jamie Brandon and Lydia Rees) and paleoethnobotany (Gayle Fritz and Elizabeth Horton) in bluff shelters to looks at future directions in research (Natalie Mueller and Logan Kistler) and case studies of current bluff shelter research (James Rees, Devin Pettigrew and Jared Pebworth, Marvin Kay and Jerry Hilliard, Brian Andrews, and Lydia Rees, Jared Pebworth and Jamie Brandon). The session was well received and plans are under way for its publication.

Bluff Shelter Website Receives Preservation Award

"Bluff Shelters of the Arkansas Ozarks" (<https://archeology.uark.edu/ozarkbluffshelters/>), which went live in fall 2016, won an award for Outstanding Achievement in Preservation Education in the 2017 Arkansas Preservation Awards. This award recognizes any individual or entity making a significant contribution to the cause of historic preservation in Arkansas through education.



Graduate students Breanna Wilbanks and Victoria Jones standing in front of Ms. Jones' and Dr. Brandon's poster on the 2017 excavations at Leetown at the annual meeting of the Society for Historical Archaeology in New Orleans (ARAS-UAF digital photo, 2018).

Bluff Shelter Public Outreach

Aside from our online outreach efforts, the UAF research station (often with the assistance of Lydia Rees) conducted nine public programs about bluff shelters in the Arkansas Ozarks—including two guided hikes to Walker Shelter on the Back 40 Trails in Bella Vista, Arkansas. Additionally, throughout the year both Brandon and Rees consulted with the Shiloh Museum of Ozark History, which is in the process of creating an Ozark bluff shelter exhibit as a part of ongoing updates to the museum's permanent exhibit space.

Jacob Wolf House

The Jacob Wolf House is a two-story log structure that stands on a hillside overlooking the juncture of the White and North Fork Rivers in the present-day town of Norfork in Baxter County. It was constructed in 1829 as the first permanent courthouse for Izard County in Arkansas Territory and is the oldest standing public structure in Arkansas.

The ARAS-UAF station is in the initial stages of a research project at the Jacob Wolf House. In cooperation with the Department of Arkansas Heritage we will investigate the grounds surrounding the historic structure during the development of

new interpretation and new construction at the site. This spring Michael Evans and Jared Pebworth assisted Dr. Jami Lockhart (ARAS-CSP) in conducting a multi-sensor remote sensing survey of the 3 acres surrounding the Wolf House. We are scheduled to conduct limited excavations next fiscal year with the help of volunteers from the Three Rivers Chapter of the Arkansas Archeological Society.

Graduate Student Research

The station worked closely this year with three Department of Anthropology graduate students doing research in the area. Victoria Jones is working on an M.A. thesis about the 2017 field school excavations at the Leetown hamlet in Pea Ridge National Military Park. Dr. Brandon is her thesis advisor. Lydia Rees, another M.A. student, is studying prehistoric ceramics in the Arkansas Ozarks with Dr. Wesley Stoner, a ceramic and material science specialist in the Department of Anthropology, as her advisor. Breanna Wilbanks entered the M.A. program with an interest in folk medicine and feminist archeology. Dr. Brandon is Breanna's thesis advisor. See pages 8–9 for more about these students and their research projects.

UAF Research Station — Academic & Service Activities

Teaching & Higher Ed

- **UAF Anthropology Department.** Brandon taught two courses: ANTH 3023, Approaches to Archeology (26 students), and ANTH 4813/5813, Ethnographic Approaches to the Past (15 students) during the 2017–18 academic year.
- Brandon served on 8 University of Arkansas graduate student committees (6 M.A./2 Ph.D.). Of these, he was chair of 5 anthropology M.A. committees and one anthropology Ph.D. committee.
- Brandon also was chair of 2 committees for the University of Arkansas undergraduate Honors College (anthropology).
- Brandon assisted twice with visiting tours to the Arkansas Archeological Survey for Introduction to Archeology (ANTH 1033) classes.
- Dr. Brandon took part in the University of Arkansas's Anthropology Department Open House.
- Jared Pebworth assisted with an atlatl construction workshop and atlatl practice for the University of Arkansas "AnthroHogs" ArcheOlympics team; competition was at Toltec Mounds Archeological State Park in March.

Professional Service

- **ARAS Committees.** Brandon served as Chair of the ARAS Personnel Committee, and as a member of the Web Steering Committee and the Digital Data Collection Initiative (DDCI) working group.
- **Professional Organizations.** Brandon served on the Editorial Board of the Society for Historical Archaeology, as Judge for the 2018 SHA Student Paper Prize, and as Judge for the 2018 Arkansas Historic Places Film Prize.

Public Service & Outreach

- **Boards & Committees.** Brandon served as Chair of the State Review Board for Historic Preservation; Secretary of Preserve Arkansas; board member of the Arkansas Humanities Council; and Vice-Chair of the City of Fayetteville, Woolsey Farmstead Steering Committee.
- **Presentations & Programs.** Brandon gave talks at Spring River Gem & Mineral Club in Cherokee Village, AR (35), the Mind Stretchers Club, Fort Smith, AR (29), Hobbs State Park (75), Butterfield Trail Village (40), and the Searcy County Historical Society in Marshall, AR (33); Brandon and Lydia Rees led two Walker Shelter/Back 40 Bluff Shelter Hikes in Bella Vista (85 & 72), and gave a talk at the Butler Center for Arkansas History's "Legacies & Lunch" program in Little Rock (52); Jared Pebworth and Michael Evans took part in the Hobbs State Park Fall Festival in Rogers, AR (800 visitors); Brandon, Pebworth, and Evans participated in the 5th annual Celebrate Archeology Day, an Arkansas Archeology Month event in Fayetteville (220); Brandon taught a class on Ozark bluff shelters to the Osher Lifelong Learning Institute in Fayetteville (20) and spoke about archeology at the Oakdale Middle School Career Day, Rogers, AR (100).
- **Tours & Workshops.** Brandon, Pebworth and Evans helped give a tour of the Arkansas Archeological Survey & the University of Arkansas Museum Collections to 4-H State O-Rama (25); Brandon taught a half-day Naturalist in Training (NIT) workshop on archeology and Ozark bluff shelters to the North Central Arkansas Master Naturalists, Bull Shoals (35); Jared Pebworth and Lydia Rees assisted with the Osage Nation's Heritage Tour by showing and talking about ongoing archeological research in the Ozarks, at the coordinating office in Fayetteville (30).
- **Media Outreach.** Brandon manages an active social media presence on Facebook, Twitter, and Instagram for the ARAS-UAF research station. Brandon was interviewed several times during the year for local and University news outlets.
- **Consultations.** ARAS-UAF station staff provided consultation and advice about various archeological projects and concerns to: the City of Fayetteville (stabilization and archeology of the Woolsey Farmstead); the Bella Vista Museum & the Bella Vista Trail System (looting in bluff shelters along the Bella Vista trail system); private landowners (potential historic graves on a Bentonville property); the Shiloh Museum of Ozark History (development of a bluff shelter exhibit); Flat Earth Archeology, LLC (excavations at Ruppel Road, in Fayetteville); Thaden Academy in Bentonville (development of an archeology program for the school).
- **Artifact Identification, Citizen Inquiries.** Brandon, Pebworth, and Evans fielded a number of calls, "drop-ins," and house visits regarding artifacts, sites, and general questions.



Jared Pebworth showing a visiting group from the Osage Nation artifacts from Saltpeter Cave (ARAS-UAF digital photo, 2018).

Service to the Arkansas Archeological Society

- **Chapter Presentations.** Brandon gave talks to the Three Rivers Chapter in Mountain Home (20), the Central Arkansas Chapter in Little Rock (25), the Ko-ko-ci Chapter in Fayetteville (30), the Ark-Homa Chapter in Fort Smith (10), and the Arkansas River Valley Chapter in Russellville (12).
- **Ko-ko-çi Chapter.** Brandon assisted with scheduling speakers for the monthly Ko-ko-ci Chapter meetings and edited the Ko-ko-ci Newsletter.
- **Three Rivers Chapter.** Brandon assisted the new Three Rivers Chapter in Mountain Home by helping to line up speakers, and giving general advice about typical chapter activities.

Volunteer Hours

- Volunteers (Society members, UAF anthropology students, and others) contributed 9,080 hours to station projects during 2017–2018. This includes hours contributed during the training program and field school at Pea Ridge.



University of Arkansas - Fort Smith Research Station

The ARAS-UAFS research station was established in 2005 at the request of the University of Arkansas - Fort Smith campus. The University purchased the Drennen-Scott House, 1838 home of the City of Van Buren founder, businessman, and Indian Agent John Drennen, with plans to use the property as a museum and training center for their Historical Interpretation degree program. The station's responsibilities include archeological investigations at the Drennen-Scott site and other assistance to the program at UAFS, working with the Ark-Homa Chapter of the Arkansas Archeological Society and other outreach activities in the Fort Smith area, and archeological research in the Arkansas River Valley between Fort Smith and Clarksville in cooperation with the UAF and WRI research stations.

Timothy S. Mulvihill (M.A., University of Arkansas, 1996) joined the Survey in 1989 as station assistant at ARAS-ASU, then moved to the Parkin research station, where he was station assistant from 1991–2005. In late spring of 2005, Mulvihill moved to Fort Smith to establish the new UAFS research station. His interests include Woodland and Mississippi period archeology, site survey methodologies, and mapping.

Rachel Jones & Shanna Carney (part-time assistants). Rachel Jones is a UALR anthropology student who attended the 2018 training program. Shanna Carney is a student at UAFS.

Mulberry River Sites

A cooperative study was initiated with the USDA Forest Service in early 2017 for work at two sites (3FR46 and 3FR58) in the Mulberry River drainage that are located on U.S. Forest Service land. Volunteer and student crews, guided by professionals, investigated these sites over the two-week Arkansas Archeological Society and Survey training program in June 2017. Since that time, Mulvihill and Mary Brennan (co-director on the project and recently retired Ozark National Forest archeologist) have started on the analysis of artifacts recovered during the fieldwork. People who used the Woolsey site (3FR46) during the Woodland and Mississippi time periods manufactured stone hoes from argillite, a locally available siltstone. This activity produced thousands of argillite flakes, along with many hoes and hoe fragments, that were recovered during the excavations. This laboratory work has continued throughout the year.

Rachel Jones, a UALR anthropology student who attended the training program, was hired to process the flotation samples from the excavations. This work was done under the training and supervision of Dr. Elizabeth Horton at the ARAS-Toltec Mounds research station. Jones and Horton have also begun the analysis of the processed flotation samples.

We accomplished additional fieldwork at 3FR46 during the month of October with the help of Survey and Forest Service staff and volunteers. During this time, excavation of two pit features discovered during the training program was completed. One of these pits, Feature 1, was the first open-site storage pit to show evidence of a grass lining that has been found in Arkansas. The grass lining served to help protect stored crops buried in the pits. Several other anomalies seen in the geophysical survey were also tested to determine if they were pit features. Unfortunately, no other pit features were identified.

In the spring of 2018, Shanna Carney, a student at UAFS, was hired part-time to help with the cleaning, numbering, and rough sorting of artifacts not yet processed from the training program and the additional fieldwork. A grant was obtained from the Arkansas Archeological Society's Archeological Research Fund (ARF) to radiocarbon date two samples from the pit features found on 3FR46.

Water Screening and Flotation Backlog

For two weeks during the month of July, Mulvihill worked to process a backlog of water screen samples from previous excavations at the Drennen-Scott (3CW1050) and Pruitt



Graduate students Michelle Rathgaber and Sarah Shepard helping with October excavations at 3FR46. ARAS-UAFS DSC_1822, 2017, digital photo by Tim Mulvihill.



Archeologists monitored as heavy equipment was used first to clean the east side of Cavanaugh Mound in Fort Smith so a profile of mound construction could be observed, then as soil was added to rebuild and stabilize the mound, preventing further erosion (ARAS-UAFS DSC-1751 and DSC_1807, 2017, digital photos by Tim Mulvihill).

(3LO769) sites. Approximately 50 bags of soil were water screened. UALR student Rachel Jones also processed several flotation samples from these sites. The water screening processing took place at the ARAS coordinating office in Fayetteville because the ARAS-UAFS research station does not currently have a convenient location for water screening. The processing of these samples alleviated some of the space problems at the station.

Pevehouse Cemetery

During the fall Mulvihill completed a digital map and grave inventory of the Pevehouse Cemetery for the owners, who are trying to nominate the site to the National Register of Historic Places. The mapping fieldwork had been completed during the winter and spring of 2017 with the assistance of students as part of an Interpreting Death class at UAFS. The cemetery contains the remains of some of the early settlers of Crawford County, as well as continued use by other families.

Willhaf House and Drennen-Scott Historic Site

Mulvihill consulted during the ongoing planning for rehabilitating the UAFS-owned Willhaf house (3CW1297), which was built circa 1840. Work also continued on the cleaning and analysis of artifacts excavated this past fall from Willhaf and previously from the Drennen-Scott Historic Site (3CW1050), also owned by UAFS. Mulvihill, assisted by Jared Pebworth and Mike Evans, investigated a possible filled-in cellar window by excavating a test unit along the outside wall at the Willhaf House (see photo on page 40).

In late March and early April, as part of an Introduction to Archeology class taught by Mulvihill at UAFS, two weeks were spent excavating with students in the backyard of Drennen-Scott. One excavation unit was reopened below the former

location of the detached kitchen. Another was opened near the eastern edge of the backyard where it was discovered that the cultural deposits were much shallower. This is always a popular activity for the class, allowing the students to have a direct experience of archeological fieldwork and really get a sense of the process of archeology. Each student is required to participate for five hours as part of the class. Students also participate in other hands-on activities to learn about flintknapping (the process of making flaked stone tools) and pottery-making during the course.

Cavanaugh Mound 3SB3

In early August of 2017, Mulvihill, along with Survey Director Dr. George Sabo III and ARAS-WRI station assistant Larry Porter, monitored the repair of the east side of the Cavanaugh Mound (3SB3), a prehistoric Indian mound located within the city limits of Fort Smith. The mound was acquired by The Archaeological Conservancy around 2006 and this year they undertook the large expense to rebuild the eastern side of the mound. This portion of the mound had been eroding quite badly for some time. It was originally damaged in the 1960s and 70s when one of the previous landowners allowed dirt to be removed from the east side for use as fill.

The family who owned the land in the latter part of the 1800s had established a family cemetery on top of the mound. In 2015, part of one of those graves began to erode out of the east face of the damaged mound. As work was conducted, Survey personnel took the opportunity to record and photograph exposed profiles of the prehistoric Indian mound. Jessica Crawford, Southeastern Representative for The Archaeological Conservancy, also assisted with the data recording. During this work, no artifacts were recovered, which is consistent with previous accounts of no artifacts ever being found in association

with the mound. However, the stratigraphy showed clear stages of construction of the mound, and in one case, a few feet down from the top of the mound, showed two postmolds extending down from a previous occupational surface of the mound. Unfortunately, no features containing charcoal were encountered,

which could have been used to obtain a radiocarbon date. The mound was restored using contrasting soil so it could be easily distinguished from the original mound fill, and sod was added to stabilize the surface.

UAFS Introduction to Archeology student excavating at Drennen-Scott Historic Site (ARAS-UAFS DSC_2137, digital photo by Tim Mulvihill).



UAFS Research Station — Academic & Service Activities

Grants, Honors & Awards

- \$600 grant from the Arkansas Archeological Society's Archeological Research Fund, awarded to Timothy Mulvihill (ARAS-UAFS), Mary Brennan (USFS), and Elizabeth Horton (ARAS-TMRS), for a radiocarbon date from 3FR46.

Teaching & Higher Ed

- Mulvihill taught ANTH 2203, Introduction to Archaeology (9 students) during Spring 2018 at UAFS.
- Ongoing consultation and archeological research at the Drennen-Scott Historic Site and the Willhaf House (properties owned by UAFS).

Public Service & Outreach

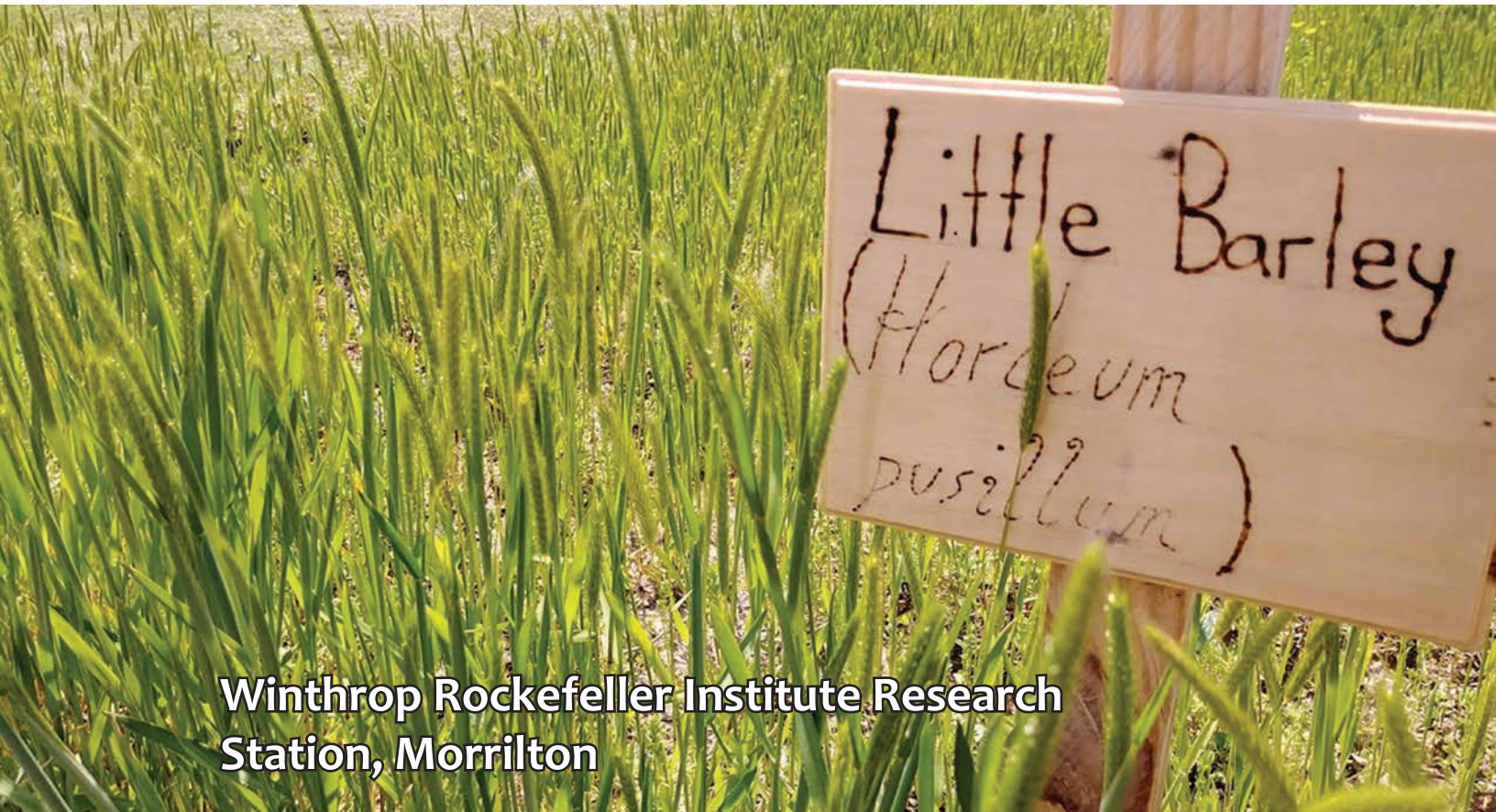
- **Archaeological Conservancy.** Mulvihill, with other ARAS staff, consulted with the Conservancy about planned repairs to the Cavanaugh Mound in Fort Smith, monitored the restoration, and will continue to observe conditions at the site (owned by the Conservancy).
- **Programs & Presentations.** Mulvihill gave talks to the Mind Stretcher Lecture Series in Fort Smith (36), and (with Jami Lockhart, Jared Pebworth, and Michael Evans) the Crawford County Chronicles lecture series in Van Buren (20).
- **Public Schools.** Mulvihill gave presentations on archeology to the Mountainburg School 4H Club (44 students) and to Van Buren Homeschoolers.
- **Media Outreach.** Mulvihill administered a Facebook Page for the ARAS-UAFS research station.

Service to the Arkansas Archeological Society

- **Chapter Presentations.** Mulvihill gave public talks to the Ark-Homa Chapter in Fort Smith (11), Ko-ko-ci Chapter in Fayetteville (17), Tunican Chapter in Monticello (14), Central Arkansas Chapter in Little Rock (7), Three Rivers Chapter in Mountain Home (28), and another co-authored presentation to Ko-ko-ci Chapter in Fayetteville (22).
- **Training Program.** Mulvihill continued analysis of finds from the 2017 training program, which he co-directed.
- **Ark-Homa Chapter.** The station advises and supports the Ark-Homa Chapter of the Society serving the Fort Smith area. Mulvihill makes arrangements for guest speakers and provides information to UAFS for press releases. He served as Chapter treasurer during 2017–2018. The station hosts lab sessions for Chapter members and provides fieldwork opportunities for volunteers.

Volunteer Hours

- Volunteers contributed 356.5 hours to station research projects in the field and laboratory during 2017–2018.



Winthrop Rockefeller Institute Research Station, Morrilton

The ARAS-WRI research station is located on the campus of the Winthrop Rockefeller Institute on Petit Jean Mountain. The Institute was established in 2005 as an educational and conference center of the University of Arkansas System. “The Rockefeller Institute’s mission is to develop diverse programs that nurture ideas, policies and activities to make life better in Arkansas.” The WRI research station of the Survey conducts archeological research in 11 counties of mountainous west-central Arkansas, including the southern fringe of the Ozarks (the Boston Mountains) and a large portion of the Ouachitas. The two mountain ranges incorporate varied upland and river valley environments and are separated by the Arkansas River corridor. Examples of important archeological resources in the station area range from rock shelters and rock art sites—including Indian Rock House in Van Buren County and numerous pictographs and petroglyphs at Petit Jean State Park in Conway County that are listed on the National Register—to finely made prehistoric ceramics from Carden Bottoms in Yell County—to the early 19th century town of Cadron in Faulkner County, also on the National Register of Historic Places.

Emily Beahm (Ph.D., University of Georgia, 2013) joined the Survey as an assistant at the WRI research station September 1, 2013 and was promoted to station archeologist beginning July 2015, and is also a Research Assistant Professor of Anthropology for the Department of Anthropology, University of Arkansas Fayetteville. Her major fields of interest are archeology of the eastern United States, Mississippian culture, ceramics, regional settlement patterns, social interaction, style, and iconography. Before coming to the Survey, she worked primarily in Tennessee and Georgia, with experience in directing major field projects, college teaching, and archival research.

Larry Porter is a native of Logan County, Arkansas, and has been a member of the Arkansas Archeological Society since 1979. He participated in summer training programs and spent eight years doing contract archeology for various private firms, mostly in the Ouachita National Forest, before joining the Survey in 1999 as archeological assistant at the ATU (now WRI) research station. His interests include the prehistoric Woodland and Mississippi periods of the northern Ouachita Mountains and Petit Jean River Valley, as well as early historic settlement in Arkansas. He is also an accomplished artist whose depictions of archeological subjects have appeared in publications and museum exhibits.

Bluff Shelter Research

The ARAS-WRI station continues analysis of material from bluff shelter site 3CN362, located on Petit Jean Mountain. In addition, Dr. Beahm conducted an inventory of bluff shelter collections held at the WRI station, Pope County bluff shelter material held at the Arkansas Tech Museum, and the collections held at Petit Jean State Park for comparison to the 3CN362 material.



Ongoing analysis of faunal material from 3CN362 (ARAS-WRI digital photo).

Collections Work

The WRI station accessioned donated collections from 41 sites from July 2017 to June 2018. Beahm and Porter continued to work on inventorying and rehabilitating existing collections housed at the ARAS-WRI research station. Dr. Beahm has also begun working on interpreting material from existing collections from sites 3CE68 and 3PP17, both excavated in the 1970s.



Ceramic sherds from 3PP17 sorted in the ARAS-WRI lab (ARAS-WRI digital photo).

Partnership with Arkansas Tech University

The ARAS-WRI research station has had a long history with Arkansas Tech University. The station was originally located at Arkansas Tech University, and worked closely with the

museum at Arkansas Tech. While continuing to hold Arkansas Archeological Society Chapter meetings in the Arkansas Tech Museum, the ARAS-WRI station had little to do with the museum since around 2008 when the station moved to the Winthrop Rockefeller Institute, and the museum's focus shifted from its emphasis on Arkansas History and Prehistory to solely Arkansas Tech history. In 2018 the focus of the Arkansas Tech Museum has once again changed to include regional history and prehistory. The museum also has a new director—Dr. James Peck. It is anticipated that the ARAS-WRI research station will resume an active relationship with the Arkansas Tech Museum, particularly in respect to prehistoric Arkansas displays and research into the prehistoric collections held at the museum. The WRI research station has already assisted in this endeavor by providing Dr. Wiewel, an anthropology professor at Arkansas Tech, and Dr. Peck with information about sites in the Gregoire collections held at the museum.

Dr. Beahm taught a class on Native American foodways for the Arkansas Tech course “Archeology of Food” and provided hands-on experience opportunities to Arkansas Tech students taking a variety of archeology classes.

2018 Training Program

Dr. Beahm served as the laboratory director for the 2018 training program jointly sponsored by Arkansas Archeological Survey and Arkansas Archeological Society at Pea Ridge Battlefield National Military Park. This involved setting up and organizing the lab space in the Garfield Community Center and overseeing the washing and sorting of artifact material. See more about the training program in other parts of this Annual Report.

Project Dig

Project Dig is a joint venture of the Arkansas Archeological Survey's WRI station and the Winthrop Rockefeller Institute. This program, first started at the station in 2008, is a semester-long experience for gifted and talented 5th and 6th graders at local Arkansas public schools within the WRI station territory. At the beginning of the semester Dr. Beahm visits each class and talks to them about what culture is and the role it plays in all aspects of life. Then the students take several class periods to brainstorm and come up with an entirely new, unique, imaginary culture, creating artifacts, an alphabet, and murals to reflect that culture. They take a field trip to the archeological research station where they actually excavate another class's material culture, and then take several class periods to analyze the artifacts and draw conclusions about the other class's culture. Finally, they come back up to the Winthrop Rockefeller Institute and present their findings to the other class in a semi-formal environment, what we call the “Research Symposium.” In the spring of 2018, Pottsville 5th grade GT students and Perryville



Program from the 2018 Project Dig Research Symposium (ARAS-WRI digital photo).

and Dardanelle 6th grade GT students participated in the Project Dig program with the WRI station archeologists.

Modifications to the Project Dig program, beginning in 2015 were designed to reevaluate its efficacy, with two overall goals in mind—to promote true understanding and to have real value to students, teachers, preservation efforts, and society in general. These modifications are based on research into principles of learning from education theory. Dr. Beahm developed a survey to be given to students who have completed the program, and received IRB approval to carry out a study of how well students retain information about archeology and culture after participating in Project Dig. (IRB protects the rights and welfare of people participating in research.) A preliminary evaluation of this retooled program was presented at the Southeastern Archaeological Conference in Tulsa, Oklahoma in November of 2017.

Teaching Gardens

The Teaching Gardens at the ARAS-WRI research station are designed to be an interactive way to learn about Native American gardening techniques, tools, and the plants used both before and after the introduction of corn into the Southeast. The Teaching Gardens are a collaboration between the Arkan-

sas Archeological Survey and the Winthrop Rockefeller Institute. First established in 2016, the Native Teaching Gardens at WRI include three different areas representing different plant procurement strategies used by Native people in Arkansas. The plants in the Arkansas Native Plants Walkway area reflect wild plant food resources gathered by Native people beginning at least 8500 BC, such as hickory nuts, pecans, acorns, ferns, dewberries, blueberries, paw paws, maypops, and pokeweed. The plants in the Woodland Period Garden are similar to the plants found in the Plum Bayou Garden at Toltec Mounds Archeological State Park near Scott, Arkansas, and include native plants of the Eastern Agricultural Complex that were cultivated and domesticated by 3000 years ago. The Mississippian Period Garden showcases the agricultural plants used by people in the late prehistoric and protohistoric periods in Arkansas: corn, beans, and squash.

Now in their third year, the Teaching Gardens have expanded to include plants traditionally important during early European settlement of Arkansas. These include sorghum, cotton, yucca, and various traditional herbs. This expansion ties the Teaching Gardens in more securely with the Heritage Farmstead facilities where the ARAS-WRI research station is housed.

Homeschool Education Series

With the assistance of Dr. Mel Zabecki, Educational Outreach Coordinator for the Arkansas Archeological Survey, Dr. Beahm developed a Homeschool Education Series incorporating both the Gathering, Gardening, and Agriculture Social Science Curriculum created by the Survey and the WRI Teaching Gardens that are located at the WRI research station. This education series also adds new archeology-related educational activities to the existing GGA curriculum. Classes are held once a month at the WRI research station from April to September to encompass the entire growing season, and cover the history of plant use in Arkansas from the Archaic through the Historic periods. Not only does this program educate children about plant use through time in Arkansas, but the children also provide assistance in the planting and maintenance of the Teaching Gardens. So far homeschool students have assisted in planting the crops in the Mississippian and Woodland period gardens, harvested little barley and maygrass, carried out insect control on squash, and worked on processing sunflowers.

Other K-12 and Public Outreach

Dr. Beahm worked with 3rd grade gifted and talented teacher Lindsey Drain from Russellville Schools on a year-long unit devoted to archeology in her class. This involved site visits to her four classes three times during the school year. Dr. Beahm taught classes about culture, soil science, and excavation techniques. The last set of class visits included a simulated archeological excavation assisted by Larry Porter.

The ARAS-WRI research station continues to host and participate in several events for Archeology Month. Beahm gave a talk and led a tour of the WRI station for Petit Jean State Park's



Blue dent corn harvested from the WRI station Mississippian garden (ARAS-WRI digital photo).

Archeology Day. Arkansas Tech University had an Archeology Day on campus where Beahm and Porter set up artifact displays and answered student questions. The Central Arkansas Master Naturalists spent the day at the WRI station to learn about archeology and geology of Arkansas. Finally, the WRI station hosted its own Archeology Month Open House complete with artifact exhibits, a traditional woodworking demonstration by Paul Gladwell, and hands-on archeology related activities and crafts. As part of the Open House, the WRI station also hosted a Seed Swap sponsored by ROOST (Revitalizing Ozark-Ouachita Seed Traditions).

The WRI station also participated in the grand opening for the “Art in Its Natural State” program in April put on by the Winthrop Rockefeller Institute. The Institute hosted temporary exhibitions of seven outdoor artwork displays created by artists from Arkansas and adjacent states. As a kick-off event, the Institute held a day-long celebration of art and Arkansas. The WRI research station opened its doors to visitors with a number of archeology-related art activities for adults as well as children. The station also showcased some of the works of art created by Native Americans in Arkansas prehistory.

Russellville 3rd grade GT student excavating as part of a year-long unit on archeology (ARAS-WRI digital photo).



WRI Research Station — Academic & Service Activities

Grants, Honors & Awards

- 2017 Award for Excellence in Heritage Preservation from Preserve Arkansas for the Gathering, Gardening, and Agriculture 5th Grade Social Science Curriculum written by Jodi Barnes, Emily Beahm, Elizabeth Horton, and George Sabo.

Teaching & Higher Ed

- Beahm presented a guest lecture on “Prehistoric Arkansas Foodways Through Time” to ANTH 3103, Anthropology of Food at Arkansas Tech University (7 students).
- Beahm prepared booths with relevant archeological displays and answered questions for visitors at Arkansas Tech Food Day in October (200 attendees) and Arkansas Tech Archeology Day in March (200 attendees).

Service to Winthrop Rockefeller Institute

- **Native American Garden Project.** Station staff managed the Native American Gardens at WRI, including planting, tending, and harvesting, processing the food and fiber plants, and preparing the gardens for winter.
- **Project Dig.** Station staff, cooperating with WRI Program Coordinators, again presented Project Dig, a program for Gifted and Talented students that uses archeological concepts and active learning to teach critical thinking and the scientific method; students from Dardanelle, Perryville, Pottsville, and Russellville participated, along with teachers and some parents.
- **Art in the Natural State.** Station staff participated in this WRI sponsored art installation with an open house and art-themed archeology activities.

Professional Service

- Beahm served on the DDCI (Digital Data Collection Initiative) working group within ARAS.
- Beahm served as a member of the ARAS Publications Committee.

Public Service & Outreach

- **Programs & Presentations.** Emily Beahm gave a tour of the station and a talk about archeology for Petit Jean State Park’s “Senior Special” program for senior citizens (35), and a similar program for the Park’s Archeology Day (12). Beahm set up a display about the Native Gardens project at the “Go Native, Grow Native” event at the Forest Service in Russellville (250). The station hosted its annual Open House for Archeology Month (20) and a day-long class about archeology and geology for the Central Arkansas Master Naturalists (28).
- **K–12 Schools.** Beahm gave presentations about Native Americans and archeology to four 5th grade classes at Booneville school (88 students) and, with assistance of Porter, to the 3rd grade GT classes at London Elementary, where teacher Lindsey Drain was using a year-long archeology curriculum (44 students). The station again hosted Project Dig with several local schools participating (30 students). Homeschool students visited the station for hands-on social studies learning experiences with the Gathering, Gardening, and Agriculture curriculum (8–15 students plus parents and younger children).
- **Other Outreach & Consultations.** Larry Porter assisted Cleburne County Historical Society with a visit to County Farm Cemetery in Heber Springs, to locate graves, possible graves, and plan a fence rebuilding project; met with Petit Jean State Park officials to discuss a plan for controlling graffiti at Rock House Cave; visited Springfield in Conway County to record a historic rock-lined spring on the Cherokee boundary line; responded to a landowner request to visit and record two previously unrecorded sites, 3JO804 (historic) and 3JO805 (prehistoric).
- **Media Outreach.** Emily Beahm administers a Facebook Page for the WRI research station with events, news, and photos. The social media outlet gained new followers and reached up to 8000 people this year.

Service to the Arkansas Archeological Society

- **Chapter Presentations.** Emily Beahm developed and presented a “bottle gourd workshop” to the Arkansas River Valley Chapter in Russellville (23); Larry Porter gave a public talk to the Ouachita Chapter in Hot Springs (20).
- **Training Program.** Emily Beahm was lab director for the field lab at the June 2018 training program at Pea Ridge National Military Park. Porter participated in follow-up fieldwork at the site of the 2017 training program and assisted with logistics for the 2018 training program.

- **Arkansas River Valley Chapter.** The WRI research station advises and supports the Arkansas River Valley Chapter, serving the Russellville/Morrilton and Petit Jean Mountain area. Emily Beahm serves as Secretary/Treasurer, handles publicity and logistics for monthly meetings, produces a newsletter, and schedules speakers. She updated and amended the Chapter by-laws to meet AAS Executive Committee requests. The staff host field/lab days for volunteers whenever possible. Porter consulted with Society member Chester Shaw on a project in Pope County.

Volunteer Hours

- Volunteers contributed 47 hours to station research projects in the field and laboratory during 2017–2018.



University of Arkansas at Pine Bluff Research Station

The ARAS-UAPB research station is located on the University of Arkansas Pine Bluff campus. The station archeologist teaches courses in the UAPB Department of Social and Behavioral Sciences. The station conducts archeological research in eight counties of east-central Arkansas, extending from Little Rock to the Mississippi River. This territory encompasses portions of diverse physiographic regions including the Delta, the Gulf Coastal Plain, and the Ouachita Mountains. The archeological heritage of the area includes sites representing the earliest Paleoindians at about 11,500 BC, through Colonial and Historic Arkansas. The best-known site in station territory is Menard-Hodges in the Osotouy Unit of Arkansas Post National Memorial. Menard-Hodges is part of a complex of sites thought to include the Quapaw village of Osotouy and the earliest Arkansas Post, which was the first European settlement in what became France's Louisiana colony.

John H. House (Ph.D., Southern Illinois University at Carbondale, 1991) is the Survey's Research Station Archeologist for UAPB, and Research Professor of Anthropology for the Department of Anthropology, University of Arkansas Fayetteville. He has been involved with Arkansas archeology since he was a high school student in Mountain Home, and attended the first ever Arkansas Archeological Society training program. House joined the Survey in 1978 as an assistant at the UAPB station. He served as station archeologist at UAM from 1983 to 1985, and again during 1988, before returning to head the UAPB station. His interests include North American prehistory, material culture studies, and the archeology of colonial era Native Americans.

Robert J. Scott (Ph.D., Southern Illinois University Carbondale, 2018) has worked previously for the Illinois State Museum, the Center for Archaeological Investigations at Southern Illinois University Carbondale, and Panamerican Consultants, Inc. He worked as the station assistant at the Survey's UAM research station (2004–2007), leaving to enter the Ph.D. program in Anthropology at Southern Illinois University Carbondale. Scott was a teaching assistant at University of Alabama and Southern Illinois University, and for the archeological field schools at both institutions. His past experience includes work with WPA-era museum collections, studies of historic artifacts, faunal analysis, and the analysis of prehistoric pottery. He re-joined the Survey as station assistant at ASU in September of 2010, and transferred to UAPB station in the fall of 2013.

Lake Dumond Site 3AR110

In 2017–2018 ARAS-UAPB station archeologist Dr. John House continued analysis of materials from Native American graves at the Lake Dumond site (3AR110), now part of the Osotouy Unit of Arkansas Post National Memorial. The graves are those of children believed to be Quapaws who lived on the nearby Wallace Bottom site. Burial associations included cuprous metal tinkling cones, clips (“copper mail”), a ring made from a cuprous sheet metal tube, glass beads, vermillion, basketry preserved by copper salts, and one fragmentary Native ceramic vessel. House is preparing a journal article reporting this research.

Station assistant Robert Scott prepared an inventory and preliminary analysis of 1,422 glass beads from three graves preliminary to transferring the items to the Survey coordinating office for documentation and reporting in compliance with the Native American Graves Protection and Repatriation Act.

In conjunction with the Osotouy inventory (see below) House selected a fragment of cane matting in one of the Lake Dumond graves and submitted it to Beta Analytic. Assay of the specimen returned four calendar date intervals at the 95 percent confidence interval. The interval with relevance to the sample context is AD 1619–1670. This supports dating the Lake Dumond graves to before 1700. Elizabeth Horton at ARAS-TMRS assisted in the selection and description of the sample and Carrie Wilson, NAGPRA Representative for the Quapaw Tribe of Oklahoma, provided advice on documentation.

Osotouy Inventory

Beginning in 2014 the Survey, in partnership with the National Park Service Midwest Archeological Center in Lincoln, Nebraska, began a multiyear comprehensive archeological inventory of the Osotouy Unit. John House and Dr. Jami J. Lockhart (ARAS-CSP) represent the Survey as co-principal investigators for this project. In February 2014 Lockhart directed geophysical surveys of the plaza and outlying northern periphery of the Menard-Hodges site (3AR4). Results from the geophysical surveys indicated what appeared to be numerous cultural features beneath the surface in both areas. Phase 2 fieldwork, begun in September 2015, included further geophysical mapping and excavation on selected potential cultural feature locations. Osotouy Inventory fieldwork resumed in March 2016 with excavation on three additional anomalies identified by the 2014 remote sensing. Midwest Archeological Center conducted follow-up topographic mapping and mound coring in fall 2016.

In September, House selected samples excavated during the 1997 and 1998 Society/Survey training programs in the Menard locality for radiocarbon dating. These consisted of three charred organic material samples from the Menard-Hodges plaza area and one segment of a cane splint that was part of matting in one of the colonial era graves at the Lake Dumond site (see above). These samples were submitted to Beta Analytic, Inc. The results help bring the chronology of the Menard



UAPB student Jamaal Courtney sorts size-graded flotation heavy fraction from 1998 excavations at the Menard-Hodges site plaza (ARAS-UAPB digital photo 10oct17.jpg).

Locality into sharper focus. Results from the three Menard-Hodges samples suggest that the plaza area was the scene of intense activity in the AD 1400s.

In early 2018, Robert Scott selected 22 pottery samples from the 1997–1998 excavations at Menard-Hodges as candidates for future thermoluminescence (TL) dating. Goals for the projected dating program are: (1) refining the ceramic chronology for the region by directly dating diagnostic type-varieties and modes (e.g., Owens Punctated, *var. Menard*; helmet bowl rims; Jordan Mode); (2) determining the duration of site occupation by dating Baytown, Coles Creek, and Mississippi period ceramics from the site; and (3) dating different occupation areas of the site. In order to make the best of the limited funds available, sherds were chosen that could serve more than one of the above goals.

In November House presented a paper titled “Discovering Menard” in a session on recent work at the Menard-Hodges site at the Southeastern Archaeological Conference in Tulsa, Oklahoma.

Other Menard-Hodges Research 3AR4

UAPB student Jamaal Courtney, as part of his History Independent Study course activity in the Fall semester at UAPB, assisted House in size-grading and sorting of flotation heavy fractions collected from the plaza area of Menard-Hodges (3AR4) during the 1998 training program. Flotation heavy fractions represent heavier materials (e.g., pottery fragments, chipped stone debris, and animal bones) that were retained on one-sixteenth inch screens when bulk samples of sediment from excavations are processed by water flotation. Separating heavy fractions into <4.75mm and >4.75mm size-grades with subsequent sorting of the latter by material is useful for ready-samples for specialized analysis.

Tarleton Creek Mounds Mapping 3AR15

In September and October, Scott and House completed mapping at the Tarleton Creek Mounds site (3AR15) in Arkansas County. This followed mapping of the principal mound at the site plus excavation of a test unit on the mound summit in April, May, and June. The completed topographic map suggests that the site is a multi-mound ceremonial center built around a plaza. In addition to topographic mapping, the work included mapping of exposures of shell-tempered sherds, daub, and other cultural debris in the extensive wooded area south and east of the principal mound. The mapping indicates a

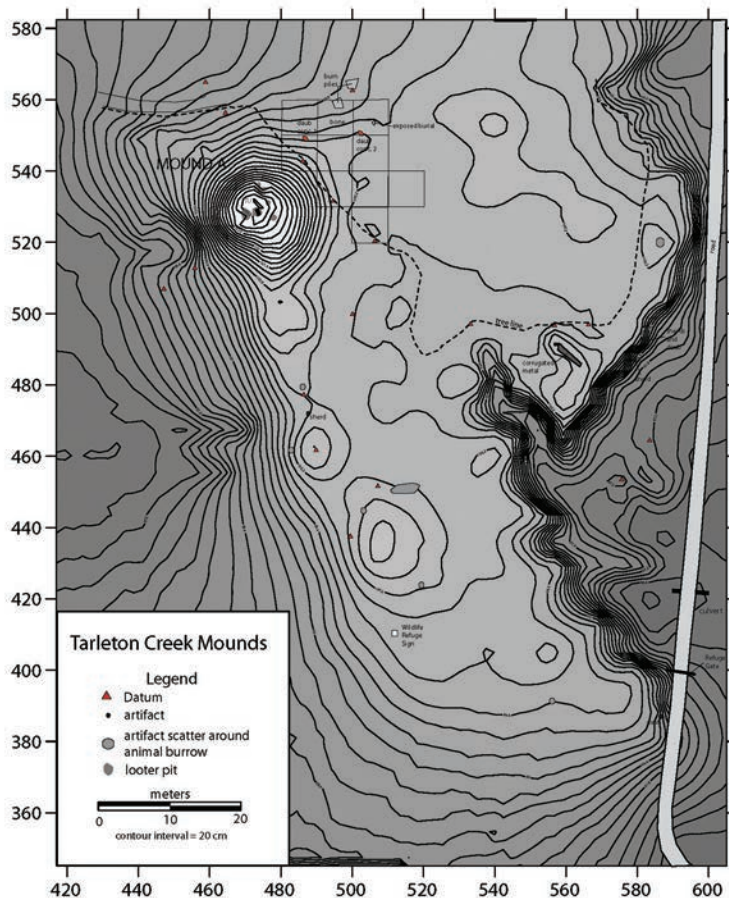
substantial increase to the known boundaries of this important Mississippian site.

Thibault (Fourche Island) 3PU1

In the 1870s and 80s, J. K. Thibault excavated pottery vessels from a number of small mounds on his plantation on Fourche Island in the Arkansas River floodplain south of Little Rock. Thibault subsequently donated and loaned a series of vessels to the Smithsonian Institution. These vessels were among those reported in 1886 by W. H. Holmes in the *Bureau of American Ethnology Annual Report*. They were some of the first artifacts from Arkansas to be reported in the scientific literature. The Thibault site (3PU1) is now within a 160-acre tract acquired by the Quapaw Tribe of Oklahoma in 2012.

In February, House and Scott resumed topographic mapping and shovel testing in the wooded tract along the east edge of the site. Five additional shovel tests on a 10x10m grid were completed and the topographic map in the wooded tract was extended to the south of the areas previously mapped.

To date, the topographic map covers approximately 60 percent of the known extent of the Thibault site and all local surface collection, excavation, and shovel-testing grids have been tied together and plotted on a single map. When completed, the topographic map will form a basis for determining the relationships among natural and cultural features throughout the site.



Pettus 3LN27, a Plum Bayou Culture Site

As part of ongoing research on the Pettus site (3LN27) in Lonoke County, House photographed objects in a private collection from that site. These included 123 notched arrow points, 20 Honey Creek bifaces, plus selected Coles Creek Incised/Larto Red ceramic vessel rims. Profiles were recorded for the rims. The Pettus site, first recorded by a local resident in 1960, was a major habitation and perhaps ceremonial site of the larger Plum Bayou culture landscape centered on Toltec Mounds.

Ragland-Farmer Site 3JE512

In January, House and Scott excavated a test pit and prepared a topographic map of the Ragland-Farmer site (3JE512) near Wabaseka in Jefferson County. The location is widely known locally for the presence of small possible mounds and for finds of arrowheads over the years. The test pit in one of the mounds produced chipped stone debitage and fragments of grog-tempered pottery. No pre-mound topsoil horizon was discernible, however, in the stratigraphic profile of the test pit.

Topographic map of Tarleton Creek Mounds in Arkansas County, produced in 2017.

The work at Ragland-Farmer to date has not resolved the issue of whether the mounds were constructed by Native Americans or are natural features on a well-preserved remnant of the pre-settlement landscape.

Dumond Site 3AR40

In 1967, James A. Scholtz of the University of Arkansas Museum directed excavations in Mound 23, a small mound at the Dumond site (3AR40) on Bayou La Grue in Arkansas County. The following year, Scholtz reported the results in Volume 9 of *The Arkansas Archeologist*. Among the data presented in that article was the presence of the foundations of a prehistoric wall-trench house.

In 2017, funds from a donation in support of ARAS-UAPB station research from Jamie Kitchens and Jeff Nally provided an opportunity to date Mound 23. Thanks to advances in radiocarbon dating since the 1960s, it is now possible to date specimens which could not be dated 50 years ago. In April 2018, House secured two samples from the University of Arkansas Museum/Arkansas Archeological Survey Collection Facility at Fayetteville. One sample consisted of a charred acorn kernel associated with Mississippian pottery in a pit beneath the floor of the structure; the other consisted of a lump of charred wood, identified as red oak, from the structure floor. House submitted the samples to Beta Analytic for AMS dating in July 2018. The radiocarbon assays returned calibrated dates around AD 1500 and in the AD 1300s, respectively. Together these two dates suggest that Mississippian culture use of Mound 23 spans as much as two centuries.

Tillar Archeological Project

From 2013 to 2018, Robert Scott conducted doctoral dissertation research at sites along Bayou Bartholomew in southeast Arkansas assigned to the Mississippian culture Tillar phase. The two primary goals of the Tillar Project were: (1) to

establish the timing and rate of depopulation in southeast Arkansas during the Protohistoric period; and (2) to identify the cause, or causes, of population loss and regional abandonment. In June, the Southern Illinois University Carbondale graduate school approved and accepted the final draft of Scott's doctoral dissertation, "Investigating the Causes and Consequences of Depopulation in Southeast Arkansas, AD 1500–1700." Scott's dissertation serves as the first formal summary of the results of the Tillar Archeological Project. These results support the conclusion that population decline occurred gradually in the study area and that Old World disease epidemics were not a causal factor driving depopulation. ARAS-UAPB station archeologist John H. House served on Scott's SIU doctoral committee.

Based on a study of mussel shell seasonality and refits from Tillar Farm sites, Scott completed and submitted an article with co-authors Joe Collins (Middle Tennessee University), Fred Andrus (University of Alabama), Amy Moe Hoffman (Mississippi State University), and Evan Peacock (Cobb Institute, Mississippi State University) to *Journal of Archaeological Science: Reports*.

Hickory Grove Cemetery

In August 2017, House met with Louis Crook of Little Rock to discuss how the UAPB station might support his efforts to document and preserve an abandoned African American cemetery in Lonoke County. Following clearing of Hickory Grove Cemetery by an inmate crew from Wrightsville Correctional Unit in April, Scott began preparing a total station map with the assistance of House, Crook, and others. The map, complete except for small areas beneath brush piles, indicates hundreds of unmarked graves, shown by linear depressions, in addition to marked graves dating to the early and mid 1900s. In June, House agreed to serve on the board of the cemetery association as it seeks certification as a 501(c)(3) organization. Hickory Grove Cemetery is about 2.5 acres (1ha) in area.

UAPB Research Station — Academic & Service Activities

Grants, Honors & Awards

- \$800 donation from Jamie Kitchens of Little Rock and Jeff Nalley of Benton to the Arkansas Archeological Survey to support John House's research in Arkansas.
- Robert Scott was awarded his Ph.D. in Anthropology from Southern Illinois University Carbondale in June 2018.

Teaching & Higher Ed

- John House taught SOCI 2330, Introduction to Anthropology, during the Fall 2017 semester (27 students) and during the Spring 2018 semester (28 students) at UAPB. Also during Fall 2017 House collaborated with Dr. Michael Lynch in a History Independent Study for UAPB student Jamaal Courtney, supervising Mr. Courtney's work on flotation heavy fractions from Menard-Hodges 3AR4.
- John House served on the doctoral dissertation committee for Southern Illinois University Carbondale Ph.D. candidate Robert Scott, and as chair of UAF Anthropology Ph.D. student Jessica Cogburn's dissertation committee.
- John House served as judge for the Junior High Earth and Planetary Science exhibits at UAPB Regional Science Fair.

Professional Service

- House assisted the ARAS Personnel Committee with the search for an Educational Outreach Coordinator.

Public Service & Outreach

- **Programs & Presentations.** John House participated in an Artifact ID session at Lonoke County Museum (5), 4H Archeology Day at St. Mary's Catholic Church in McGehee (30), and gave a public talk at the Pine Bluff-Jefferson County Historical Museum (12). Robert Scott gave presentations to a group of Boy Scouts at Arkansas Post National Memorial (45), and a 4H Archeology Day at West Helena (40), and a 4H Archeology Day at McGehee (30).
- **Historic Cemeteries.** John House and Robert Scott consulted with Mr. Lewis Crook of Little Rock on clearing and preservation of the previously abandoned African American Hickory Grove Cemetery (3LN592) in Lonoke County; Scott oversaw instrument mapping of the cemetery; House agreed to serve on the board of the newly formed Hickory Grove Cemetery Association as part of the process to secure 501(c)(3) status. House helped evaluate a proposal for Arkansas Department of Corrections inmates to clear Gethsemane Cemetery (3JE511).
- **Consultations.** Scott and House assisted Dr. Evan Peacock (Cobb Institute of Archaeology, Mississippi State University) by providing sherd and mussell shell samples for a source identification project. House served as Humanities Scholar for an Arkansas Humanities Council-funded program "Crossroads Festival" at Arts and Science Center for Southeast Arkansas; consulted with the Quapaw Tribe on an NCRS funded project in Crittenden County; and agreed to lead a tour of Menard-Hodges for Quapaw Elders. House met with Dr. Mary Olsen of the Elaine Legacy Project to discuss potential ARAS involvement in identifying graves of African American victims of the 1919 massacre, and later was contacted by a filmmaker interested in making a documentary about Elaine. Station staff met with various citizens about sites on their property and/or artifact collections.
- **Collections.** Scott completed an inventory of collections donated by Frank and Robert Chowning from sites in ARAS-UAPB station territory; there were 19,880 items from 31 sites and 576 artifacts without provenience. The inventory resulted in identification of previously unrecognized components for over a dozen sites. House pursued the whereabouts of specimens from the Powell Canal site that had been sent to the Illinois State Museum for analysis and cannot now be located.
- **Media Outreach.** Robert Scott administers a Facebook Page for the UAPB station, with 744 followers in 9 counties.

Service to the Arkansas Archeological Society

- **Programs & Presentations.** John House gave a public talk to the Tunican Chapter in Monticello (20) and moderated a panel discussion observing the 50th anniversary of the Arkansas Archeological Survey at the 2017 annual meeting in North Little Rock.
- **AAS Publications.** John House provided peer review for the Society Bulletin, *The Arkansas Archeologist*.
- **Training Program.** Robert Scott attended the 2018 training program at Pea Ridge National Military Park and taught one session of the site survey seminar.
- **Volunteer Opportunities.** The station invites local Society members to assist in the lab or fieldwork whenever opportunities arise.

Volunteer Hours

- Volunteers contributed 31 hours to station research projects in the field and laboratory during 2017–2018.



University of Arkansas at Monticello Research Station

The ARAS-UAM research station is located on the University of Arkansas Monticello campus, where the station archaeologist teaches anthropology courses in the School of Social and Behavioral Sciences and consults on projects related to the University owned historic properties. The station territory covers seven counties in southeastern Arkansas. The eastern portion is located in the Arkansas delta and consists of landforms deposited by the ancestral Arkansas and Mississippi rivers and their tributaries. Arkansas Indians left the remains of numerous small to moderate sized habitation sites as well as mound and/or mortuary centers of the later prehistoric and protohistoric periods. Several mound sites are mentioned in the reports of Victorian era archeologists. The western part of the territory is made up of the upland West Gulf Coastal Plain and dissected by the Saline and Ouachita rivers and their tributaries. Archeological research shows that Arkansas Indians have utilized this area since the Archaic period. Significant sites in the station territory include the small Lake Enterprise Mound in Ashley County, the oldest known Indian mound in Arkansas, and Lakeport Plantation in Chicot County, Arkansas's only remaining pre-Civil War plantation mansion on the Mississippi Delta. More recent sites range from the National Register listed Taylor/Hollywood Plantation 1840s log house to World War II internment sites such as Camp Monticello, Rohwer, and Jerome.

Jodi Barnes (Ph.D., American University, 2008) is the Survey's Research Station Archeologist at UAM and Research Assistant Professor for the Department of Anthropology, University of Arkansas Fayetteville. She joined the Survey in January 2013. She has published articles in the *International Journal of Historical Archaeology*, *Historical Archaeology*, and *Southeastern Archaeology*. She is an Associate Editor for *Historical Archaeology*. She also edited a book *The Materiality of Freedom: Archaeologies of Post-Emancipation Life*, and co-edited with Frank McManamon and Andy Stout *Managing Cultural Resources: Global Context, National Programs, and Local Actions*. Dr. Barnes has secured funding and grants to support research and public outreach in southeast Arkansas and teaches "Cultural Anthropology," "Sex, Gender, and Culture," and "Introduction to Archeology."

Drew County Historical Museum

In 1972 the Drew County Historical Museum purchased the A. C. Looney collection of hundreds of projectile points collected in Arkansas, Texas, and Oklahoma. In addition, Drew County Historical Society and Tunican Chapter members, like Curtis Lagrone, donated artifacts resulting in an amazing collection of pottery and stone tools from across the state and beyond.

In 2015 Staci Gregory, a recent graduate of the University of Arkansas at Monticello, took an independent study course, Introduction to Museum Studies, taught by Dr. Barnes. Ms. Gregory wrote a grant proposal to improve the Archeology Room at the Drew County Historical Museum and received funding from the Arkansas Humanities Council and the National Endowment for the Humanities. Beginning in fall 2015, Dr. Barnes worked with students and ARAS staff to inventory and identify the items in the collection and update the exhibits.

In September 2017 a new exhibit at the museum titled, “Our Past: Arkansas Indians in Drew County,” opened with a reception for members of Drew County Historical Society and the Tunican Chapter of the Arkansas Archeological Society. The exhibit uses the museum collections to highlight Drew County’s Native American history. It provides a timeline of Arkansas Indian history and explores the history of foodways, pottery production, flintknapping, and more. The exhibit also includes an archeological scavenger hunt and other activities to engage young people in the content.

Hollywood Plantation (3DR26) and Foodways

Dr. Barnes, with the help of Dr. Robert Scott (ARAS-UAPB), continued monitoring the restoration of the two-story dog trot house and construction of the new visitors’ center and parking lot at Hollywood Plantation. With the assistance of UAM student worker, Benjamin O’Neil, Dr. Barnes continued the reorganization of the collections, analysis of the artifacts, and development of artifact databases. All of the artifacts have undergone primary analysis, and a more detailed analysis of the glass was completed. Kathryn Bush, a paleoethnobotanist, completed analysis of the FLOT samples, identifying 10 tree species, a wild bean, and a corn cupule. Dr. Lucretia Kelly, a zooarcheologist, completed the faunal analysis, providing important information about diet and food preparation at Hollywood. Dr. Barnes is continuing the detailed analysis of the ceramics and buttons and using the data to develop presentations and publications on the archeology of health and foodways, while continuing to edit “Behind the Scenes of Hollywood” for publication as part of the Survey’s popular series. With this focus on the archeology of foodways and health and healing at Hollywood Plantation, Dr. Barnes expanded the scope of the research to explore foodways at sites like the Taylor Mounds (3DR2), the Brownlee House (3PU30) in Little Rock, and Camp Monticello (3DR305), and to consider the linkages between foodways across sites and through time.



Tunican Chapter member, Curtis Lagrone, with the artifacts he donated, in the new exhibit at the Drew County Historical Museum.

Barnes also received a grant from the Arkansas Archeological Society to further develop a public outreach program about Native American foodways. The program teaches people about foodways, hunting techniques, and technological change. Participants learn about changes in hunting technology from spears to atlatl to bow and arrow. Combined with plant gathering and corn grinding, this program helps people see the changes in Arkansas Indians’ diets and the work required to fill their stomachs as people transitioned from gathering to gardening to agriculture.

Camp Monticello

With the publication of results of the archeology of Camp Monticello in the journals *Historical Archaeology* and *Southeastern Archaeology*, the focus has turned to sharing information about the World War II prisoner-of-war camp with the public. This was done through the Archeology Month event, Hike Camp Monticello, tours with descendants, like Lore-dana Mazzei, whose father was interned at the Camp, and the evaluation of the new documentary, “The Forgotten History of Camp Monticello,” by Matteo Borgardt and Silvia Bizio for their Arkansas Humanities Council grant. In addition, Dr. Barnes joined Dr. Stacey Camp (Michigan State University) to



Monitoring the construction of the parking lot at Hollywood Plantation.

contribute Camp Monticello materials for an online comparative database of World War II internment in preparation for the submission of a proposal for a National Park Service Japanese-American Confinement Sites Grant. Photos and documents were provided for a mockup of a new website, which will highlight Japanese-American internment sites as well as German and Italian prisoner-of-war sites, including Camp Hearne in Texas, to encourage research across the WWII homefront cultural landscape.

Behind the Big House

Dr. Barnes assisted with year three of Preserve Arkansas's Behind the Big House program at Historic Arkansas Museum in Little Rock. The program explores extant slave dwellings and interprets the experiences of the enslaved people who once inhabited them. It was modeled after a similar program in Holly Springs, Mississippi. For three years Dr. Barnes conducted research on the Brownlee House (3PU30), located at the museum. She gave a presentation about the archeology and preservation of the site, along with what the archeology tells us about the enslaved peoples' foodways. She also participated in the two-day workshop, Best Practices of Interpreting Slavery,

Food prepared as part of the Behind the Big House program at Historic Arkansas Museum.





Michael Pomeroy talking with people about life at Camp Monticello during the Archeology Month hike of the World War II prisoner-of-war site.

which corresponded with the Behind the Big House program in Holly Springs. Dr. Jodi Skipper (University of Mississippi) received a Whiting Foundation Public Engagement Fellowship to organize the workshop and create a website to help people and organizations develop programs to interpret slavery. For

the workshop, Dr. Barnes gave a presentation about Arkansas's Behind the Big House program and how organizations could create similar programs in their communities. The presentation and information from the talk appear on the website, Behind the Big House: Interpreting Slavery in Local Communities

UAM Research Station — Academic & Service Activities

Grants, Honors & Awards

- 2017 Award for Excellence in Heritage Preservation from Preserve Arkansas for the Gathering, Gardening, and Agriculture 5th Grade Social Science Curriculum written by Jodi Barnes, Emily Beahm, Elizabeth Horton, and George Sabo.
- 2017 Certificate of Achievement in recognition of service as President of Preserve Arkansas.
- \$720 grant awarded to Dr. Barnes from the Arkansas Archeological Society's Bill Jordan Public Outreach fund for "Hunting in the Past" public education activities program.

Teaching & Higher Ed

- Jodi Barnes taught ANTH 2203, Cultural Anthropology (8 students) during Spring 2018. Barnes also worked with Devin Sorrows, a graduate student in the public history program at UALR for an Independent Study on African American Archeology.
- Jodi Barnes consulted with UAM on historic properties they own and conferred with Turner Neal Museum about upcoming exhibits.

Professional Service

- **ARAS Committees.** Chair of ARAS Publications Committee; elected to ARAS Personnel Committee in May 2018
- **Peer Review.** Barnes provided peer review of four submissions for *Journal of African Diaspora Archaeology and Heritage*, *Historical Archaeology*, and Lexington Books, Rowman & Littlefield.

- **Journals & Editorial Service.** Associate Editor, *Historical Archaeology*; Assistant Editor, *Drew County Historical Journal*; and Editorial Board, *Journal of Undergraduate Research in Anthropology*.
- **Society for Historical Archaeology.** Jodi Barnes serves on the SHA's Gender and Minority Affairs, Academic and Professional Training, and Membership Committees. She took part in two anti-racism workshops and helped organize a forum on structural racism for the 2018 annual meeting. She also participated in the Ed and Judy Jelks Student Travel Award and Student Paper Prize selection committees. In May 2018 she joined the editorial team as Associate Editor for the journal *Historical Archaeology*.
- **Southeastern Archaeological Conference.** Barnes serves on the Public Outreach Committee.

Public Service & Outreach

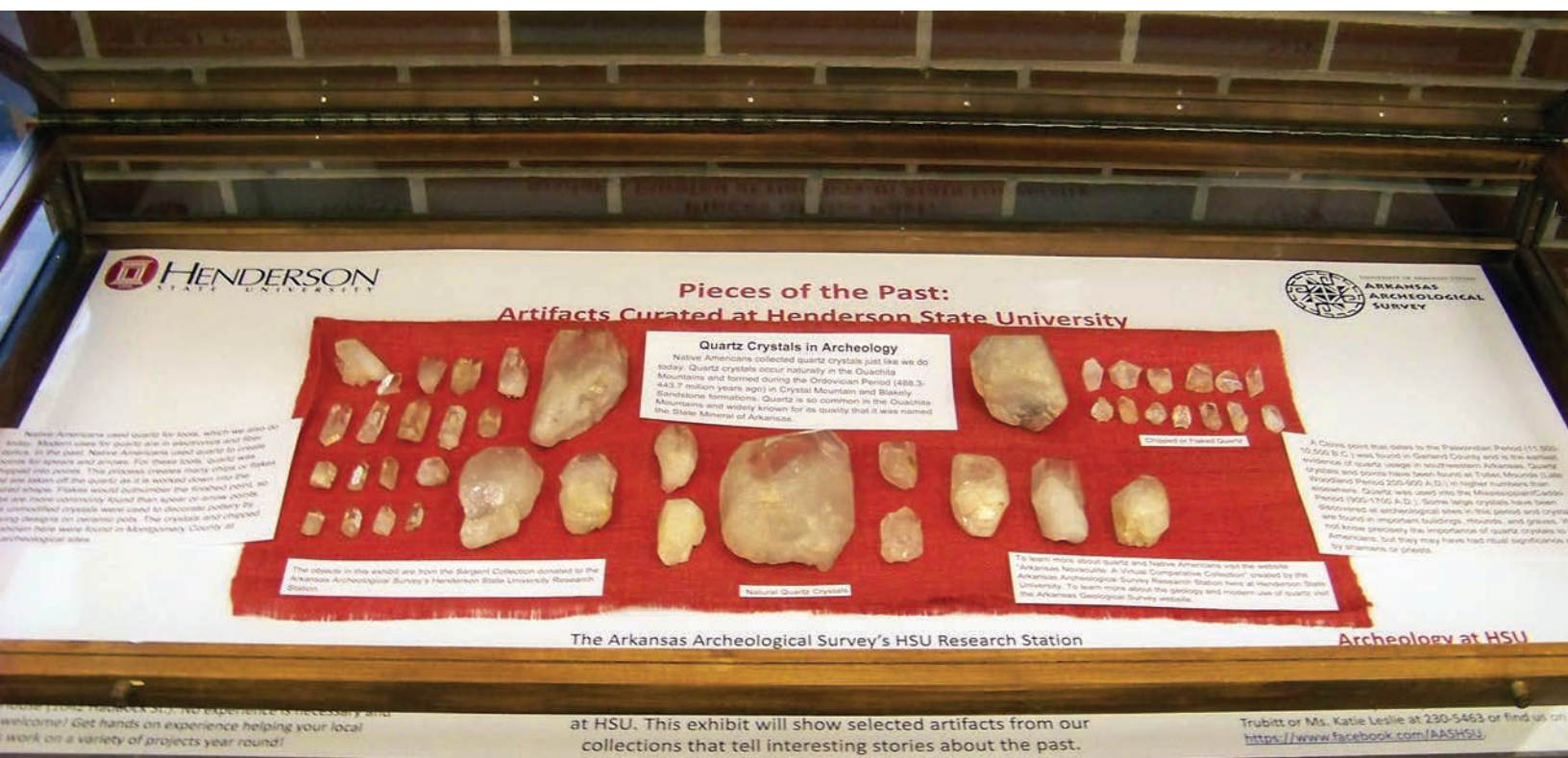
- **Preserve Arkansas.** Jodi Barnes served as President in 2017 and as Secretary and chair of the Governance Committee in 2018. She attended Executive, Finance, Governance, Development, and Education committee meetings and quarterly Board meetings, and assisted the Executive Director on various matters. Activities this year included:
 - Barnes gave a talk about urban archeology for the 2018 "Behind the Big House" event at Historic Arkansas Museum; Barnes also traveled to Holly Springs, Mississippi for a two-day workshop, Best Practices of Interpreting Slavery, and gave a talk about the Behind the Big House program in Arkansas.
 - Barnes participated in the Most Endangered Places announcement and developed planning and promotional materials for the 2018 Most Endangered Places Bicycle Ride
- **Drew County Historical Society & Museum Commission.** Jodi Barnes serves on the Museum Commission and served as the assistant editor for the *Drew County Historical Journal* in 2017. She completed an update to the archeology room exhibit, helped organize an opening event (40 attendees), and submitted a final report to the Arkansas Humanities Council.
- **Programs & Presentations.** Jodi Barnes gave a talk on Camp Monticello for the University of Tulsa Anthropology Club (21). Barnes took part in Martin Luther King Jr. Day Cemetery Cleanup with the Arkansas Historic Preservation Program at Hollywood Plantation and Valley Farm Cemetery, where she led a tour for participants from Boy Scouts, 4H, and Phi Alpha Theta, who then worked to cut weeds and clean trash from the cemeteries (22). She gave other presentations at the Rotary Club of Monticello (17), and Behind the Big House event at Historic Arkansas Museum in Little Rock (122), and the Best Practices for Interpreting Slavery workshop in Holly Springs, MS (27). Tables at Owlfeast in Monticello (80) and at the Mississippi Archaeology Expo (124) with Tunica Chapter engaged about 200 members of the public. With Michael Pomeroy, Barnes organized and conducted a "Hike Camp Monticello" tour for Archeology Month (17).
- **Exhibits.** Jodi Barnes installed a small exhibit on Hollywood Plantation in the Memorial Classroom Building at UAM; consulted with Turner Neal Museum about creating the Gathering, Gardening, and Agriculture exhibit.
- **Social Media.** Jodi Barnes continued to develop public outreach and education on social media. Barnes contributed content to the ARAS website, including an article for a new Women's History Month web page.

Service to the Arkansas Archeological Society

- **Tunica Chapter.** The station advises and supports the activities of the Southeast Arkansas Tunica Chapter, including Lab Days for volunteers and various assistance to Chapter board members. Jodi Barnes organized the speaker series, developed Archeology Month events, wrote articles for the newsletter, and prepared press releases and fliers.
- **Programs & Presentations.** Barnes developed and presented "Cordage Workshop: An Experimental Archeology Workshop" to the Tunica Chapter in Monticello (10) and gave a public talk to the Central Arkansas Chapter in Little Rock (28).

Volunteer Hours

- Volunteers contributed 89 hours to station research projects in the field and laboratory during 2017–2018.



Henderson State University Research Station, Arkadelphia

The ARAS-HSU research station is located on the campus of Henderson State University in Arkadelphia, where the station archeologist teaches anthropology courses in the Department of Sociology, Human Services, and Criminal Justice. The station territory covers nine counties of southwestern Arkansas. This area is dominated by the Ouachita Mountains, but extends across parts of the Little Missouri, most of the Middle Ouachita, and the Middle Saline river basins on the Gulf Coastal Plain. Ouachita Mountain novaculite, mined extensively in the 19th century as “Arkansas whetstone,” and also quarried by prehistoric American Indians for toolmaking and trade, is a resource that affected early settlement and land use in the uplands. In the river basins, salt-making was an industry pursued by American Indians and later by settlers. Both activities are represented by important archeological sites.

Mary Beth Trubitt (Ph.D., Northwestern University, 1996) is the Survey’s Research Station Archeologist at HSU/Arkadelphia, and Research Professor of Anthropology for the Department of Anthropology, University of Arkansas Fayetteville. She joined the Survey in 2000 after a teaching position at Western Michigan University. She has previous field experience in ten states and Belize, including work in southern Arkansas in the 1980s, and extensive research at the Cahokia site, where she studied the role of prestige goods in the political strategies of chiefdoms, among other topics. She is an expert on various prehistoric technologies and procurement strategies, including the shell bead industry, novaculite and other lithic extraction and tool making, and ceramics.

Chelsea Cinotto (M.A., University of Reading, 2014) began working in February 2017 as the assistant for the ARAS-HSU station. Chelsea earned a B.A. in anthropology from the University of Oklahoma and an M.A. in archaeology from University of Reading in the United Kingdom. She has experience working for the Oklahoma Archeological Survey, the National Cowboy & Western Heritage Museum, and Sam Noble Oklahoma Museum of Natural History. Chelsea has stepped in to work with students and volunteers during the station’s weekly lab days, and has been assisting ongoing research.

Station Collections and Records: Archiving Our History

The ARAS-HSU research station continued its efforts to inventory curated artifact collections in FY 2017–2018. In addition to updating the station's box inventory database with counts and weights of major categories of artifacts, site revisit forms are being submitted to the ARAS registrar's office for AMASDA, and new information added to the "Arkansas Novaculite" website database. Chelsea Cinotto supervised the work of the Ouachita Chapter of Arkansas Archeological Society and HSU student volunteers during weekly archeology lab days. Artifacts accessioned during 1975 through 1992 were inventoried (a total of 152 boxes). This inventory project has spurred new research and efforts to disseminate results of older field investigations.

Ancient Caddo Lifeways in the Saline and Ouachita River Valleys

A major research focus at the ARAS-HSU research station incorporates analysis of old collections with new excavations to interpret Caddo Indian lifeways in west-central Arkansas. Progress continued on analyzing and interpreting results of major excavations conducted during the 2013–2014 training programs at Dragover (3MN298) in the Ouachita National Forest. Mary Beth Trubitt compared the ceramic sherd assemblage from Dragover with that from WPA excavations at Adair (3GA1). She analyzed INAA data from these sites and discussed INAA results on Caddo and Cahokia ceramics with several colleagues. (INAA, instrumental neutron activation analysis, is used in archeology to determine the concentrations of trace elements in the clay matrix of a ceramic artifact; from this, the source of the clay can be determined and the data can then be used to discuss things like trade networks or social relationships.) Trubitt wrote a collaborative grant proposal with Forest Service colleagues to include analysis of Dragover chipped stone artifacts. Cinotto completed data entry from Robert Scott's analysis of Dragover mussel shell and incorporated it into the catalog. Trubitt and Cinotto co-wrote a "Current



Ouachita Chapter volunteer Denise Evans documenting a JEC Hodges Collection vessel during archeology lab day at the station (ARASHSUD_C0003; photographer, M. B. Trubitt).

Research" article and submitted it to *Caddo Archeology Journal*.

Trubitt continued work on comparing two Caddo mound sites (the Hedges site 3HS60, in the Ouachita River valley, and Hughes 3SA11, in the Saline River valley). Past excavation projects uncovered residues of burned structures next to the main mounds at both of these contemporaneous Late Caddo period sites. The analyses provide new information on timing and activity patterning in these ancestral Caddo communities.

Trubitt finalized the Hughes analyses and began writing a book manuscript comparing the two sites. She wrote a paper on the subject that was presented at the Arkansas Archeological Society annual meeting in 2017.

Cinotto researched the 1973 excavation at the Caddo Hills site (3MN22), and analyzed the ceramics found in a large pit there (Feature 2), curated in the ARAS-HSU research station collections. She created and presented a poster on results of the ceramics analysis at the Arkansas Archeological Society annual meet-



Ceramic sherds from Chelsea Cinotto's analysis of the pit feature at the Caddo Hills site (3MN22) (ARASHSUD_N20095; photographer, C. Cinotto).

ing in September 2017, and wrote an article for the “Current Research” section of the ARAS website with conclusions from the research. After analyzing the other artifacts found in the pit feature, and making comparisons with the nearby Standridge site (3MN53), she presented a paper at the March 2018 Caddo Conference in Idabel, Oklahoma. Cinotto began writing an article detailing the 3MN22 artifact analysis results and comparisons with several other Caddo sites in the Ouachita Mountains for future submission to *The Arkansas Archeologist*.

A major milestone in spring of 2018 was completing the multi-year project to document pottery vessels in the Joint Educational Consortium’s Hodges Collection, curated at the ARAS-HSU research station, with the assistance of volunteers during weekly archeology lab days. Cinotto completed vessel photography and data entry for the 1,352 documented vessels, and organized the records and digital photographs. Trubitt facilitated an agreement between the JEC and ARAS to transfer the skeletal remains and associated grave goods in the collection to Fayetteville for NAGPRA documentation. Trubitt and Cinotto finalized documentation and photography of the associated artifacts, and the human remains and associated grave goods were transferred to the ARAS-CO in September 2017. Trubitt wrote a summary article on a ceramic vessel series

based on Caddo pottery in the JEC Hodges Collection from a cluster of eight sites north of Arkadelphia with grave lot information, and submitted it to *Caddo Archeology Journal* in May 2018.

Ann Early (Arkansas’s State Archeologist) and Trubitt began writing a chapter on Caddo ceramics in the Ouachita River valley for a planned volume, “Ancestral Caddo Ceramic Traditions,” edited by Duncan McKinnon, Jeffrey Girard, and Timothy Pertulla for LSU Press.

Investigating Tool Production and Exchange Using Arkansas Novaculite

Another major research focus of the ARAS-HSU research station has been understanding the acquisition, production, and distribution of novaculite, an important toolstone that was quarried from mountain ridges in the Ouachita Mountains. Trubitt regularly updated the “Arkansas Novaculite” website source/distribution database with information submitted by colleagues and the public on novaculite artifacts found in and beyond the quarry zone. John Samuelson (ARAS-CSP) and Trubitt refreshed the website to fix broken links. During the curated collections inventory, information on typed points made of novaculite from recorded sites is continuously added

HSU students Cali Huitt and Ashley Hennessee learning archeological surveying and mapping on campus during the spring semester (ARASHSUD_Co301: photographer, R. Arce).



to the website database. Eventually this will result in a series of maps that show the distribution of novaculite artifacts across the region and changes in distribution through time.

Trubitt wrote a book manuscript, “Ouachita Mountains Archeology.” This short book is a straightforward discussion of how we do archeology as a science and an overview of what we have learned about the archeology of this region, based mainly on results from the Jones Mill and Dragover projects. The book was developed out of a series of public talks and answers to common audience questions. In June 2018, Trubitt submitted the manuscript to the ARAS Publications Committee for consideration in the Arkansas Archeological Survey’s Popular Series.

Trubitt updated portions of the manuscript for “Extracting Stone: The Archaeology of Quarry Landscapes” (American Landscapes series for Oxbow Books) and discussed progress with co-author Anne Dowd.

Mississippian Societies in the Midwest and Southeast

Trubitt was invited to participate in a Southeastern Archaeological Conference symposium on the planned Spiro Craig Mound exhibit/book project, and presented a paper on Spiro arrow points in Tulsa in November 2017. Trubitt attended the Mississippian Iconography Workshop in San Marcos, Texas, as an invited participant in May 2018.

As part of long-term research on Mississippi period archeology in the Midwest and Southeast, Trubitt and Kelsey Kahlbaum-Hoisington returned to a 1997 Cahokia project. Kahlbaum-Hoisington prepared records and artifacts from the

West Cahokia Project for transfer to Illinois. Trubitt drafted a mini-grant proposal for additional funds, and completed a new map of the site and excavation areas. In a related project, Trubitt planned her contribution to “Cahokia: City of the Cosmos,” a volume edited by John Kelly and James Brown for the American Landscapes series, Oxbow Books.

Exhibits for Henderson State University

Cinotto created and installed new exhibits monthly in the “Pieces of the Past” exhibit case in HSU’s Huie Library. July’s exhibit featured a Caddo engraved shell gorget, August’s showed the range of novaculite colors and translucency with a variety of chipped stone tools, and September’s featured quartz crystals from archeological contexts (see the photo on page 61). Using objects from station collections, fall and winter exhibits featured an ancient Egyptian ceramic statue called an “ushabti” that came from Libya (October), a decorative historic pocket watch case (November), an Aztec statue of Tlaloc, the Jaguar God, from Teotihuacan (December–January), and replicas of famous diamonds with their history and folklore (February). For Archeology Month in March 2018, the exhibit highlighted tools that archeologists use in the lab and field. April displayed soda bottles made in Arkansas, and the May–June exhibit showed an Archaic period gorget, or neck ornament, made of ground slate with two drilled suspension holes. These rotating exhibits give HSU students and library visitors a chance to see objects from the ARAS-HSU collections and learn about archeology.

HSU Research Station — Academic & Service Activities

Grants, Honors & Awards

- \$400 mini-grant from the Cahokia Archaeological Society to Mary Beth Trubitt for “Sharing Results from the West Cahokia Project,” to produce a portable display banner interpreting results of 1997 Cahokia investigations. Trubitt will travel to Illinois to deliver the completed banner and present a public talk.

Teaching & Higher Ed

- **Teaching & Advising.** Trubitt taught ANT4053/ANT 5053/SOC4063, World Cultures (39 undergraduate and 2 graduate students) and ANT2023, Introduction to Physical Anthropology and Archeology (24 students) in Henderson State University’s Department of Sociology, Human Services, and Criminal Justice during Spring 2017.
- Trubitt advised several students about courses, projects, graduate school, and career plans, and wrote several recommendation letters.
- Trubitt set up a special “Readings & Research in Anthropology” course (ANT4083), and then prepped and taught it to a student in Summer 1 semester in June, 2018. Cinotto assisted by working with the student on field equipment preparation and during the AAS training program.
- **Other Service to HSU.** Trubitt served on a department faculty search committee, and attended department and Ellis College meetings as requested. She attended a Canvas training session to learn the new system for delivery of online course materials.
- **Joint Educational Consortium.** Trubitt and Cinotto curate the JEC’s Hodges Collection of American Indian artifacts at HSU. In consultation with the JEC board and ARAS staff, Trubitt arranged a memorandum of understanding between JEC and ARAS regarding human remains and associated grave goods, resulting in a transfer of these materials to the ARAS coordinating office for NAGPRA documentation in September 2017. Trubitt and Cinotto finished vessel analysis and organized JEC Hodges Collection records. HSU is planning to create new exhibit and storage space for the collection on campus. Cinotto checked current exhibits that display artifacts in the collection at the HSU Huie Library, the OBU Hickingbotham Library, and the Clark County Historical Association Museum in Arkadelphia.
- **Pieces of the Past Exhibits in Huie Library.** Cinotto created and installed small exhibits that changed monthly, featuring artifacts from ARAS-HSU curated collections (audience estimated at about 25 people each month).
- **Service to University of Arkansas.** Trubitt advised an applicant to the graduate school and Anthropology program.

Professional Service

- **Committees.** Trubitt serves on the ARAS Personnel Committee.
- **Journals & Editorial Boards.** Trubitt has served as the editor for *Southeastern Archaeology*, the journal of the Southeastern Archaeological Conference, since November 2017. Trubitt attended meetings of the SEAC board and SEAC editorial board at the conference in November, and subsequently discussed business with board members by email. Trubitt also serves on the editorial boards for *Caddo Archeology Journal* and the *Journal of Texas Archeology and History*.
- **Peer Review.** Trubitt peer-reviewed manuscripts for *American Anthropologist* and *American Antiquity*, and a grant proposal for the National Science Foundation. Trubitt wrote a letter in support of an award nomination.

Public Service & Outreach

- **Programs & Presentations.** Trubitt presented public talks at the PEO Chapter in North Little Rock (35), the Young at Heart group in Arkadelphia (20), National Park College in Hot Springs (45), the John Percifull Chapter of the DAR in Hot Springs (25), and the Garland County Library (50).
- **Historic Cemetery Preservation Initiative.** Trubitt discussed several cemeteries and preservation concerns with local residents (Conzel-Campbell Cemetery in Garland County, Slate Branch Cemetery in Saline County, Mount Tabor Cemetery in Dallas County). She sent copies of our report on mapping Hot Springs City Cemetery (aka Pesthouse Cemetery) to the City of Hot Springs and to the Melting Pot Genealogical Society, and visited the cemetery in January 2018 following the City’s cleanup work there.
- **Consultation.** Trubitt regularly reads incoming site forms, site reports, and agency notifications. She shared results of a site visit in Benton with the Saline County judge, consulted with the CO, AHPP, and ADOT about the EW Arterial

project following queries from Hot Springs residents, and attended a “listening session” at the Ouachita National Forest office in Hot Springs. Trubitt and Cinotto reviewed text/images for new interpretive signs for Hot Springs National Park. Trubitt and Cinotto assisted the Hot Spring County Sheriff’s Office and FBI with a murder victim search in September 2017, and assisted the Sheriff’s Office and Katie King (UALR) in skeletal remains recovery in November 2017. Cinotto visited 3SA417 in March 2018 and assisted Amanda Pesce, NRCS, with shovel testing. Cinotto assisted the ARAS-SAU research station with metal detecting fieldwork at Prairie D’Ane Battlefield (SAU70) in May 2018. Trubitt assisted Mitchell Childress (Panamerican Inc.) with monitoring soil coring at the Jones Mill site (3HS28) as part of proposed construction in June 2018.

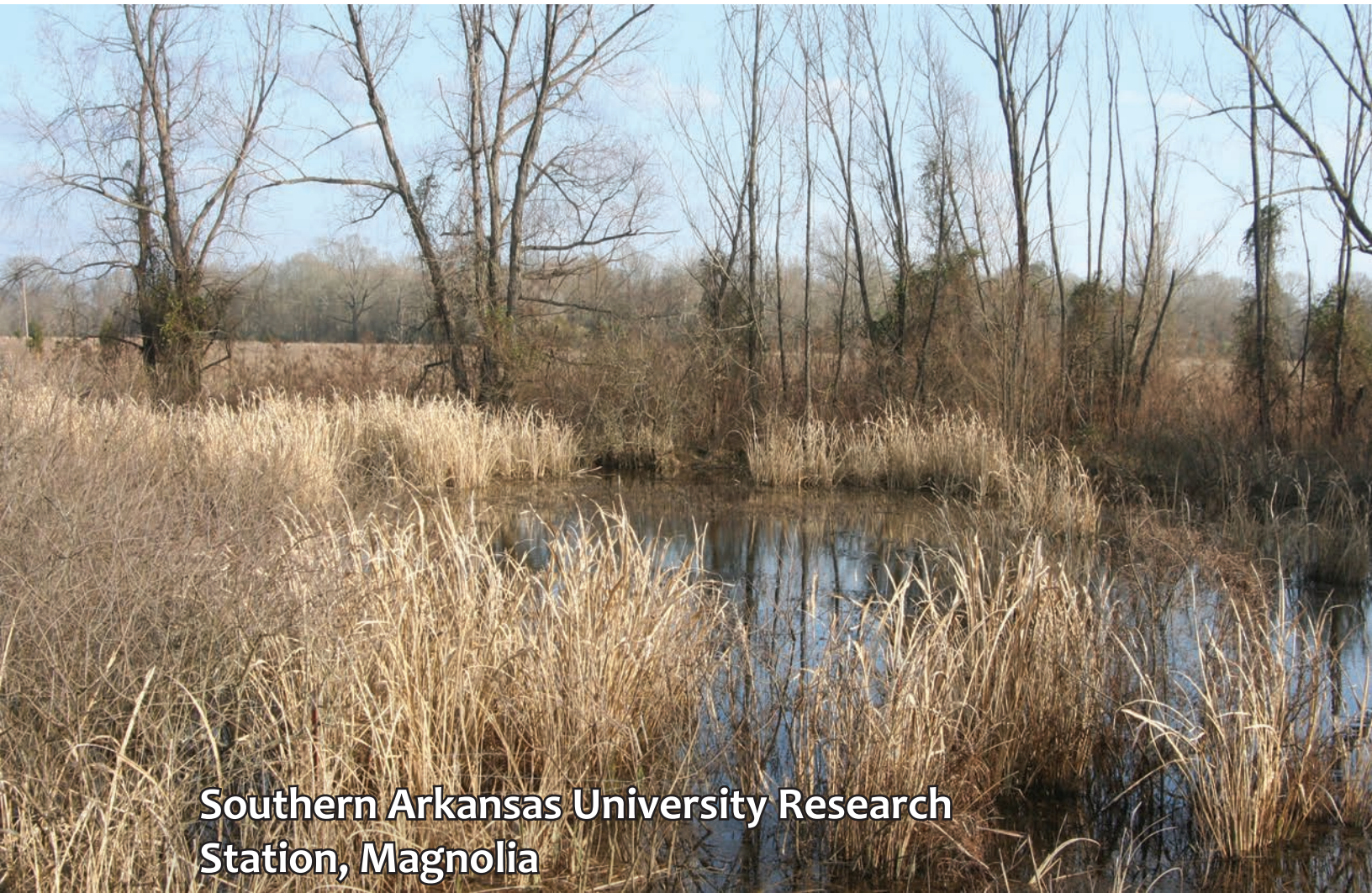
- **Media Outreach.** Trubitt and Cinotto administer the HSU research station’s Facebook page, adding “on this day” posts highlighting past station activities as part of the ARAS 50th anniversary celebration in 2017, “2017 station year-in-review” photos in January 2018, and regular posts about station projects, jobs and internships of interest to HSU students, and volunteer opportunities. Trubitt wrote or co-authored several short pieces for the Survey website in the “50 Moments” series. Trubitt sent Arkansas Novaculite brochures at the request of the Arkansas Welcome Center in Blytheville.
- **Other Public Service.** Trubitt and Cinotto advised local residents, teachers, park interpreters, and historical society members about sites, cemeteries, artifacts, and collections via telephone, email, and meetings. Following field visits with landowners in Clark, Garland, Hot Spring, Pike, Polk, and Saline counties, station personnel recorded 19 new archeological sites during FY2017–2018 (3CL0917, 921, 922, 923; 3GA1095, 1096, 1097, 1098, 1105; 3HS709, 710, 711, 712, 713; 3PI630; 3PL1607, 1608; 3SA416, 417). Trubitt loaned show and tell boxes for school talks in Garland County. Cinotto accessioned a donation of celts from Margaret Robertson. Cinotto and Trubitt planned two teacher workshops with Mel Zabecki (for July 2018) at the Dawson Educational Cooperative in Arkadelphia and the DeQueen-Mena Educational Cooperative in Gillham. Cinotto scheduled and planned talks for two branches of the Clark County Library. Trubitt attended several meetings of the Clark County Historical Association.

Service to the Arkansas Archeological Society

- **Ouachita Chapter.** Trubitt and Cinotto regularly attend monthly meetings of the Ouachita Chapter in Hot Springs. Trubitt served as Secretary for the chapter in 2017, and as President in 2018. She also edits the chapter newsletter, and assists with administering the chapter’s Facebook page. Cinotto serves as Secretary for the chapter in 2018. Trubitt and Cinotto coordinated and advertised Archeology Month events with the chapter. Cinotto assisted Ouachita Chapter member Chester Shaw with his examination of artifacts from 3SA11, curated at ARAS-HSU, as part of ceramic research. Cinotto and Meeks Etchieson led a mapping and testing project at 3CL244 with Ouachita Chapter and Clark County Historical Society volunteers. The team recovered mid- to late-nineteenth and early-twentieth century artifacts from this historic domestic site, as well as many chipped stone flakes from an earlier prehistoric occupation. Cinotto created a map of the site based on total station and Trimble points, and Cinotto and Etchieson wrote and submitted a revisit form to the ARAS registrar’s office.
- **Arkansas Archeology Month.** Cinotto distributed Arkansas Archeology Month materials around Arkadelphia. She developed and installed an Archeology Month exhibit, “Native Arkansans,” a timeline of human occupation in Arkansas before the arrival of Europeans using diagnostic artifacts, in Garland County Library with several Ouachita Chapter volunteers (about 75 visitors).
- **Training Program.** Cinotto attended the 2018 training program at Pea Ridge Battlefield, June 8–23. She planned and assisted Michelle Rathgaber with teaching the basic lab class during the first week (9 participants), taught basic lab during the second week (5 participants), and helped in the field at Leetown. She also assisted with logistics before and after the dig, aided by HSU student Ashley Hennessee (who was the first recipient of the Society’s new Hester Davis AAS Training Program Scholarship).

Volunteer Hours

- Volunteers contributed 762.5 hours to station research projects in the field and laboratory during 2017–2018.



Southern Arkansas University Research Station, Magnolia

The ARAS-SAU Research Station is located on the Southern Arkansas University campus in Magnolia, where the station archeologist teaches in the School of Liberal and Performing Arts. The station serves 11 counties in southwestern Arkansas, stretching from the edge of the Ouachita Mountains south to the Arkansas/Louisiana state line, and from the Ouachita River west to the Oklahoma and Texas state lines. This territory incorporates the Great Bend region of the Red River, once a major settlement area of the Caddo people. Sites in station territory include Crenshaw, the earliest known Caddo ceremonial center, Historic Washington State Park, the region's earliest American trading center, and many of the Camden Expedition battlefields from 1864.

Carl G. Drexler (Ph.D., The College of William and Mary, 2013) joined the Survey in 2011 and was promoted to Research Station Archeologist in 2015. He also serves as Research Assistant Professor of Anthropology for the Department of Anthropology, University of Arkansas Fayetteville. He has previously worked for the National Park Service, Colonial Williamsburg Foundation, and U.S. Army Engineer Research and Development Center, using his expertise in historical archeology, conflict studies, and spatial analysis. He has field experience in Mexico, Cuba, the British Virgin Islands, and in the United States Midwest, Great Plains, Southeast, Southwest, and Mid-Atlantic regions.

Fiona M. Taylor (B.A., Texas A&M University, 2015) was hired as the Arkansas Archeological Survey Research Station Assistant at Southern Arkansas University in Magnolia in January 2017. Following graduation, she moved to rural northern Nevada to fulfill an AmeriCorps position teaching science and outdoor ethics to underprivileged schools and communities. Fiona has been a member of the Arkansas Archeological Society since 2010 and has participated in numerous archeological projects around the state. Her research interests include collections management, environmental anthropology, and conflict.

Dr. Carl Drexler downloading GPS data after a long day of battlefield survey at Pea Ridge National Military Park. Photo by Jamie Brandon (ARAS-UAF).

The station had another busy year, emphasizing efforts in Civil War archeology and Caddoan saltmaking. Additionally, we undertook several cemetery studies and research on the Cherokee settlement in the Red River Valley in the early 1800s. On campus, we have been active participants in the creation of a Rural Studies Institute at Southern Arkansas University. These efforts, and more, are discussed below.

Once again, Civil War archeology dominated our field research activities. Most of this work has been done to assist local communities and heritage managers in their efforts to document and preserve battlefields and other sites associated with the war.

Civil War Archeology across Arkansas

Our first major effort was at Broad Ridge, a portion of the Pea Ridge battlefield, in Benton County. This was an area of Pea Ridge National Military Park that had not been studied previously. Working with volunteers, we conducted a metal detector survey along Broad Ridge, locating the position occupied by Confederate artillerymen during the early stages of the battle. We also documented an area of fighting that does not appear in histories of the battle and recovered several pieces of artillery ammunition that were previously unknown.

In May, we initiated three weeks of systematic metal detection at the Prairie D'Ane battlefield, outside of Prescott (Nevada County). Local efforts to preserve the battlefield succeeded in purchasing 800 acres of land, which we then surveyed to establish the location of battle-related events. The results are still under analysis, but our work presents a different interpretation of the battle from what appears in published studies, helping to refine our understanding of the engagement and aiding preservation.

Following immediately on the heels of Prairie D'Ane was a month's worth of fieldwork in Foster's Field, at Pea Ridge National Military Park, in Benton County. Dr. Drexler taught the 2018 University of Arkansas field school there, with ten students drawn from across the state. They learned excavation, mapping, metal detection, record-keeping, and a host of other archeological skills while working in one of the least well understood portions of the battlefield park.

Alongside the field school, Dr. Drexler co-directed the 2018 joint Arkansas Archeological Survey/Arkansas Archeological Society training program with Dr. Jamie Brandon (ARAS-



UAF). We had over 100 volunteers come out and participate, working in three different areas (Leetown, Foster's Field, and Clemens' Farm). See the report from our ARAS-UAF research station for more information, and also page 120.

Caddo Saltmaking at Holman Springs

Not all of our research focused on the Civil War. Our efforts to move forward with analyzing material from the 1985 and 1986 Arkansas Archeological Survey/Arkansas Archeological Society training program excavations at Holman Springs (3SV29) in Sevier County continued, largely in the form of ceramic analysis and study of patterns of features at the site. Both Dr. Drexler and Ms. Taylor presented papers on this research at the Caddo Conference, held in Idabel, Oklahoma.

The Sulphur Fork Factory and the Lost Prairie Cherokees

This year marks the bicentennial of some keystone events in the Territorial Period of Arkansas's history. Two sites, in particular, loom large in this aspect of our research. First, Miller County marked the bicentennial of the founding of the Sulphur Fork Factory, a trading house established by the U.S. govern-



Beginning the Ceramic Analysis of 3SV29, Holman Springs: A Caddo Salt-Processing Site in Sevier County, Arkansas

Fiona Taylor, Arkansas Archeological Survey- Southern Arkansas University Research Station Assistant
Magnolia, Arkansas



ABSTRACT

The objective of this poster is to present data collected, research methods, and conclusions drawn from the ongoing ceramic analysis of the Holman Springs site (3SV29). This site was excavated during the 1985 and 1986 Arkansas Archeological Society's Annual Training Programs, however, no systematic analysis or reporting of the artifacts was undertaken at the time. The Arkansas Archeological Survey's Southern Arkansas University Research Station in Magnolia, Arkansas currently houses 364 boxes of artifacts from archaeological excavations at the Holman site, 269 of which are filled with pottery sherds. This translates to about 73% of all artifacts recovered from Holman Springs. By beginning the systematic analysis and inventory of the ceramic assemblage, I am fulfilling research obligations previously left incomplete.

Currently, I have examined and inventoried about 6.3% of the ceramic collection, which totals more than 8,600 sherds. The majority of sherds inventoried are body sherds from large, utilitarian storage vessels or salt pans. Although no samples for radiocarbon dating have been sent at this time, I believe this is a Mid-to-Late Caddo site based on the style of pottery. Using an Access Database, I have recorded decoration, temper, coarse or fine wares, sherd forms (base, body, or rim), box location, and ceramic types when possible.

BACKGROUND

Holman Springs (3SV29) sits adjacent to a salt marsh on the Rolling Fork River near De Queen, Arkansas in Sevier County. Frank Schambach (SAU Station Archaeologist) and James Sholtz (HSU Station Archaeologist) visited the site in 1968 and photographed two mounds comprised of ceramic middens, but did not excavate (Schambach Weekly Report 11/8/1968). In 1978, David Kelley (SAU Station Assistant) visited the site and found the mounds had been bulldozed, effectively coating the ground surface with ceramic sherds (Kelly Weekly Report 5/2/1978). The potential for a memorable excavation was clear to the Arkansas Archeological Society, in conjunction with the Arkansas Archeological Survey, excavated the Holman Springs site during the annual Training Programs in 1985 and 1986, which afterwards, were affectionately referred to as the "More Sherds than Dirt" digs.



Photographs of the site by Fiona Taylor, 2017; Color slides of drying sherds, 1985, property of the Arkansas Archeological Survey

DECORATION

Decoration: Coarse	Shell	Shell/Grit	Grit	Shell/Grog	Total
Applique	35	4	4	2	45
Applique Node	10	2	1	-	13
Applique + Other Decoration	17	1	-	-	18
Applique Node + Other Decoration	3	3	-	-	6
Brushed	33	18	-	-	51
Crimping	298	75	5	1	379
Incised Lines	87	15	9	-	111
Punctations	101	8	10	2	121
Punctated Rim	7	-	-	-	7
Scalloped Rim	5	1	1	-	7
Strap Handles	4	-	-	-	4

Fine Wares	Shell	Shell/Grit	Grit	Total
Engraved	7	5	3	15
Incised	3	1	-	4
Slipped	2	-	2	4
Undec./Polished	129	7	20	156

Data in the tables represents both decorated rim and body sherds; no distinction was made when tallying up decoration styles.



Photographs by Fiona Taylor, 2018, property of the Arkansas Archeological Survey

The vast majority of ceramics recovered from Holman Springs are sherds, with only a few partial vessels recovered. All sherds were inventoried as either fine or coarse wares then by decoration, temper, vessel portion (rim, body, or base), and count. Salt pan sherds were categorized with undecorated sherds. I did not include surface treatment in the initial analysis, except as an indicator of finewares (burnishing/polishing). Typing decorated sherds is difficult for a number of reasons. First, it is a very large collection composed of tens of thousands of sherds with a variety of decoration motifs. Second, we see in the Caddo tradition that often times both the rim and body of a vessel was decorated in different styles. Few of the coarseware sherds in the collection are large enough to show both the rim decoration and body decoration, if there is one. And most importantly, I am still familiarizing myself with Caddo ceramic types.

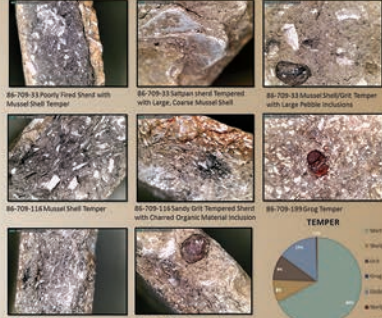
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TEMPER



Images captured using a Dino-Lite Digital Microscope by Fiona Taylor, 2018, property of the Arkansas Archeological Survey.

5,818 sherds are shell-tempered, 1,254 are undetermined sherdlets, 800 are grit-tempered, 704 are shell/grit-tempered, 34 are shell/grog-tempered, 8 are grit/grog-tempered, and 1 is grog-tempered. Shell-tempered salt pan sherds make up the majority of sherds collected. Sherds with a diameter less than 1/8 inch were categorized separately as sherdlets and temper was not recorded. As you can see in the microscope stills, most of the sherds have some degree of either coarse or fine shell temper. I based my categorization on the predominant tempering agent.

FURTHER RESEARCH

Holman Springs was a salt processing site, as evidenced by the preservation of salt pan sherds and the site's location next to a salt-producing marsh. Although most of the ceramic collection is not definitively typed, I would date the site somewhere in 1200-1500 A.D. range. To get a more accurate date, staff at the SAU Research Station staff are planning to submit C14 samples taken during the 1980's digs for radiocarbon dating next year. In the meantime, I will continue inventorying and analyzing the roughly 250 boxes of ceramics that are left. After the initial analysis of the entire ceramic assemblage is complete, further research opportunities include: reconstructing partial vessels, analyzing rim sherd thickness and vessel forms, surface treatment analysis, ceramic/organic residue analysis, tabulating and typing decorated sherds, photographing ceramic artifacts, and publishing the results in a report. This collection also contains wood, lithic, shell, bone, and historic artifacts that have not yet been fully analyzed. Interpreting site features and research into occupational periods, faunal analysis, and regional site comparisons has begun, with larger plans of looking at foodways, nutrition and diet, conflict, and depopulation causes in the future.

Holman Springs 3SV29 research poster, by Fiona Taylor, for the Caddo Conference.

ment to maintain relationships with various Native American tribes in the Red River Valley. The ARAS-SAU station staff did some small digs on the site back in the 1980s, and we brought out some of the associated artifacts to show students and the general public during the bicentennial festivities.

We have also maintained an interest in the Lost Prairie Cherokees, a small settlement established by the followers of Duwali, who arrived in the Red River Valley in 1819, and were chased away by an attack by neighboring whites the following year. Using newspaper accounts and other documents from the period, we have fleshed out some of this story, the location of which Claude McCrocklin (a noted avocational archeologist and member of the Louisiana Archaeological Society, who was mentored by Clarence Webb) believed he identified back around 1991. These findings were presented at this spring's Arkansas Historical Association meetings.

Cemetery Outreach

We spent a significant amount of time at the start of this fiscal year conducting ground-penetrating radar surveys of cemeteries in Calhoun and Nevada Counties. These surveys focused on identifying unmarked burials, which could then be marked and avoided by subsequent inhumations. Additionally, we completed several mapping projects on cemeteries in Howard and Lafayette Counties, which are aiding local groups in managing those facilities and applying for funds to develop and preserve them.

Records and Collections Management

We are fortunate to be the custodians of fifty years' worth of archeological research completed by this station's staff. Effectively safeguarding that intellectual history in the modern world involves digitizing old records and cataloging and inventorying existing collections. This multi-year effort continues.

SAU Research Station — Academic & Service Activities

Grants, Honors & Awards

- Initiated work on a \$30,324 grant from the Arkansas Historic Preservation Program for “Archeological Survey of the Battlefield at Prairie D’Ane” (Carl Drexler, principal investigator).
- Drexler received the Walter L. Brown Award for Best Business History from the Arkansas Historical Association, and the Peggy Smith-Mary Worthen Award from the Pulaski County Historical Society for his article “The Little Rock Picric Acid Plant in World War I,” published in the *Pulaski County Historical Review*.

Teaching & Higher Ed

- **Department of History, Political Science, and Geography, SAU.** Drexler taught ANTH/SOC1013, Introduction to Cultural Anthropology (9 students) and ANTH/HIST3143, North American Indians (25 students). He also oversaw two Independent Studies, focusing on museum studies.
- **Department of Anthropology, UAF.** Drexler taught ANTH 4256, Archeological Field School (10 students) at Pea Ridge National Military Park, held in conjunction with the ARAS/AAS training program and a collaborative research project with the National Park Service.
- **Graduate Committees & Other Advising.** Drexler sits on two M.A. degree committees at the University of Arkansas, and one undergraduate honors thesis committee.
- **Other Service at SAU.** Drexler continued assisting SAU’s efforts to obtain a National Endowment for the Humanities grant for a heritage smartphone app focused on U.S. Highway 82. Drexler and Taylor participated in discussions and planning meetings for SAU’s Rural Studies Institute. Taylor attended the Department of History, Political Science, and Geography’s reinstated Table Talk, an open discussion forum between faculty and students within the department, to see what the ARAS-SA U research station could offer to students.

Professional Service

- **ARAS Committees.** Drexler headed the Digital Data Collection Initiative working group.
- **Professional Organizations.** Drexler served as Continuing Education Coordinator and member of the Academic and Professional Training Committee of the Society for Historical Archaeology; recruited and planned nine workshops for the 2018 Conference, held in New Orleans, Louisiana; hosted eight workshops at the annual conference, with over one hundred attendees; recruited workshops for the 2019 annual conference, to be held in St. Charles, Missouri. He provided peer review for the journals *Southeastern Archaeology* and *Historical Archaeology*, and contributed a book review to the *Florida Historical Quarterly*.
- **Boards and Committees.** Drexler served on the Board of Trustees of the Arkansas Historical Association, chaired the AHA’s Foster-Beason Award committee, and served on the Public Information Committee and the Westbrook/Gingles Award Committee. Drexler also served on the Board of the Friends of the Arkansas State Archives (term ending in December 2017) and moderated their Facebook page.

Public Service & Outreach

- **Programs & Presentations.** Drexler gave talks to the Arkansas Living History Association (40) and the Hempstead County Historical Society (25). Drexler and Taylor, joined by Arkansas Archeological Society member David Jeane, talked to grade school students in Doddridge, Arkansas about the archeology of the Sulphur Fork Factory at its bicentennial celebrations (670). Drexler was invited to present a paper at the Old Statehouse Museum in a symposium on “Keeping the Home Fires Burning: Arkansas in World War I” in observation of the Great War’s centennial (audience 25, video on YouTube). Taylor gave a talk to Friends of Nevada County Battlefields and other community members at the Nevada County Library (40). Taylor participated in the 2017 Southwest Arkansas Youth Conservation Field Day in Hope, Arkansas with hands-on displays and demonstrations about archeology as a career and an artifact sorting activity (167 high school students).
- **Media Outreach.** Drexler wrote two contributions for the ARAS Artifact of the Month web series. The station web page had nine new blog posts during the year. The Twitter and Facebook social media resources generated nearly 70,000 “impressions” and gained 125 new followers.



Combined ARAS-SAU research station and Red River Chapter (formerly Kadohadacho Chapter) of Arkansas Archeological Society booth at the Jonquil Festival in Washington, Arkansas during Archeology Month.

Service to the Arkansas Archeological Society

- **Red River Chapter.** Drexler and Taylor helped reorganize the Kadohadacho Chapter as Red River Chapter, with updated bylaws. The station hosted seven monthly meetings and provided opportunities for volunteers.
- **Programs & Presentations.** Drexler gave talks to the Red River Chapter in Magnolia (17) and to the Arkansas River Valley Chapter in Russellville (30). Archeology Month activities with AAS volunteers included a Spring Dig at the print shop and tavern on Block 61 at Historic Washington State Park (6), and a booth at the Jonquil Festival in Washington, and at El Dorado Art Walk (about 100 attendees).
- **Training Program.** Drexler co-directed the two-week training program at Pea Ridge National Military Park. Fiona Taylor assisted with excavations at the training program.

Volunteer Hours

- Volunteers contributed 2156 hours to station research projects in the field and laboratory, and public service and education activities during 2017–2018.



Arkansas State University Research Station, Jonesboro

The ARAS-ASU Research Station is located on the Arkansas State University campus in Jonesboro, where the station archeologist teaches in the Department of English, Philosophy, and World Languages. The ASU research station territory includes 17 counties of northeastern Arkansas. American Indian cultural development from 12,000 BC to historic times and early Euroamerican settlements are represented in the archeological record. Among the well-known sites are the Dalton period Sloan site—the oldest known cemetery in North America—and the King Mastodon, which was featured in *National Geographic* magazine. A large number of sites date from the scientifically critical transition that occurred about 12,000 years ago between the Ice Age (Pleistocene) and modern (Holocene) climatic regimes. Geographically, the ARAS-ASU station territory incorporates the eastern border of the Ozark Plateau and the vast lowland areas of the Mississippi River basin and its tributaries. It thus provides ideal natural laboratories for the study of diverse adaptations in Arkansas prehistory.

Juliet Morrow (Ph.D., Washington University in St. Louis, 1996) is the Survey's Research Station Archeologist for ASU/Jonesboro, and Research Professor of Anthropology for the Department of Anthropology, University of Arkansas Fayetteville. She came to the Survey in 1997, from a position with the Office of the State Archeologist of Iowa's Highway Archeology Program, and had worked for various private research firms and the U.S. Army Corps of Engineers. Morrow's background in earth sciences provides expertise in geoarcheology, geomorphology, and site formation processes. Much of her archeological research has focused on the Paleoindian period and multidisciplinary studies of hunter-gatherer lifeways, stone tool technology, and Pleistocene/Early Holocene ecology.

Brandy Dacus (M.S., The University of Memphis, 2011) has been the Senior Assistant at the ARAS-ASU Research Station since April 2016. After graduating from Middle Tennessee State University, she worked in cultural resource management throughout the Southeast and pursued graduate studies at the University of Memphis and Southern Illinois University Carbondale. While a graduate student, she had the opportunity to co-instruct several field schools at the Castalian Springs and Kincaid Mound centers. Her research interests include leadership strategies, architecture, and iconography of late prehistoric Mississippian societies in the Southeast.

Sarah Stuckey (B.S. in Physics, Arkansas State University, 2013) has been ARAS-ASU Station Assistant since January 2014. She had worked as a volunteer at the ASU station for several years. Her senior capstone project, under Morrow's direction, explored the use of FTIR (Fourier transform infrared spectroscopy) for sourcing Burlington chert, an important lithic raw material that was quarried from many locations in the midcontinent.

Arkansas Paleoindian Database (APD)

In May 2017 we initiated the Arkansas fluted point survey via publication of a brief article in *Field Notes*. Fluted points are the earliest known time-diagnostic artifact of the late Ice Age or early Paleoindian time period. These are the most elusive sites because they are difficult to locate in the Delta where they are typically buried beneath many feet of sediment. The early sites are equally hard to find in the highlands (Ozarks, Boston Mountains, and Ouachitas) because of the lack of ground cover. Our article and call for help to record Paleoindian points and sites resulted in eight new sites recorded in AMASDA (the Survey's computerized database system for archeological site information). Using existing collections and a few private collections, dozens of Paleoindian points and tools were documented. This research is ongoing and our goal is to incorporate it into a public database for creation of a website on Paleoindian settlement-subsistence in Arkansas. Owners of artifact collections will remain anonymous.

Brandy Dacus learned the basics of how to record fluted points and helped enter the data into a database that we have renamed the Arkansas Paleoindian Database or APD. I revised our fluted/lanceolate point data recording form (lanceolate means leaf-shaped) to accommodate the inclusion of fishtailed point shapes because these are numerous in some areas and at some time periods in Arkansas and adjacent states. Data collected from 1967 to 2017 was consolidated and provided the basis for a conference paper presented by Brandy Dacus at the Arkansas Archeological Society annual meeting. Expansion of the paper to examine the evolution of land use with this research was presented by Dr. Chris Gillam (Winthrop University-South Carolina) at the Southeastern Archaeological Conference in Tulsa in November 2017. A manuscript summarizing the knowledge base of Paleoindians in Arkansas is being prepared for a chapter of an edited volume to be published by a new generation of Paleoindian scholars, tentatively titled "The Paleoindian and Early Archaic Southeast: The Last 20 Years, 1996–2016." Brandy Dacus created distribution maps for point types and Sarah Stuckey edited them and created a timeline of Paleoindian points and chert maps for the manuscript. Sarah took over the administration of the APD

at the beginning of 2018 and continues to add new Paleoindian artifacts to this database.

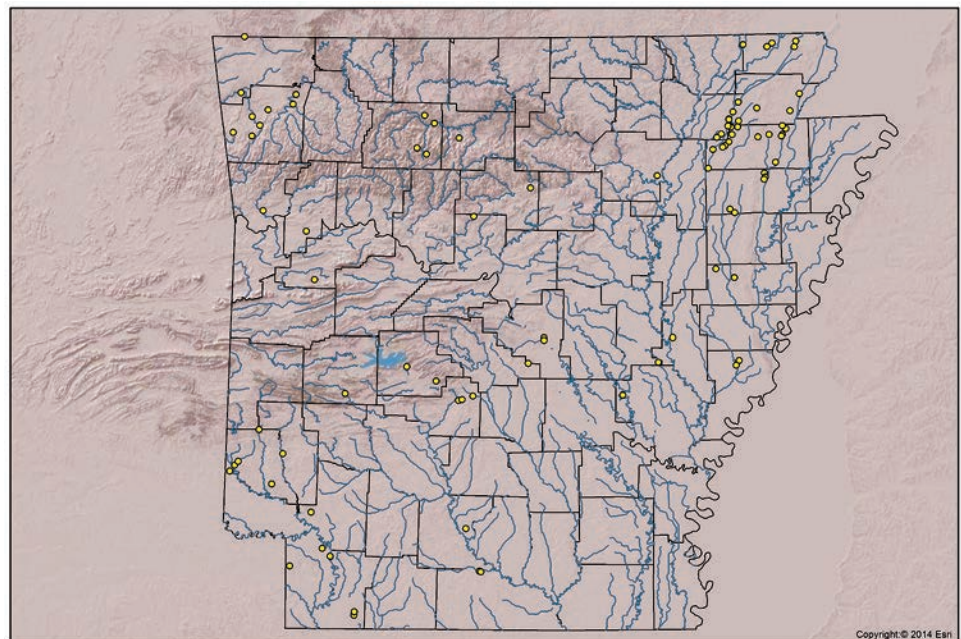
Points Formerly Typed as Sedgwick, or PFTAS

Morrow tentatively named a point type PFTAS based on eight very small point fragments in the APD. Five are in the Survey's collections and three are from two different private collections. Metric data were summarized. All eight specimens are proximal or haft fragments with a shallow or no basal concavity. Most of the PFTAS have two or more small narrow flake detachments on at least one face that produced a flake scar ridge that remains on the point and a slight projection near the center of the base. PFTAS have a plano-convex cross section and/or some have remnant patches of the original surface of the flake they were made from. Lateral and basal margin grinding is light to moderate when present. Haft grinding and the breakage patterns suggest they are not preforms but finished points. Use-wear analysis has not been conducted. The name PFTAS, an acronym, comes from the fact that these artifacts had previously been typed as "Sedgwick points," but Morrow believes the name is not at present useful.

To better understand the untyped small fluted points in the APD, metric data from a sample of Folsom points from the state of New Mexico and the Gault site in Texas available in the Paleoindian Database of the Americas (PIDBA)—four small Clovis points from the Lehner site in Arizona; Clovis points from Kimmswick (a mastodon kill in Missouri); and Gainey points from the Vail site in Maine, Lamb site in New York, and the Rummells Maske site in Iowa—were compared. In 2005, Morrow typed ARAS APD-129 as a Gainey preform; however, reanalysis types it as a PFTAS.

PFTAS form a relatively cohesive group. They tend to be thinner and have a shallower basal concavity than points typed

Map showing locations (small dots) where fluted points have been found and documented in the APD (Arkansas Paleoindian Database).





Five PFTAS from the Survey's collections, front and back sides.

as Clovis. Compared to Gainey, Clovis points are slightly more variable, but overall they are thicker and with a slightly shallower basal concavity. PFTAS do not appear to be miniature Clovis, Gainey, or Folsom points. There is a continuous size distribution from PFTAS to large Clovis, Pelican, and Gainey points. For comparison, the “miniature” fluted points reported by Western Ontario University professor Chris Ellis range from 22.4 to 27.0mm in total length ($n = 2$), 12.0 to 13.5mm in width ($n = 4$), and 2.2 to 2.8mm in thickness ($n = 6$). Two untyped “miniature fluted points” from the Pavo Real site in Texas are pictured online (see <https://www.texasbeyondhistory.net/pavoreal/paleoindian.html>); they are not similar in shape or in technological attributes.

The current distribution of PFTAS is the Western Lowlands of northeast Arkansas, but it is possible that they occur throughout the Mississippi Delta, particularly in the vicinity of the Lafayette Formation, e.g., southeast Missouri, southern Illinois, and northwestern Mississippi. In northeast Arkansas, and the CMV generally, the most accessible knappable (i.e.,

easily worked) chert is from the Lafayette Formation. Crowley's Ridge chert, the local name for the Lafayette Formation, is comprised of heavily patinated, knappable cobbles of various sizes and lithic types. Fist-sized cobbles were broken open and used as cores for detaching flakes. Flakes for making PFTAS could be detached from small cobbles or from bifaces.

Are PFTAS spear points or arrow points? What prey were they used for—mammoths, deer, fish, or waterfowl? With new techniques for analyzing residues that adhere to the surfaces of stone tools, it may actually be possible to answer these questions in the future. For now, we'd like to suggest an age beginning around 12,850 calendar years before present for these artifacts, although it's possible that some of them could be older. We expect to find more PFTAS as we continue to document points in public and private collections in Arkansas.

A version of this research is also available on the Survey website at <http://archeology.uark.edu/learn-discover/current-research/pftas/> and in *Field Notes*, Newsletter of the Arkansas Archeological Society, No. 404 (2018).



Julie Morrow (second from right) and others working to retrieve the King Mastodon remains in 1999.

The King Mastodon Project

The King Mastodon paleontological site was discovered in Arkansas in 1999 when mastodon (*Mammuth americanum*) cranial elements were uncovered by dredging contractor Mr. George King in Little Bay Ditch. The site is located southeast of Jonesboro, AR in the Eastern Lowlands of northeast Arkansas, in drainage networks that were part of a braided stream system during the Late Pleistocene. Morrow found more mastodon elements while monitoring the site in the summer of 1999, including more cranial fragments, axial and limb elements, and tusk fragments. Other taxa collected include long-nosed peccary, white-tailed deer, numerous small mammals, pig, cow, bison, coyote, dog, various birds, turtle, snake, frog, various fish, bivalves, and gastropods. Many of these specimens were found in the spoil pile created by dredging. The stratigraphy of the site consists of lenses of gray clay of Late Pleistocene age, overlain by Holocene aged sand, which underlies approximately 30 feet of tan sand and ditch spoil. Dentin from the mastodon jaw found at the site dates to approximately 14,100 calendar years ago based on three radiocarbon assays.

The cranium is heavily damaged and is unusual in that the two alveoli for the tusks are of greatly differing sizes. The right alveolus and premaxilla appear normal and the left is abnormal. Recently Morrow teamed up with Dr. Andy Grass (New York Institute of Technology College of Osteopathic Medicine, at ASU) to conduct an in-depth study of this pathology. Andy is a ground sloth expert from Iowa. The opening to the tusk alveolus is very small, only approximately 5cm wide, and shows signs of bone growth around its margin, as well as on the ventral side of the premaxilla near the base of the alveolar cavity. Reduced and malformed tusks, including sometimes small supernumerary tusks, have been observed in African elephants due to infection and abscess of the alveolus. The left maxillary molars of this specimen are also broken, leading to the possibility that the infection may have spread, but the breakage may also be due to ditch cleaning machinery (drag line) skimming over the bones.

Due to the relative sizes of the two alveoli the damage or infection to the left alveolus must have happened when the

animal was relatively young, but the size of the right alveolus shows that it lived for quite some time afterwards, and it seems unlikely that this infection was the cause of death.

Dalton Research

Morrow wrote a piece on the Sloan site (3GE94) for the Survey's website (see below).

Our Dalton collaboration with Dr. Ashley Smallwood (University of West Georgia) continues. Smallwood reported that she used the two unused experimental Dalton points ARAS-ASU sent to her in April. One was used for drilling and the other was used for butchering. Morrow reviewed an excellent paper on the Dalton adze and how this tool allowed Dalton people to manage forests and make transportation networks across the entire midcontinent. Morrow also reviewed a paper on Bayesian statistics as applied to Dalton radiocarbon dates. Morrow and Stuckey created a Dalton database to allow for comparison between Dalton and Paleoindian tools. By November 2018 we expect to have measured and photographed several hundred Dalton points.

"The Sloan Site" on ARAS Website

The Sloan Dalton cemetery site is the oldest known formal open-air cemetery in the New World. It is located on a late Ice Age sand dune in Greene County, Arkansas between Crowley's Ridge and the Ozarks in a physiographic region known as the Western Lowlands. Back in the 1970s Arkansas State University student Mary Ann Sloan told Dr. Dan Morse (who was then the research station archeologist for the Arkansas Archeological Survey in Jonesboro) about the site and it was eventually excavated in order to preserve information that was being lost to vandalism. The 1974 excavations revealed clues that people of the Dalton culture, between about 12,480 and 11,300 calendar years ago, buried their dead in ceremonial fashion. At that time, much of northeast Arkansas, including the Western Lowlands, was covered in deciduous vegetation and contained a wide diversity of animal and plant resources.

The Dalton culture is recognized as a distinctive suite of stone tools that occur at archeological sites across the Eastern Woodlands. Included in this suite of tools are bifacially flaked lanceolate "Dalton points" that functioned as cutting tools as well as spear tips, awls/perforators, and end scrapers, and bifacially flaked adzes for wood chopping and hide processing. Several types of formal unifacially retouched flake tools often accompany these formal bifacial tools. The flaked stone technology of the Dalton people is extremely refined and is on a par with that of contemporary Paleoindian cultures to the

Dalton “tool kit” retrieved from different parts of the Sloan site. Clockwise from top left corner: two adzes, an end scraper, a backed knife, a flake cutting tool, a chert hammer, a sandstone abrader, a grooved sandstone abrader, a heavily resharpened Dalton point, a minimally resharpened Dalton point, a Dalton perforator, and a hammerstone.



west such as Folsom, Midland, and Plainview. Tools made from chert and other toolstone types are the most commonly available evidence for understanding Dalton lifeways. Items made from organic materials like wood, leather, and plant fibers are rarely, if ever, preserved in open air sites like the Sloan site. Despite the lack of organic remains, the Sloan site provides an unprecedented window into ceremonial activities of hunter-gatherers during the Pleistocene to Holocene transition.

The Sloan site excavation covered an area of about 12m by 12m. As artifacts were exposed in the large block-style excavation, they were gently cleaned with bamboo picks and paintbrushes. Many artifacts occurred in clusters or concentrations. The discovery locations of all Dalton artifacts were piece-plotted on a grid and catalogued in the field. Many artifacts were also photographed in the field in the locations where they were excavated. Artifacts and bone fragments were shallowly buried in sandy sediment. Bone preservation was very poor; only tiny fragments from 114 catalogued locations were recovered. Spatial patterning of the artifacts and bone fragments suggests there may have been about 28 to 30 people buried there.

Most of the known tools of the Dalton tool kit in northeast Arkansas come from the Sloan site. Microscopic analysis indicates that many tools recovered from Sloan do not appear to have been made specifically for ceremonial use. Many would have been functional tools for conducting subsistence related activities such as cutting and scraping plant foods and wood; scraping and perforating hides to make clothing and footwear; incising bone and antler and wood; chopping and scraping wood for spears, tool handles, shelters, and canoes; cracking nuts; crushing pigment; manufacturing chert tools; etc. Projectile points can also serve as a material expression of group identity, so Dalton points and Sloan bifaces embody symbolism beyond their functionality.

A total of 439 stone tools were recovered during the month-long excavation at Sloan, including 146 Dalton points used as knives, projectiles, awls, one “preform,” 42 adzes, 95 bifaces, 33 end scrapers, 9 backed unifaces, 59 flake tools, 3 chert hammers, 5 cores, 35 sandstone abraders, 5 cobble tools, 5 fragments of red ochre, and 1 ironstone object. Many of the stone tools from Sloan were made of opaque, honey-colored Crowley’s Ridge chert, which is the closest source of chert to the Sloan site, but the Sloan people also used a wide variety

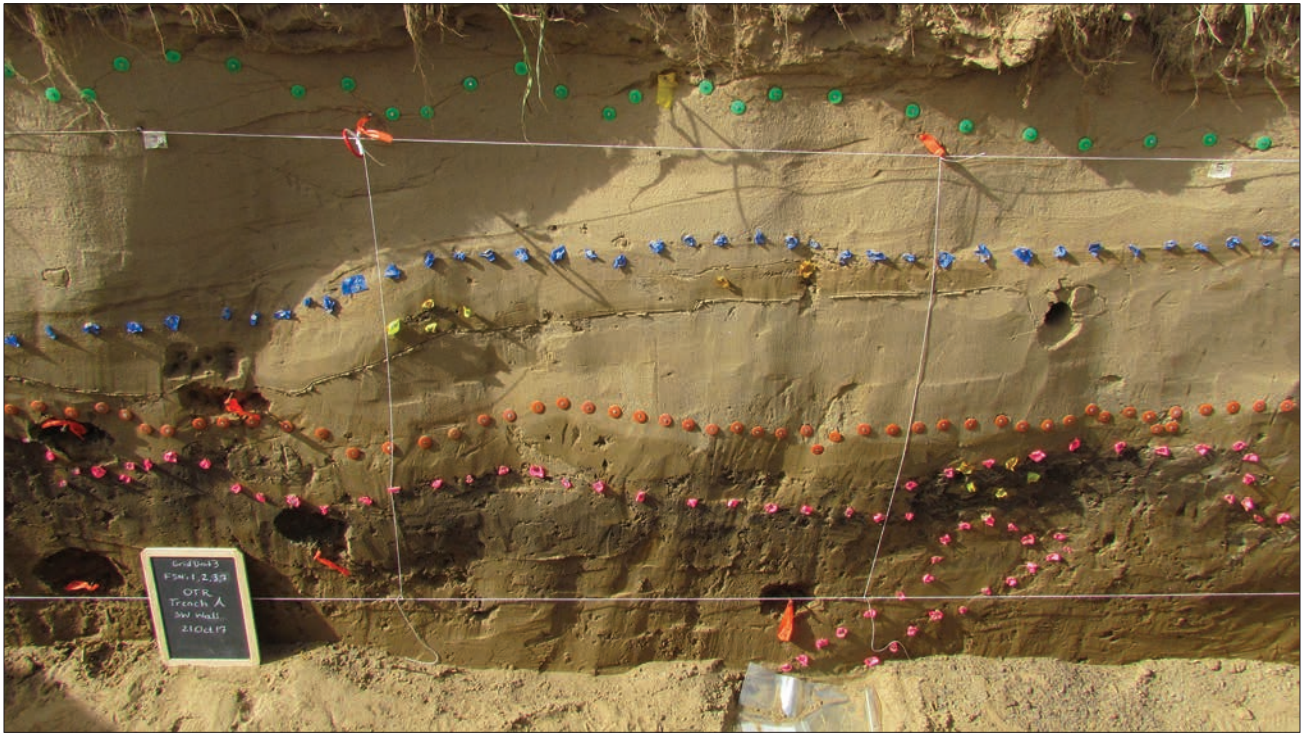
of chert types from the Ozarks to manufacture some of their tools. The use of chert types exotic to the site location (i.e., over 60km distant) suggests that the Sloan Dalton groups may have traded for some of their stone raw material and/or visited the sources in the Ozarks themselves. Dalton toolmakers evidently preferred to make certain tools on cherts of particular colors and textures. White Penters chert and Burlington chert were selected specifically for Sloan bifaces and large Dalton points. A Sloan biface is an over-engineered, hypertrophic (excessively large) biface that may have functioned as a symbol of leadership and identity.

The distribution of several dozen cream-colored to bright white chert Sloan bifaces in Illinois, Missouri, and Arkansas provides a clue to the size of the “interaction sphere” or region within which at least some Dalton people were routinely traveling. The Sloan site appears to be at the southern end of this network. Research into the hunting and gathering way of life of the Dalton and other Early Archaic period cultures is ongoing at the ARAS-ASU research station through the application of experimental methods to gain information about tool use. This is being accomplished through microwear analyses of replica Dalton tools and archeological tools carefully recovered from Dalton sites like Sloan.

This summary also appeared as a short article for the Survey’s 50 Moments web series. It can be seen here <http://archeology.uark.edu/who-we-are/50moments/sloansite/>.

Paleoseismology at Old Town Ridge 3CG41

Old Town Ridge is a multicomponent archeological site located on privately owned land in northeast Arkansas. It is adjacent to a relict channel of the St. Francis River system, which is why people selected it as a living place periodically for at least 10,000 years. From 2008–2010, the Arkansas Archeological Survey conducted a study at 3CG41 to determine the occupa-



Stratigraphy at Old Town Ridge.

tional history of the site. The study focused on documenting the Middle Mississippian fortified village using gradiometry and limited testing. One radiocarbon date obtained on hickory nut shell from a buried hearth inside a 4 x 4m open corner wall-trench house suggests the village was last occupied between about AD 1290 and 1420. Anomalies that may represent liquefaction features caused by an earthquake are visible in gradiometry images of the fortified village at the site. Possible liquefaction features crosscut other anomalies that might be cultural, such as a ditch, posts, and other architectural elements, burials, hearths, and pits.

Some anomalies may be the result of vandalism, uncontrolled excavation, animal burrowing, and other disturbance to the site. Since 2008, Morrow has observed large badger dens on both the north and south sides of the site. Animal burrows and past uncontrolled excavations may mimic prehistoric features.

The focus of our ongoing study is not on the prehistoric features per se, but on the features that most likely represent past earthquakes. We propose to address the following three questions: (1) Are there paleoliquefaction features at Old Town Ridge? If so, then (2) How many seismic events generated liquefaction features at the site and what is the age of each liquefaction event? And finally, (3) How do these ages relate to large historic and/or prehistoric earthquakes identified elsewhere in the Mississippi River Valley?

Answering these questions will help refine the recurrence interval of strong ground-shaking in the region and the potential for strong earthquakes to have influenced the movements

and activities of human groups in the past. Data generated so far indicate that people abandoned the site around AD 1400. Reasons for abandoning Old Town Ridge and numerous other Middle Mississippi period sites in the New Madrid Seismic Zone (NMSZ) include but are not limited to climate change, earthquake activity, and warfare. Artifacts dating to the Late Woodland/Early Mississippi period indicate there were earlier communities at Old Town Ridge. Episodic occupation may have enlarged the village from the Late Woodland period to the Middle Mississippi period. Enlargement of the village and expansion of its palisade wall and/or ditch during the Middle Mississippi period may be correlated with paleoseismic activity. Establishing a chronology of earthquake activity at Old Town Ridge is an important first step toward future investigations of the Native American communities that lived at the site from as early as 11,000 BC to ca. AD 1400.

The main part of the Middle Mississippian village north of the road was the focus for research in the fall of 2017. Julie Morrow and Geologist Dr. Randall Cox (University of Memphis) supervised data recovery to determine if paleoliquefaction (earthquake-related) features were present. The project was designed to trench through a suspected paleoliquefaction feature that would also yield datable prehistoric organic refuse. In October 2017, ARAS staff and volunteers helped excavate a 20m long trench and prepare walls for profile drawings. Dr. Cox took OSL samples (optically stimulated luminescence, OSL, is a method of determining the age of buried sediments) and Morrow described soils and took C14 and soil samples. Most

cultural and natural features, stratigraphy, clasts (fragments of weathered rock), and artifacts larger than about 1cm were photographed and hand drawn. The trench, major stratigraphic units and all samples were mapped using a Total Station transit. Cultural features were sampled and are being processed using flotation, wet-sieving, and/or water screening as appropriate to the sample. Experience of the last 22 years of research in northeast Arkansas, analytical classifications, and regional-chronological frameworks developed by Robert Taylor and Juliet Morrow are being used to interpret contexts and dating of paleoseismic features. The trench remained open for a month so that researchers could visit the site.

Using photographs Sarah Stuckey produced scaled maps of both sides of a 14m long trench that cross-cut a cultural feature that appears to be a trash-filled ditch that surrounds the entire 18 to 19-acre village. Three possible earthquake events were documented and five samples were submitted for C14 dates. If field interpretations are correct, then Old Town Ridge is one of the few places in the New Madrid Seismic Zone where a minimum of three separate paleoliquefaction features are clearly visible that date to paleoseismic events between AD 1400 and 1812. The final report will be submitted to a journal in fall 2018.

Western Lowlands

Dr. Morrow edited Sarah Stuckey's Western Lowlands map several times and oversaw digitization of rim profiles, etc. Then she began editing a time chart based on research conducted over the last 20 years by herself, Robert Taylor (Arkansas Archeological Society), and Robert Scott (ARAS-UAPB). Last year, Brandy Dacus and Sarah Stuckey, with help from ASU students and community volunteers, completed the process-

ing of Graddy site materials. Morrow made an outline for a brief article summarizing the occupational history of the site destined for *Field Notes*. General Inventory of the Graddy site salvage is completed. Seven of about 50 flotation samples have been processed. Sarah drew 300 rim profiles of all vessels from selected western lowland sites and digitized them.

Richards Bridge 3CT11

Morrow processed sediment associated with large pottery sherds from the bottom of the borrow pit at Richards Bridge, site of the training program in 2015 and 2016. Alex Garrett, ASU undergraduate student, assisted Morrow in soil analyses.

Larry Billings Collection

The inventory and documentation of the Larry Billings collection, on loan to the ARAS-ASU research station, was conducted by Sarah Stuckey. Larry Billings has been one of the station's most valuable volunteers since 1998 when he joined the Central Mississippi Valley chapter of the Arkansas Archeological Society. ASU archeology students and a community volunteer, Rhinda Kesselring, helped document chipped stone artifacts from the collection. The collection consists of hundreds of artifacts from archeological sites in Baxter and Marion counties. This collection represents one of the most significant classes of information available from the region as sites are continuously destroyed by the action of the White River as it rises and falls due to the hydroelectric dam upstream from Cotter, Arkansas. Information on and photos of the Paleoindian and Dalton artifacts have been added to the Arkansas Paleoindian Database and to the Arkansas Dalton Database that Morrow is compiling.

ASU Research Station — Academic & Service Activities

Teaching & Higher Ed

- **Teaching & Advising.** Morrow taught ANTH 3203, Introduction to Archeology (5 students) and ANTH 2233, Introduction to Cultural Anthropology (9 students) during the 2017–2018 academic year at ASU. Morrow advised 10 ASU students about classes and archeology degrees, and several other students about volunteering at the ASU station.
- **Other Campus Assistance & ASU Museum.** Morrow and ARAS Director Dr. George Sabo met with new ASU Chancellor Kelly Damphousse. Morrow conferred with ASU Museum Director Dr. Marti Allen regarding Black History Month 2018, with Jill Kary regarding Archeology Month, and the RISE program. She answered multiple email queries about artifacts in the ASU Museum collections, sites, and information on collectors and museum advisors in Arkansas. Morrow conducted an Artifact ID event during Arkansas Archeology Month and a workshop on "How To Do Archeology the Right Way" (9 attendees) at the ASU Museum.

Professional Service

- **Peer Review.** Morrow reviewed works submitted to the *Journal of Anthropological Archeology*, *Quaternary International*, *Latin American Antiquity*, *Journal of Archaeological Method and Theory*, *Nature Human Behavior*, and *Southeastern Archaeology*.

- **Professional Organizations.** Morrow served on the Annual Meeting Program Committee for the 2018 annual meeting of the Society for American Archaeology (SAA); She was discussant for a symposium on Paleoindian at the 2018 SAA annual meeting.
- **Committees.** Morrow served as a member of the ARAS Publications Committee.

Public Service & Outreach

- **Programs & Presentations.** Morrow gave presentations to Baxter County Historical and Genealogical Society (30), Baxter County History Day (22), Delta Gateway Museum in Blytheville for the opening of a new Native Americans exhibit (25), conducted a program on Arkansas geology and rock and fossil identification for Cub Scouts in Jonesboro (40), and assisted two Artifact ID events at Parkin State Park (55). Dacus aided Delta Gateway Museum's Artifact ID event (9). Morrow and Stuckey selected and inventoried artifacts for a loan to Delta Gateway Museum.
- **Historic Cemeteries Initiative.** Morrow contributed a video on the Knights of Pythias Cemetery: A Sacred Site in Jonesboro, Arkansas via YouTube for the 2018 meeting of the PAAC (Preservation of African American Cemeteries) "Memorial in May – Cemetery Preservation Conference" in Little Rock (available at <https://www.youtube.com/watch?v=C2x2FkepnMo>).
- **K-12 Education.** Morrow and Stuckey prepared materials for a booth at Westside High School Career Day highlighting careers in archeology, geology, and anthropology and past projects by the ARAS-ASU research station (about 700 students and teachers). Morrow spoke to junior high and high school teachers at Rector schools (60). Morrow served as judge for the Northeast Arkansas District Science Fair in the categories of Earth and Atmospheric Sciences and Geology and Oceanography.
- **Media Outreach.** The ARAS-ASU station maintains three Facebook pages (NE Arkansas Cemetery Research, Central Mississippi Valley Chapter of the Arkansas Archeological Society, and ARAS-ASU Research Station) and one website. Visits on the Facebook pages totaled 929.

Service to the Arkansas Archeological Society

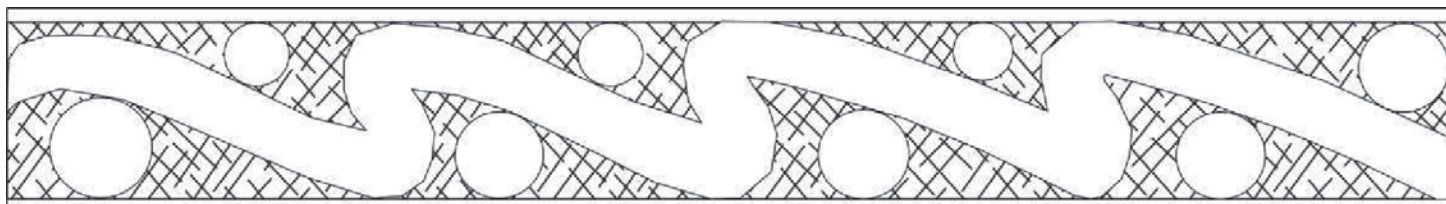
- **Programs & Presentations.** Morrow gave public talks to the Ouachita Chapter in Hot Springs (20), the Three Rivers Chapter in Mountain Home (60), and twice to the Central Mississippi Valley Chapter in Russellville (combined, 40). Brandy Dacus gave a public talk to the Ark-Homa Chapter in Fort Smith (15).
- **Central Mississippi Valley Archeological Society.** Morrow continued to arrange guest speakers for the monthly meetings and provide guidance. Brandy Dacus managed membership and t-shirt sales for the Chapter, and prepared flyers. Sarah Stuckey assisted with announcements for meetings. Volunteer opportunities are provided in the station lab and field projects.
- **Training Program.** Brandy Dacus taught the basic excavation class at the 2018 training program in Pea Ridge, Arkansas. Sarah Stuckey assisted Dr. Zabecki (ARAS Educational Outreach Coordinator) with a group of students from the Thaden School, and then worked with Dacus in the basic excavation class and helped with unfinished excavation units in other parts of the site.

Volunteer Hours

- Volunteers contributed 269 hours to station research projects in the field and laboratory during 2017–2018.



Coordinating Office





The Survey Director, George Sabo III, Ph.D.

George Sabo III (Ph.D., Michigan State University, 1981) was appointed Director of the Arkansas Archeological Survey in 2013 after a national search. He first joined the Survey as ARAS-UAF Research Station Archeologist in 1979. He eventually earned the title of Professor of Anthropology in the University of Arkansas Fayetteville Fulbright College of Arts and Sciences, where he taught undergraduate and graduate level courses for nearly thirty years, served on numerous graduate student committees, was the Department's Director of Graduate Admissions for two years, and continues to serve as Co-Director of the interdisciplinary Environmental Dynamics Ph.D. Program. Prior to accepting the position in Arkansas, Sabo spent nine years doing archeological research in the Upper Great Lakes and the Canadian Arctic, and held a position as assistant to the State Archeologist of Michigan while attending graduate school. His work in northwest Arkansas has included mound excavations in the western Ozarks, the cultural landscapes and interpretation of rock art sites, studies of historic pioneer farmsteads, the ethnohistory of Arkansas Indians, especially the Caddo, environmental history, and development of interactive digital educational resources. In addition to many articles and book chapters, he is the author of the Survey's popular history of Arkansas Indians (*Paths of Our Children*), and coauthor of *Arkansas: A Narrative History*, published by the University of Arkansas Press.

Dr. Sabo's goals for the organization include supporting all staff members as they pursue the Survey's mission in their individual and collegial capacities, strengthening and developing cooperative research projects that maximize the strengths of the ARAS staff by working across research station territories and making use of cost-share agreements and collaborative research funding, an initiative to inventory, digitize, and preserve decades of ARAS records and documentation, improving our ability to serve the educational community, stabilizing job descriptions in an employee handbook, and revitalizing the ARAS publications program.

Teaching & Higher Ed

- **George Sabo III**, Survey Director since 2013 and **Professor of Anthropology**, serves as **Co-Director of the Environmental Dynamics Interdisciplinary Ph.D. Program**, which is part of The Graduate School and International Education at the University of Arkansas. In 2017–2018, Dr. Sabo
 - served on 6 Anthropology Department and Environmental Dynamics Program M.A. and Ph.D. student committees.
 - served on the UAF Anthropology Department Personnel Committee.
 - served on the University of Arkansas System eVersity Academic Governance Council.
 - presented guest lectures: “Research Opportunities at the Arkansas Archeological Survey” to a UAF Introduction to Archeology class (18 students); “Research and Education Opportunities at the Arkansas Archeological Survey” to a University of Central Arkansas Anthropology class (10 students and faculty); and “Current Research at the Spiro Site” at UAFS (12 students).
 - presented the keynote address on “Current Research at the Carden Bottoms Site” at the University of Central Arkansas Student Research Symposium (75 students and faculty).

Professional Service

- Sabo provided peer review for the journal *Southeastern Archaeology*.
- Sabo served as an external reviewer for Glenn Black Laboratory of Archaeology, Indiana University.

Public Service & Outreach

- Sabo presented “What is Archeology” to a visiting 4H group (16 students and leaders).
- Sabo (and other ARAS staff) presented “Research and Collaboration at the Arkansas Archeological Survey” to the Osage Nation Heritage Tour (36 participants).
- Sabo presented a teacher workshop on “Caddo Kinship and Gender Roles” at Caddo Mounds State Historic Site, Alto, TX (24 teachers and participants).
- Sabo assisted Jessica Crawford (The Archaeological Conservancy) and Tim Mulvihill (ARAS-UAFS research station archeologist) with Cavanaugh Mound stabilization in Fort Smith.
- Sabo attended and helped supervise the 2018 ARAS/AAS training program at Pea Ridge National Military Park (in photo at left, Michael Evans and Dr. Sabo work together to record data points with a Total Station transit at Pea Ridge).

Grants & Scholarly Activities

- Sabo organized a multi-institution research collaboration/discussion meeting at the Butler Center for Arkansas History on current research in the central Arkansas River valley (September 2017).
- Sabo is a co-Principal Investigator (with Claire E. Terhune, Wenchao Zhou, Paul M. Gignac, and Haley D. O’Brien) on “MRI: Acquisition of a micro-computed tomography system for advanced imaging and inter-disciplinary multi-user access for the University of Arkansas and the US Interior Highlands” (National Science Foundation grant for 2017–2020; \$687,161) <https://micro.uark.edu>; <https://researchfrontiers.uark.edu/researchers-test-new-microct-imaging-system/>.
- Sabo is a co-Principal Investigator (with Kathryn Sloan, Michael Pierce, Kim Sexton, Robert Cochran, David Fredrick, Sean Teuton, and Eric Funkhouser) on “Arkansas Stories of Place and Belonging” (University of Arkansas Chancellor’s Discovery, Creativity, Innovation, and Collaboration Fund grant for 2018–2019; \$88,735).
- Sabo participated in the 25th Caddo Iconography Workshop at Texas State University in San Marcos, TX (May 2018).
- Sabo, along with Carol Diaz-Granados, Jan Simek, and Mark Wagner, co-edited *Transforming the Landscape: Rock Art and the Mississippian Cosmos* (Oxbow, 2018) for the American Landscapes series published by Oxbow Books.

Other Activities

- Sabo accepted, on behalf of ARAS, the 2017 Forest Supervisor’s Award for Partners and Community Engagement from the Ozark-St. Francis National Forest.
- On March 15, 2018 Sabo joined State Archeologist, Dr. Ann Early, and Arkansas Archeological Society President, Hope Bragg, at the State Capitol for the Governor’s proclamation of Arkansas Archeology Month and to present this year’s Archeology Month poster to Governor Hutchinson.



The State Archeologist, Ann M. Early, Ph.D.

The duties of the State Archeologist involve all aspects of public archeology, from site reporting to liaison with public agencies to public education and outreach programs. These activities include preservation planning, review of nominations of archeological properties to the National Register of Historic Places, and establishing guidelines for archeological research in the state. Information on state laws pertaining to archeological sites in Arkansas is available from this office. The State Archeologist also oversees the Survey's collections and records management programs, cooperative relationships with the Arkansas Archeological Society, and educational outreach activities including Publications.

Ann M. Early (Ph.D., University of Massachusetts – Amherst, 1973) is a Research Professor of Anthropology for the University of Arkansas Fayetteville Department of Anthropology, and is the second person to serve as State Archeologist for Arkansas. She was hired to the position in 1999 after 27 years as Station Archeologist at the ARAS-HSU Research Station in Arkadelphia. Early is the author of numerous books and articles on Arkansas archeology. Her research has focused on human ecology in the uplands of the Trans-Mississippi South, Caddo Indian cultural traditions and relationships, Caddo pottery design and typology, and the effects of Euroamerican cultural perceptions on popular images of the past. As State Archeologist, she has been active in historic cemetery preservation initiatives, among many other projects.

Research & Scholarly Activities

A number of research projects moved forward this year. The emphasis was on using older collections to bring timely projects to completion while also improving the condition of legacy collections and records. Dr. Early continued working on the Gilcrease Museum's Digital Catalog Interface to review, classify and comment on their Lemley Collection and Perino Collection of Arkansas pottery, finishing roughly 2,786 out of 3,200 pottery vessels by the end of the 2017–2018 fiscal year. Each item is linked to the Survey's AMASDA database by adding site codes to each curation document. As part of that project Dr. Early spent time trying to find Gregory Perino's field and catalog records in order to improve the utility of his Banks Village 1958 collections. Although the site was in Arkansas, there are no records of the fieldwork or analysis at ARAS and evidently the Gilcrease does not have any either.

With the help of a small corps of student and citizen scientist volunteers Dr. Early continued to analyze the Johnny Ford site (3LA5) collections. This is a Woodland period camp and cremation cemetery in southwest Arkansas that was excavated by ARAS staff and Arkansas Archeological Society volunteers in 1970 but never carried through analysis to publication. The collection is being fully inventoried and re-boxed at the same time to bring it up to modern curation standards. The site may be the largest such cremation cemetery in the Trans-Mississippi South. Early gave an update presentation about the project at the Caddo Conference in March.

Early continued working on a clean copy of the Caddo Pottery Design Pattern book, a compendium of 2,000 pottery designs drawn from dozens of archival collections. There is much to do before this will be finished, and it is hoped to eventually

publish the pattern book in the ARAS publications series.

Early also wrote a paper about precontact Caddo salt-making in south Arkansas that was presented (in absentia) at the 2nd International Salt Conference in Los Cabos, Mexico. Continuing her expertise in this area, she agreed to contribute a chapter to a book about salt-making by Native Americans in eastern North America. The book will be published by University of Alabama Press.

Dr. Early also completed work on drafts of additional book chapters plus an article for the Arkansas Secretary of State. A chapter coauthored with George Sabo III (ARAS Director) about the joint ARAS/AAS training program is for a forthcoming book about cooperation among amateurs and professionals in archeology to be published by the Society for American Archaeology. Another chapter, for which Early is a junior author with George Sabo III, Jerry Hilliard (ARAS-UAF), Jamie Lockhart (ARAS-CSP), and Leslie Walker (who received her Ph.D. from the University of Arkansas and is a former student of Dr. Sabo), is a review of protohistoric settlement in the Carden Bottoms region of the Arkansas River valley. This chapter expands on a Mid-South Archaeological Conference paper and will be in a collection published by the University of Mississippi Press. The article, co-authored with George Sabo III, is a brief history of Indians in Arkansas in the Territorial Period, between 1819 and 1836, and will be in the Secretary of State's decentennial report due out this year. Early is also scheduled to co-author a book chapter about Woodland and Caddo ceramics in southwest Arkansas with Mary Beth Trubitt.

Finally, Early carried out some preliminary archival research concerning the murder of Edward Coy in a racially motivated mob killing in Texarkana in the late 19th century.

Academic & Service Activities

Grants, Honors & Awards

- \$900 grant from the Arkansas Archeological Society's Archeological Research Fund for three AMS radiocarbon dates, "Dating the Cremation Cemetery at the Johnny Ford Site, 3LA5."

Teaching & Higher Ed

- Ann Early served as a member of Jessica Cogburn's Ph.D. committee (University of Arkansas) and Katie Wilson's M.A. thesis committee (Texas State University), and committee advisor to M.A. student Leah Morse (University of Arkansas).
- Throughout the year Early taught basic collection management procedures to University of Arkansas anthropology students and supervised their work as volunteers in the ARAS Archeology Lab.
- Early provided informal advice to Ph.D. candidate Robert Scott (Southern Illinois University at Carbondale) and other students at the University of Arkansas.

Professional Service

- **Organizations.** National Association of State Archeologists (Vice President).
- **Committees.** ARAS Web Steering Committee.

Public Service & Outreach

- **Boards & Commissions.** Arkansas State Review Board for Historic Preservation (Vice Chairman); Arkansas Genealogical Society (Board member); Arkansas Women's History Institute (Board member).
- **Public Outreach.** Early responded to about 213 contacts and activities from individuals or organizations concerning artifacts, cemeteries, American Indians, and other general archeology topics. These included contacts and activities with archeologists, land managers, agency persons, CRM firms, and other professionals about site and collection management, cemetery laws, scholarly information, and other topics related to preservation, plus contacts, consultations, and activities with the public education community, and private citizens. Additionally, Early helped 44 academic colleagues and graduate students with information or advice about research questions, and assisted some of them with access to collections for research. Early wrote five essays for the ARAS 50 Moments web series and reviewed articles for the Butler Center's *Encyclopedia of Arkansas History & Culture*. Early gave a talk to the Oklahoma Anthropological Society's Tahlequah Chapter (audience, 12).
- **Arkansas Archeological Society.** Early taught beginner's orientation classes five times during the June training program at Pea Ridge, and once at the Three Rivers Chapter in Mountain Home (audience 20). She worked with ARAS Director George Sabo III and the Society's executive committee on restructuring the certification program, commented on paperwork used for the training program, and gave advice on a manuscript to the editor of the Society's newsletter.



Dr. Early teaching beginner's orientation to participants in the summer training program.

Records & Collections Management

- Supervised the organization, inventory, and curation of part of the Frank Chowning collection, with help of citizen volunteers and students.
- Supervised the organization, inventory, and re-packaging of the Hays Mound 1971 salvage excavation collection with the help of citizen volunteers and students.
- Inventoried U.S. Army Corps of Engineers Gillham and DeQueen collections and Ed Reed collections with the help of volunteers.
- Wrote an article about the Lemley collection documentation from the Arkansas perspective for the Gilcrease Museum's Institute of Museum and Library Sciences grant final report.
- Catalogued Hester Davis's personal slide archive.
- Reviewed and/or commented on several records and collection management issues, including release of site data to Digital Index of North American Archaeology (DINAA) managers; disposition of human remains in the hands of the Shelby County, TN medical examiner; loan of a collection to a University of Memphis student; advice on disposition of artifact collections; landowner demand for return of Widow Logan site artifacts; loan of an artifact to Jacksonport State Park.
- 38 contacts with individuals and organizations wishing permission to publish, access to records, access to collections, and other related activities, including overseeing the completion of the Sloan site artifact photo gallery, and review of final NAGPRA notice drafts.
- Reviewed all Section 106 letters, contract reports, and Corps of Engineers permit applications pertaining to Arkansas.

Volunteer Hours

- Students (including one intern) and Society volunteers contributed 779 hours in the laboratory at the Arkansas Archeological Survey coordinating office, supervised by Dr. Early during 2017–2018.



The Survey Registrar

Managing the State's Archeological Site Files

The ARAS registrar's office oversees the reviewing and encoding of site forms, project reports, slides, black & white photos, accession paperwork, evaluating and curating new archeological collections, both contract and donations, and encoding the paperwork associated with collections.

The **AMASDA** (Automated Management of Archeological Site Data in Arkansas) database is a dynamic research tool that is linked to a geographical information system (GIS). Maintaining the daily influx of data is vital to keeping this resource current. This year **527 new sites** were recorded, bringing the total for the state of Arkansas to **49,306**. New information for **1006** previously recorded sites (revisited by various persons during the year) was reviewed and encoded. New archeological projects numbered **135** this year, bringing the total projects listed in AMASDA to **7,206**. Finally, **17** archeological collections were submitted, reviewed, and accepted for curation.

Arkansas Archeological Survey Site File Activity, 2017–2018

New Sites Recorded	527	Total no. of sites in Arkansas site files: 49,306
New Data for Known Sites	1,006	
Access to Records	259 online access 91 paid subscribers 24 students & researchers 39 State & Federal 6 on site contractor visits	
Total Information Requests	2100	
Collections Accessioned	17	
New Projects in AMASDA	135	Total no. of projects in AMASDA: 7206

The Survey registrar's office is responsible for reviewing, processing, and curating all archeological site data in Arkansas. The Registrar manages and maintains all paper, photographic, microfilm, and electronic records of archeological sites, projects, and collections; oversees encoding of all new and updated site information in the various digital databases; and assists and regulates access to records and collections by government agencies, private firms, professional colleagues, and students engaged in archeological research in Arkansas. The office also maintains a research library and a map library, and participates in the Survey/UA Department of Anthropology student internship program.

Lela Donat (M.A., University of Arkansas, 1992) became Survey Registrar in 1994, after three years as Assistant Registrar and a previous 17-year career in nursing. Her degree specialization was bioanthropology. Donat is proficient in the use of database applications and has archeological and bioanthropological field and laboratory experience in Arkansas and Chile.

Teka McGlothlin (M.A., University of Arkansas, 2014) was hired as Assistant Registrar in July 2014. She has worked in the office since 2008, first as a part-time work-study student, and later under various grant-funded projects while completing her Master's degree. McGlothlin's studies have focused on antebellum historical archeology, cultural interaction and settlement, and the use of ArcGIS as a way to represent patterns in archeology. She served as part of the Survey's Digital Data Collection Initiative (DDCI) working group.

Sarah Hunt Shepard (M.A., University of Arkansas, 2016) became a Research Assistant with the registrar's office in November 2016. She has worked in the office since 2014 on various projects including scanning technical reports and mapping projects. In addition to working on AMASDA and collections management, Shepard continues to maintain the Survey's compliance with the Native American Graves Protection and Repatriation Act.

Students:

Madelyn Rose graduated with a B.A. in Anthropology and Art History in 2018 from the University of Arkansas. She has worked with the registrar's office since 2015; prior to that she worked with the University of Arkansas Museum collections. Her project in 2017–18 is helping to manage the Forest Service collections and re-boxing general collections curated by the Survey.

Assistance to Researchers & Agencies

Another major function of the office is assisting private archeological contractors, state and federal agencies, University of Arkansas faculty, staff, and students, the 10 ARAS research stations, and others performing legitimate research in the state.

The office fielded approximately **2,100 requests for site information** during FY 2017–18 (by email, telephone, and in person), primarily from the Arkansas Department of Transportation, the State Historic Preservation Office, the U.S. Army Corps of Engineers (Memphis, Vicksburg, and Little Rock Districts), the Natural Resources Conservation Service, and the Ozark-St. Francis and Ouachita National Forests. In the course of the year, the registrar's office also assisted about **46 private firms** doing research in Arkansas. A list is provided on page 90.

Contractors now have access to AMASDA Online. The current fee schedule is \$50 per project or \$1200 per year. An "Access to Records" form must be submitted for each project. The fees will help pay for updates to servers and equipment for the AMASDA database to keep it functional and continue its serviceability to our various users. For the 2017–2018 fiscal year, we had **259** single project requests with **85 per-project** and **6 annual subscriptions**. Six contractors visited the office to perform their research.

The office assisted **19 students and researchers** on various projects: Erik Otarola-Castillo (Purdue University), Why Do

We Farm? Assessment of the Foraging Farming Transition in North America; Renee Erickson (University of Oklahoma), master's thesis research; G. Patrick Solomon (University of Arkansas at Little Rock), Giant River Cane (*Arundinaria gigantea*) in Arkansas; Leah Morse (University of Arkansas), Arkansas Cherokee Archaeology; Patrick Johnson (College of William and Mary), Empires of Earth: Mound Sites in the U.S.; Melinda Martin (University of Memphis), 3MS53 site research; Sabrina Yeasky (Southern Arkansas University), Ozmer House Internship; April Cisneros (Southern Arkansas University), Ozmer House Internship; Caitlin Yoakum (University of Arkansas), Chowning Collection research; Kelly Schaeffer (University of Arkansas), Malaria research; Lydia Rees (University of Arkansas), Ozark Ceramics; Clem Campbell (Arkansas State University), Old Folks Home Cemetery; David Dye (University of Memphis), Mississippian photography; Bob Brooks (University of Oklahoma), Kelly Creek site; Mt. Olive/Bedford Chapel Committee, cemetery research; Gary Knudsen, Penhook Rock Shelter; Katy Mollerud (Harvard), NAGPRA compliance; Jim Cherry, White County site; Tim Perttula, Caddo vessel collections.

Teaching Service

The registrar's office conducts tours of its facilities for students enrolled in classes at UAF during the academic year, and



Madelyn Rose re-boxing collections.

for visiting groups of K–12 students from around the state. The Survey employed UA undergraduate student Madelyn Rose in the registrar's office. Madelyn received her B.A. in Anthropology and Art History in 2018.

NAGPRA Functions

The office has worked to achieve and maintain NAGPRA compliance with the Survey's collections, with the following accomplishments this year:

- 5 Notices published in the Federal Register:
- 4 Notices of Inventory Completion regarding human remains and associated funerary objects attributed to the Caddo Nation, Quapaw Tribe of Oklahoma, Osage Nation, and Tunica-Biloxi Tribe of Louisiana.
- 1 Correction Notice regarding associated funerary objects with the Quapaw Tribe of Oklahoma.

- Transfer of Control agreement with the Tunica-Biloxi Tribe to return ownership of collections.
- Assisting outside agencies with NAGPRA compliance and information:
- Arkansas Highway and Transportation Department, Arkansas State Parks, University of Arkansas Department of Anthropology, Arkansas Tech University, U.S. Corps of Engineers, University of Arkansas Museum, Peabody Museum of Archaeology and Ethnology, Arkansas State Police.

New Developments

3D Scanner. The Survey received an Artec Spider 3D scanner in order to begin scanning and recording unique artifacts from the museum as well as our own collections. Currently we have scanned 53 objects while working with the Center for Advanced Spatial Technologies (CAST) in the process of learning as well as establishing protocols for the scanning process.

Digitization of Records. A few years ago, the Survey embarked on a project to ensure the survival of our 50 years of site documentation and excavation records. Kathleen Cande visited all the research stations to assess what records existed, what had been backed up as duplicates at the coordinating office and what hadn't, and what existed only on paper as opposed to a digital version. This was presented in a summary document. This year records from ARAS-WRI station were scanned, and staff began digitizing the records from ARAS-HSU research station and slides from the coordinating office.

Collections Curation & Records Management

Curation Update. The standards for curation were updated to reflect new requirements, including shape files to include in our GIS map for AMASDA. Older technological requirements were dropped. New fees were implemented beginning January 1, 2018.

The office participated in the curation survey of the Society for Historical Archeology.

Collection Rehabilitation. Funding was received from the Ozark-St. Francis National Forests for artifact inventory, documentation, and general collection rehabilitation. Over 40,000 artifacts have been brought to current curation standards so far.

Inventory Management of Curated Artifacts. Creation of an inventory control database to provide the location of the artifacts in the University of Arkansas Collections Facility. This database will be classified by row, bay, and shelf of container. Inventory will have the ability to be searched or sorted by location, accession number, project name, and/or site number.

The registrar's office provided assistance to the following firms, groups & agencies during 2017–2018

Federal

Corps of Engineers – Memphis, Little Rock, Vicksburg, and St. Louis Districts
Federal Emergency Management Agency (FEMA)
Natural Resources Conservation Service, Little Rock
U.S. Fish & Wildlife Service
U.S. Forest Service

- Ouachita National Forest
- Ozark-St. Francis National Forests

State

Arkansas Department of Transportation
Arkansas Historic Preservation Program/Department of Arkansas Heritage
Arkansas Department of Parks & Tourism
Arkansas Army National Guard
University of Arkansas

American Indian Tribes

The Cherokee Nation
The Delaware Nation
The Osage Nation

Out of State Museums & Universities

Mississippi State University
Missouri State University
New York University

Private Firms

- AECOM, Inc.
- Afendras Archaeology, LLC
- Algonquin Consultants, Inc.
- AmaTerra Environmental
- AMEC Foster Wheeler
- American Resources Group

- Archaeological Consultants, Inc.
- Archeological Assessments, Inc.
- Benchmark Environmental Consultants
- Blanton and Associates
- Burns & McDonnell, Inc.
- CBRE, Inc.
- Coastal Environments, Inc.
- Cultural Resource Analysts, Inc.
- Desert West Environmental, LLC
- EBI Consulting
- Environmental Corporation of America
- Environmental Research Center of Missouri
- Flat Earth Archaeology, LLC
- Garver
- GEO Services, LLC
- Gra Vitae, LLC
- HDR, Inc.
- Historic Preservation Associates
- Historical Research Associates
- HTNB Corporation
- JP Archaeological Consultants
- Merjent
- Michael Baker International
- Neeley Forestry Service
- Open Range Archaeology
- Paleowest/WSA, Inc.
- Panamerican Consultants, Inc.
- Quality Services, Inc.
- RESCOM Environmental Corp.
- RGA, Inc.
- SWCA Environmental Consultants
- Terracon
- TerraXplorations, Inc.
- Tetra Tech, Inc.
- Tieras Antiguas Archeology
- TRC Environmental Corp.
- TriLeaf Corporation



Sponsored Research Program

The Sponsored Research Program (ARAS-SRP) coordinates externally funded research across the ARAS organization based on grants, contracts, and cost-share agreements. Projects range in scope from field documentation of cultural resources in Arkansas, to information and collections management activities, to assisting with the study and interpretation of sites on state and federal lands in Arkansas. With their wide-ranging skill sets, including archival research, all phases of archeological fieldwork, flotation and soil sample processing, survey and precision mapping, geophysical imaging, production of CAD and other computer graphics, historic and prehistoric artifact analysis, data interpretation, and report writing, SRP staff members are invaluable contributors to station research projects, emergency excavation operations, grant-funded research, specialized laboratory and computer tasks, cost-share projects, consulting, and public outreach. To date, the Survey has completed more than 1000 externally funded projects with SRP staff as crucial contributors. SRP service to the university community includes assistance to faculty and providing field and lab training and employment opportunities for students.

Sponsored Research Program Personnel

Kathleen H. Cande (M.A., University of Arkansas, 1984) is a Survey Research Associate. Her specializations include historical archeology, material culture, archival research, the colonial Southeast, collections management and curation, and prehistoric lithic analysis. Cande also coordinates the Survey's historic cemetery research and preservation program, acting as primary point-of-contact for inquiries about cemetery related projects, and is the Archeology Lab Supervisor at the coordinating office. She joined the Survey in 1987.

Michael Evans (Research Assistant) has been with the Survey since 1991. His specialized skills include maintenance of high precision GPS spatial control for archeological field projects, digital Total Station and theodolite mapping, AutoCAD and Surfer map production, data editing and management, geophysical fieldwork and data interpretation, archeological fieldwork planning and supervision, project background research, and report production. Evans is interested in flintknapping, traditional methods of construction and architecture, blacksmithing, and primitive technology and replication.

Jared Pebworth (Research Assistant) has been with the Survey since 1991. His specialized skills include Total Station and theodolite mapping, geophysical fieldwork, data interpretation, archeological fieldwork planning and supervision, site mapping, project background research and report writing, lithic analysis, historic ceramics and material culture, and metal conservation and analysis. Pebworth is interested in historic archeology, traditional Ozark architecture, lithic raw material studies, and primitive technology and replication.

Beginning January 2018, Michael Evans and Jared Pebworth both were promoted to Research Associate and transferred to the ARAS-UAF research station, in the role of station assistants. They will continue to contribute to collaborative projects around the state as the need arises.

Once again SRP staff assisted state and federal agencies, local municipalities, cemetery groups, university and public education programs, and private citizens requesting assistance with site evaluation and artifact identification, in addition to working on a variety of ARAS research projects. Outside funding is administered from our coordinating office in Fayetteville.

Kathleen Cande pursued a wide range of activities during the year. An important task she initiated this year was to revise and update the "SRP Tracking Book." In the past, this was the sole internal record of all contracts and grants the Survey has done throughout its existence. AMASDA project numbers, Survey station, and county, budget, sponsor, and comments are being tabulated for each funded project, beginning with the earliest ones in the 1970s.

Cande continues to work with ARAS registrar's office and research station staff to maintain progress on our collection inventory and document archives projects. Cande also collaborates with several state parks, historical centers, and the University of Arkansas Center for Advanced Spatial Technologies (CAST) on development of public outreach and education programs. In her role as ARAS cemetery research coordinator, Cande provides technical assistance to numerous individuals and interest groups across the state. Finally, in her role as coordinating office lab supervisor, Cande provides critical logistical support for a variety of ARAS research projects at both the coordinating office and research stations.

Evans and Pebworth worked on several field and lab projects for the ARAS-UAF, UAFS, ASU, and Parkin research stations. Throughout the year, they provided ancient technology

demonstrations for numerous K-12 school groups, 4H groups, university classes, Archeology Month events, and Arkansas state parks. Evans and Pebworth also helped private citizens record archeological sites and identify prehistoric and historic artifacts, and consulted on artifact identification and site evaluation with archeologists working for private contracting firms.

Research, Preservation & Public Outreach Projects *Davidsonville Historic State Park Kiosk (with CAST)*

In collaboration with University of Arkansas Center for Advanced Spatial Technologies efforts to create a virtual 3D reconstruction of early 19th century Davidsonville, Cande prepared text and images for several elements of an interactive kiosk display, including Introduction, Federal Land Office, Doctor's Office & Apothecary Shop (including a detailed transcription of inventory of apothecary shop stock), Blacksmith Shop, Drope and Miller Wilderness Store (including a summary of a complicated court case where each sued the other over profits), Samuel Cupples, Gentleman Farmer, and Jail (included new text on a recently found description of the jail by travelers). Transcriptions of original court documents were provided for each element, including scans of originals.

Cande also wrote historic marker text and provided imagery for 1815 Cost of Mailing a Letter, A Court Day in Davidsonville, A Typical Arkansas Farmstead, Arkansas Hog Scalding, Early Tavern Rules, Flatboats and Keelboats on Black River, Fun & Games at Davidsonville, Interruption of Court by a Bear, Mail Stage Routes, River Travel to New Orleans, Significance of the Davidsonville Location, and River Transportation.



Kathy Cande ready to talk to visitors about cemetery preservation during Celebrate Archeology Day.

Finally, Cande compiled a Glossary of Terms and a source materials bibliography.

At the Coordinating Office, Cande organized all records, articles, notes, photocopies, maps, and other materials accumulated during the past 10 years from research at Davidsonville. These will be archived in the ARAS registrar's office along with project records from supporting grants. Additional archival resource information is being organized and transcribed for the Northeast Arkansas Regional Archives (NEARA) division of the Arkansas State Archives.

Rice-Looney House Project (ARAS Project 08-02)

Cande assisted Black River Technical College staff with artifact identification information from an excavation project conducted several years ago.

ARAS Records Inventory Project (ARAS Project 13-02)

Cande devoted considerable time and effort during the second half of the year in reviewing and inventorying a large collection of published, field, and archival maps stored at the ASU research station. After organizing the maps into logical groups, Cande created a detailed Excel spreadsheet containing inventory information and then organized the collection into acid-free artist's portfolio containers for long-term storage. Maps that had not previously been digitized were scanned at the ARAS coordinating office.

Cande also undertook a project to re-organize and re-box all sponsored research program administrative records to improve tracking and accessibility and update information required for registrar's office files.

Central Lab Supervision

Kathleen Cande supervises the Survey's main archeology laboratory in the coordinating office building in Fayetteville, keeping it orderly and well supplied. She monitored and maintained our supply of archival-quality artifact and sample storage containers in relation to several large-scale, ongoing collection inventory projects. With the assistance of our maintenance supervisor, Gina Hughes, a major lab cleaning and reorganizing effort was completed.

Cemetery Research

Kathleen Cande is coordinator of all ARAS activities under the Historic Cemetery Preservation Initiative. During 2017–2018 the Survey had 66 contacts from local, state, and federal officials, preservation groups, and the general public seeking information or assistance about cemeteries in 17 counties. Regrettably, the Survey cannot provide help to everyone, but we do our best. This year, the Survey's new Educational Outreach Coordinator (Melissa Zabecki), was assigned to help by taking calls on cemetery preservation issues when Cande or State Archeologist Ann Early are out of town. Cande requested



University of Arkansas graduate student Victoria Jones (right) and intern Allison Bearshears (left) analyzing material excavated from Leetown in Pea Ridge National Military Park in the coordinating office archaeology lab.

copies of write-ups done by the Washington County Cemetery Group so she could fill out site forms; researched exhumation procedures for a Little Rock attorney; and created a list of all Arkansas cemeteries listed on the National Register of Historic Places, which will be posted on our website.

As part of Arkansas Archeology Month, Cande participated in Celebrate Archeology Day on March 31 at the ARAS coordinating office in Fayetteville. She had a poster featuring some of Mary Beth Trubitt's (ARAS-HSU) research and distributed brochures and information on cemetery preservation to the general public.

Cande attended, for the first time, the Preservation of African American Cemeteries 11th Cemetery Preservation Conference in Little Rock, and was enlisted to fill in for Julie Morrow (ARAS-ASU) on a panel discussion "Who's Answering the Call?" She also gave a talk to the Little Rock Centennial Chapter of the DAR about documenting historic Arkansas cemeteries.

Other Sponsored Research Projects

NAGPRA Document Grant (ARAS Project 15-05)

Dr. Ann Early (State Archeologist) and Ms. Sarah Shepard (ARAS NAGPRA coordinator) completed the final Notice of Inventory Completions to bring this project to a close, funded during the past three years by a \$63,964 grant from the National Park Service. As a result of this effort, ARAS had no backlog of collections subject to NAGPRA repatriation; any newly acquired collections will be processed on an annual basis to maintain compliance with NAGPRA requirements.

Archeological Inventory of Pea Ridge National Military Park (ARAS Project 16-06)

Dr. Jami Lockhart (ARAS-CSP), Dr. Jamie Brandon (ARAS-UAF), and Dr. Carl Drexler (ARAS-SAU) completed the Year 3 portion of a four-year investigation of Civil War era archeological features preserved at Pea Ridge National Military Park. The overall project is funded by a \$115,595 cooperative

agreement with the National Park Service. Work focused this year on portions of the Leetown hamlet plus domestic areas (Foster's Field, Clemens Farm) that were inhabited during the battle. Additional details are found in the CSP, SAU, and UAF sections of this report.

Osoyuoy Unit, Arkansas Post National Memorial (ARAS Project 16-07)

Investigations of colonial era interactions between French colonists and Quapaw inhabitants of eastern Arkansas, supported by a \$32,659 cooperative agreement with the National Park Service, were concluded by Dr. John House and Robert Scott (ARAS-UAPB research station) and Dr. Jami Lockhart (ARAS-CSP). Additional information can be found in the CSP and UAPB sections of this report.

Taylor House (ARAS Project 17-03)

Dr. Jodi Barnes supervised ARAS staff and UAM student assistants in ongoing archeological investigations in support of the University of Arkansas Monticello's restoration of the 19th century Taylor House/Hollywood Plantation. Dr. Barnes' efforts were supported by \$24,427 from the ANCRF funds awarded to UAM. Additional details are provided in the ARAS-UAM research station section of this report.

Prairie D'Ane (ARAS Project 18-01)

Assisted by ARAS staff and Arkansas Archeological Society volunteers, Dr. Carl Drexler conducted investigations at the Prairie D'Ane Civil War battlefield site, at the request of the Arkansas Historic Preservation Program and supported by a \$30,324 grant from the Department of Arkansas Heritage. Additional information on this project is provided in the ARAS-SAU section of this report.

JEC Hodges (ARAS Project 18-02)

Dr. Mary Beth Trubitt and Chelsea Cinotto (ARAS-HSU) organized human remains and associated funerary objects from the Joint Educational Consortium's Hodges Collection to send to Fayetteville for NAGPRA documentation and repatriation. With support (\$1,875) provided by the JEC, Sarah Shepard (ARAS) and a University of Arkansas bioanthropology graduate student worked to document these items.

Hunting in the Past (ARAS Project 18-03)

Dr. Jodi Barnes (ARAS-UAM) applied for and received a \$720 Bill Jordan Public Outreach Fund grant from the Arkansas Archeological Society to augment hands-on public programming that teaches about archeological artifacts and prehistoric hunting technology. The funds allowed her to add a bow-and-arrow activity to the popular atlatl (spear-thrower) activity that ARAS-UAM offers at public demonstrations, markets, fairs, and other events. Read more about this program in the ARAS-UAM research station section of this report.

Wolf House (ARAS Project 18-05)

Dr. Jami Lockhart (ARAS-CSP), with the assistance of Mike Evans and Jared Pebworth (ARAS-UAF), conducted geophysical investigations in search of buried archeological features associated with the 19th century Jacob Wolf House in Norfork, Arkansas. Follow-up test excavations will be conducted by UAF research station personnel during the next fiscal year. Funded by a \$12,371 cooperative agreement with the Department of Arkansas Heritage, further information is provided in the ARAS-CSP section of this report.

Doctoral Dissertation Grant (ARAS Project 18-06)

John Samuelsen (ARAS-CSP) received a \$14,750 doctoral dissertation improvement grant from the National Science Foundation. The funds will be used to support Samuelsen's isotopic analysis of human and animal tooth samples collected from the Crenshaw site in southwest Arkansas. Additional details can be found in the Highlights section of this report.



Jared Pebworth (left) and Michael Evans (right), with Dr. Jami Lockhart in the background near the house, collecting resistivity data at the Jacob Wolf House in Baxter County.

Grants, Contracts & Cost-Share Agreements in FY 2017–2018

ARAS Project No. & Name	Source	Budget
Extensions		
15-05 NAGPRA documentation Grant (ended Oct 2017)	NPS	\$63,964
16-06 Pea Ridge National Military Park (extended 3rd year)	NPS	\$115,595 (+\$47,000)
16-07 Osotouy Unit, Arkansas Post National Memorial (ended Dec 2017)	NPS	\$32,659
17-03 Taylor House (through UAM; ended Jun 2018)	ANCRC	\$24,427
New		
18-01 Prairie D'Ane	AHPP	\$30,324
18-02 JEC Hodges	HSU	\$1,875
18-03 Hunting Through Time	AAS	\$720
18-05 Wolf House	DAH	\$12,371
18-06 Doctoral Dissertation Improvement Grant	NSF	\$14,750
Total (2017–2018 new funds only)		\$107,040

AAS = Arkansas Archeological Society
 ANCRC = Arkansas Natural and Cultural Resources Council
 DAH = Department of Arkansas Heritage
 HSU = Henderson State University
 NPS = National Park Service
 NSF = National Science Foundation

SRP — Academic & Service Activities

Teaching & Higher Ed

- Michael Evans and Jared Pebworth assisted with the University of Arkansas Department of Anthropology archeological field school during June 2018; this included GPS work, robotic total station data gathering, and student training and support (10 students).
- Evans and Pebworth gave demonstrations of artifact replicas and technology for archeology students and anthropology clubs and assisted university students interested in related projects.

Professional Service

- **Consultations.** Cande assisted Bill Bowden and Tom Dillard of the *Arkansas Democrat-Gazette* with information for articles; and Dawn Bringleon of NPS Midwest Archeological Center, with information about the history of archeological research at the Menard-Hodges site (3AR4).
- **Organizations.** Cande serves as Gulf States current research editor for the Society for Historical Archaeology and is a member of the Society of Southwest Archivists. She attended the Preservation of African-American Cemeteries 11th Cemetery Preservation Conference in Little Rock and joined one of the panel discussions to fill in for Julie Morrow (ARAS-ASU) who could not attend. Cande serves on the Board of Directors of the Washington County Historical Society, and was elected Corresponding Secretary in 2018.
- **Committees.** Kathleen Cande is a member of the ARAS Web Steering Committee. At the request of the Survey Director, Cande served on a search committee to hire a new Graphic Artist/Photographer.

Public Service & Outreach

- **Programs & Presentations.** Jared Pebworth and Michael Evans gave demonstrations on ancient hunting technology during the ARAS “Celebrate Archeology Day” in Fayetteville (220), at Hobbs State Park Fall Festival (800), for 4H students visiting the Survey in Fayetteville (50); and for other visiting school groups throughout the year. Kathleen Cande also participated in “Celebrate Archeology Day” with materials about the Survey’s cemetery preservation research and

service efforts. Cande gave a talk to the Little Rock Centennial Chapter of the Daughters of the American Revolution (35) and assisted with tours at the coordinating office lab for visiting members of the Osage Tribe (30).

- **Organizations.** Kathleen Cande is a member of the Arkansas Genealogical Society and Friends of the Arkansas State Archives.
- **Arkansas Archeological Society.** Michael Evans and Jared Pebworth set up the geophysical grid, and contributed mapping and other work at the 2018 summer training program at Pea Ridge National Military Park. Cande began as an area supervisor for the training program excavations, but had to drop out after three days of fieldwork due to an injury.
- **Cemetery Preservation Initiative.** Cande serves as coordinator of the Survey's historic cemetery research and outreach to individuals and local organizations involved with cemetery preservation. She presented information about cemetery preservation to the public at "Celebrate Archeology Day" in March, responded to phone calls, and worked on an article for the *Arkansas Family Historian* that she was requested to contribute. She continued research on the Georgia Flats Cemetery in Benton County and coauthored the 50 Moments essay on Cemetery Preservation.
- **Other Outreach.**
 - Cande authored or coauthored four web articles for the 50 Moments series on the ARAS website (see Appendix 1): "Cemetery Preservation: Working with the Arkansas Humanities Council and Descendant Communities"; "Collaborative Research with the Ozark-St. Francis and Ouachita National Forests"; "National Park Service Collections Curation at ARAS, 1988 to Now"; "The Development of AMASDA (Automated Management of Archeological Site Data in Arkansas)"; and "Metal Conservation at the Arkansas Archeological Survey."
 - Cande wrote "Jackfield Ware Teapot Handle" for the Artifact of the Month series (July) on the ARAS website <http://archeology.uark.edu/artifacts/jackfieldware-teapot-handle/>.
 - Cande agreed to write and began working on an entry for the Butler Center's *Encyclopedia of Arkansas History & Culture* about Hester Davis.
 - Evans and Pebworth assisted walk-in visitors to the Survey with artifact identifications and site recording at landowner request.



Computer Services Program

Deborah Weddle's time is committed to website development and Information Technology support for the organization. She oversees IT life cycle management and assists with routine personal computer operations. Responsibilities include computer procurement, inventory, and administration; computer repairs and upgrades; software site license management and deployment; and end user support for all staff (hardware and software). She also manages the CSP Computer Lab, which houses a specialized Geographic Information Systems workstation, PC and Mac general computing workstations, a batch slide scanner, tabloid flatbed scanner, networked color laser printer, and microfilm scanner.

Weddle is also responsible for the design and maintenance of the Survey's flagship website, maintenance of the Gathering, Gardening, and Agriculture 5th Grade Curriculum website (created by Jodi Barnes, Emily Beahm, and Elizabeth Horton), development and ongoing maintenance of a web-based artifact image catalog supplementing the reprinted *Sloan: A Paleoindian Dalton Cemetery*, now available from The University of Arkansas Press, and various other web development projects. She is also the initial point-of-contact for public inquiries through these websites.

John Samuelsen continued to maintain the ARAS servers (arkarcheology, arasbackup, and arasremote), databases, backup system, the AMASDA database, some other smaller databases, the AMASDA Online website, our various educational websites (see below), and the large format printer and scanner. This year he also helped Deborah Weddle launch the new Sloan artifact gallery website, moved AMASDA Online to a new server, and upgraded several aspects of the interface. The CSP team worked with University of Arkansas Information Technology Services to resolve issues that arise as the University moves to system-wide collaborative software.

Arkansas Archeological Survey Website (archeology.uark.edu or arkansasarcheology.org)

The Survey's main website showcases the wide variety of work ARAS archeologists and staff do in support of our core missions of research, preservation, and education. Information about educational outreach activities, new discoveries, current research, publications, and teaching resources are updated regularly, and operational guidelines and forms needed by public officials, developers, and professional archeologists working in our state are accessible through quick links on the home page.

The Survey's Computer Services Program (CSP) is responsible for all aspects of electronic information management, including systems administration, computer operations, equipment purchasing, research, instruction, and user support, throughout the organization. Our pioneering computer database for archeological site information (AMASDA) is one of the most comprehensive such applications in the country. The Survey has worked toward an approach that integrates the different data structures and digital tools being used in archeological research and cultural resource management today. Key components of this integrated approach include geographic information systems (GIS), relational database management systems, and exploratory data analysis. CSP provides online access to AMASDA for qualified subscribers and is working to provide web-enabled database access (with some information categories password-protected) for agencies and firms involved with cultural resource management in Arkansas. Our educational websites are maintained in response to public interest as well as agency and research needs. Our archaeogeophysical applications program maintains a full complement of remote sensing technologies for near-surface geophysical prospection on prehistoric and historic archeological sites.

Jami J. Lockhart (Ph.D., Environmental Dynamics, University of Arkansas, 2007) is CSP Coordinator and Director of Archaeogeophysical and GIS Applications for ARAS, Research Associate Professor of Anthropology for the Department of Anthropology, and a member of Cooperating Faculty of the Environmental Dynamics Program at the University of Arkansas Fayetteville. His research specializations include integrated data management, GIS, archaeogeophysics, and human-environmental interrelationships through time. He joined the Survey in 1988.

Deborah Weddle (B.A., Anthropology, University of Arkansas, 1993), Research Associate, is the Survey's Information Technology support and Internet applications specialist. Her specializations include web application development, Information Technologies, and the use of multimedia technologies for education. She began working for the Survey as a student archeological laboratory and field technician before moving permanently to the CSP.

John Samuelsen (M.A., University of Arkansas, 2009) is currently a Ph.D. candidate in Anthropology at UAF and is a Survey Research Assistant. His specializations include Caddo archeology, stable isotope analysis, geophysics, databases, GIS, digital storage, web application development, and computer applications in archeology. He is the Survey's server administrator, administers Survey databases, and assists with web application development.

Links to media coverage of the Survey's activities are highlighted on the website throughout the year. Visitor traffic to the website increased this year, with 115,089 pageviews (up from 91,175 during FY17) made by 16,541 unique users.

Additions to the website during the past year included a statewide Calendar of Events, a "50 Moments in Survey History" series, an Artifact of the Month series, and new research articles written by ARAS staff archeologists. Features highlighting events such as Black History Month, Womens History Month, and International Museum Day were added, and new educational materials were provided for K-12 teachers. Weddle will also work with new Educational Outreach Coordinator Melissa Zabecki to expand our online educational resources.

A Web Steering Committee works with Weddle as she continues to improve the website's organization and menus, advising on new features and content. Members of the committee are Deborah Weddle, John Samuelsen, George Sabo, Deborah Sabo, Jamie Brandon, Kathleen Cande, Jami Lockhart, and Ann Early.

50 Moments in Survey History web series

To celebrate the Survey's 50th anniversary in 2017, we introduced a weekly series of articles highlighting key moments

in Survey history and significant contributions our organization has made to Arkansas's rich past and to the field of archeology in general. The series was well received, but spilled over into 2018, with the final entries published in April. The stories will remain on the ARAS website for the foreseeable future.

Artifact of the Month web series

A new series was launched in January 2018 to highlight individual historic and prehistoric artifacts that tell us something unique and important about Arkansas history and culture. One artifact will be profiled each month. Some of the featured artifacts include an intact prehistoric woven seed bag from the Ozarks, a Civil War cannonball fragment from Pea Ridge battlefield, a Caddo human head effigy ceramic bottle, and a remarkable woven shoe from a bluff shelter in Benton County.

Publications Online Ordering & Payment System

The ARAS began working with the University of Arkansas's new CashNet team in April to design an online order form and credit card payment processing system to facilitate and increase sales of ARAS publications. The new "storefront" was launched successfully in August 2018.

Educational & Research Websites

The Survey has several educational websites linked onto our main flagship website. Deborah Weddle and John Samuelsen combine talents to continuously update and maintain the ARAS flagship website, as well as our focused topic websites, assisting the writers and content developers in presenting an effective product. Part of web maintenance included upgrading WordPress, themes, plugins, and sometimes creating custom code fixes. New websites are also being developed.

Indians of Arkansas <http://arkarcheology.uark.edu/indiansofarkansas/index.html> is designed for the public and for students and educators, and contains both academic and indigenous perspectives on American Indian history. It received 85,000 pageviews and 35,000 sessions.

Rock Art in Arkansas <http://arkarcheology.uark.edu/rockart/index.html> is designed for public education on the prehistoric rock art of Arkansas with articles, picture gallery, classroom ideas, and a searchable database of images and information. The site had 23,000 pageviews and 6,800 sessions.

These two sites have their greatest popularity during the school year, indicating use by students and teachers for learning exercises and classroom preparation about Arkansas history and Arkansas Indians. The content of the websites is a group effort, but is mostly created and updated by George Sabo (ARAS Director). These websites have garnered well over one million hits since their creation.

Arkansas Novaculite: A Virtual Comparative Collection <http://archeology.uark.edu/novaculite/index.html>, developed by Dr. Mary Beth Trubitt (ARAS-HSU), was launched in 2014 with a grant from the Arkansas Humanities Council. It had over 11,000 pageviews and 5,700 sessions this year. Trubitt continuously updates this site, which presents resources for researchers and students interested in Ouachita Novaculite, a stone that was used over millennia for toolmaking and trade, and related quarry and workshop sites.

Bluff Shelters of the Arkansas Ozarks <https://archeology.uark.edu/ozarkbluffshelters/> was written by Lydia Rees (graduate student in the UAF Department of Anthropology) in cooperation with Jamie Brandon (ARAS-UAF). Development of this website, presented primarily for general interest audiences and students, was supported by a grant from Arkansas Natural and Cultural Resources Council. It launched in 2016, and has seen steady traffic, plus an award from Preserve Arkansas.

Sloan: A Paleoindian Dalton Cemetery <http://archeology.uark.edu/sloan/> was completed in October 2017 by Deborah Weddle, with guidance from Ann Early. It is an online companion to the book *Sloan: A Paleoindian Dalton Cemetery in Arkansas* by Dan F. Morse, reprinted in spring 2018 by The University of Arkansas Press. Almost 2,000 high-quality color photographs by Jane Kellett are offered in galleries keyed to tables in the book. Images are watermarked to prevent unauthorized use, but a Publication Request Form to obtain image reprint permission is available on the website. Visitor traffic to the Sloan website during FY18 totaled 5,628 pageviews from 862 users.

Gathering Gardening and Agriculture: A 5th Grade Social Studies Curriculum (<http://archeology.uark.edu/gga/>) is a grant-funded website and its associated teaching materials were developed by ARAS archeologists Jodi Barnes, Emily Beahm, and Elizabeth Horton in early 2017. Teachers across the state utilize this resource to help meet state requirements. Visitor traffic to the Gathering, Gardening, and Agriculture website for FY18 totaled 1,365 pageviews from 573 users.

AMASDA Database & Backup Systems

Samuelsen administers a centralized and redundant backup system for the digital information created by the ARAS organization. AMASDA and the arkarcheology server are backed up nightly. A new backup server was purchased and all data was migrated to the new system in March. The new arasbackup server continues to be backed up daily. The use of the backup system by Survey personnel has increased again this year. The File Share folder, backed up nightly, now has 12.6 TB of data, 3,085,623 files, and 137,266 folders currently backed up. In addition, 4 TB of data is currently in use for system backups. This is a 32% increase in the size of the file sharing portion of the data over the last year. The server also has full system backups. The arasremote server is housed at the University data center, which allows for a total system backup in a remote location. This is to protect our data in a worst case scenario.

Samuelsen attended a meeting about reorganization of the Survey's share drive, which contains much of the Survey's work products, and advised on future needs.

AMASDA Online

Samuelsen continued to provide support for the ARAS registrar's office and anyone else needing help with the AMASDA Online website and AMASDA database. Individuals logged in over 6,995 times this year (a 9% increase) to retrieve 1,002,109 records related to archeological sites and projects in Arkansas. The web traffic on AMASDA Online increased 8% this year to 87,772 pageviews. Samuelsen also fixed various issues with AMASDA as they occurred and performed occasional custom queries of the database and GIS analyses of archeological site data upon request.

AMASDA Online was moved to a new server in August 2018. The website was updated to address a few issues. Testing has shown the website response can be as much as 10 times faster than it was on the old server in some cases, most notably with the Geographic Interface. Several upgrades were implemented during this move. This includes implementing some new University of Arkansas standards. The Geographic Interface was updated to include metadata for each layer. Many new layers were added, particularly new aerial photography from several different years. The increased storage space on the server enabled the addition of several such layers. Finally, data entry into the AMASDA system was changed in a couple ways for greater flexibility.

Archaeogeophysical & GIS Research Projects

Archaeogeophysical remote sensing has revolutionized archeological methodology and has become an integral part of research design and cultural resource management. These technologies offer nondestructive reconnaissance that can save time and expense by focusing excavation efforts for the most beneficial result. The Survey endeavors to remain at the forefront of this development.

Dr. Jami Lockhart coordinates and directs all of the Survey's GIS and archaeogeophysical research across the state, both ARAS projects originating at the various research stations and projects funded by grants or cost-share agreements with other agencies. In this capacity, he contributes original research as principal investigator, and collaborates with colleagues on research design and project reports. He also provides support for students and serves on University of Arkansas thesis and dissertation committees.

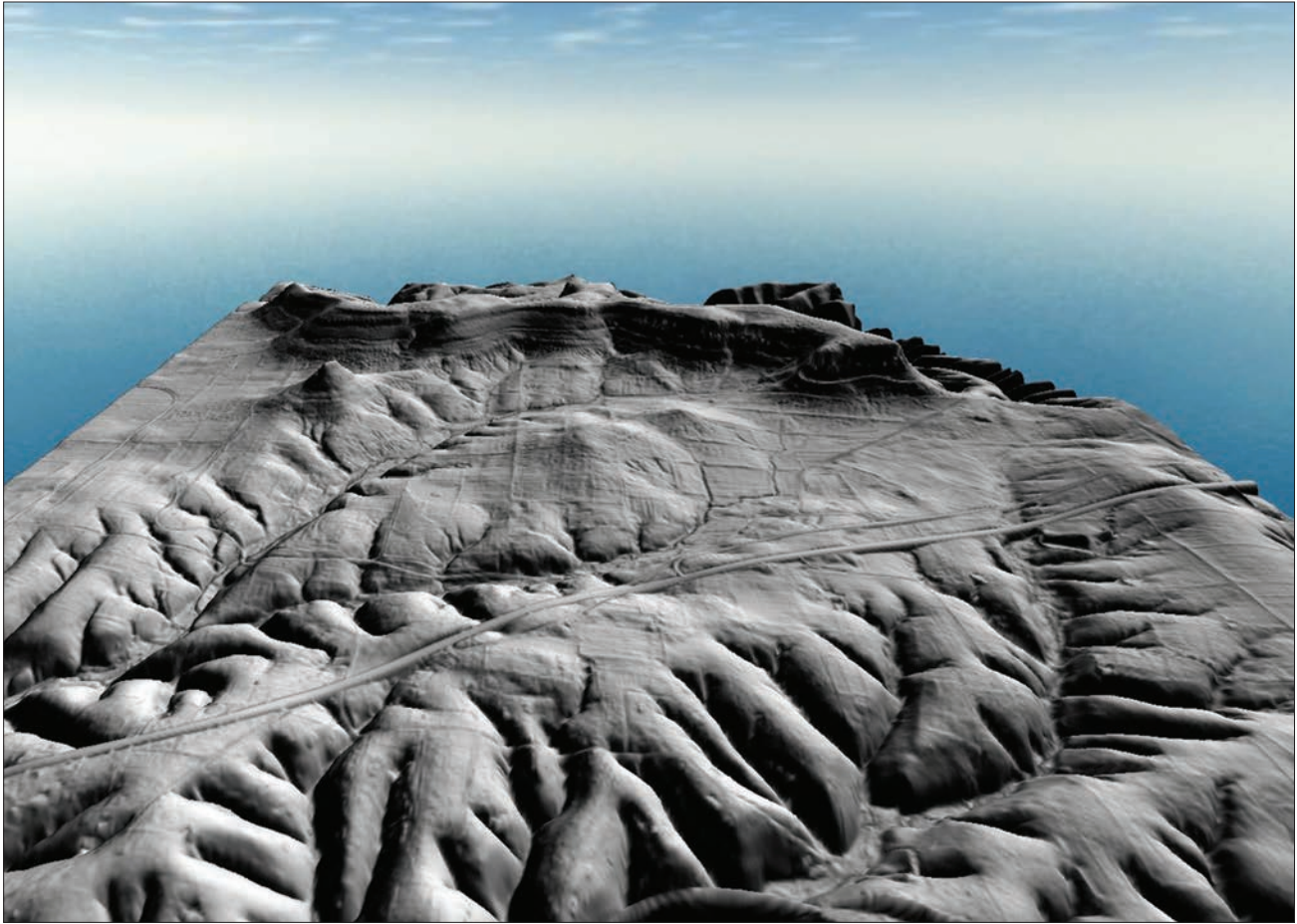
Pea Ridge National Military Park

The Survey has pursued a four-year project to conduct an archeological inventory within Pea Ridge National Military Park. The areas to be studied are associated with the March 1862 Civil War battle at Pea Ridge, Arkansas, which was one of the most significant actions of the war in this region. The project is a collaboration between the Arkansas Archeological Survey and the Midwest Archeological Center of the National Park Service, organized under the federal Cooperative Ecosystem Studies Units (CESU) program. Lockhart serves as co-PI for the project (along with Dr. Jamie Brandon, ARAS-UAF, and Dr. George Sabo III, ARAS Director). Other contributors are Dr. Carl Drexler (ARAS-SAU), Michael Evans and Jared Pebworth (ARAS-UAF), Jerry Hilliard (ARAS-UAF, retired), and John Samuelsen (ARAS-CSP).

- Lockhart continued to implement a GIS-enabled methodology currently being used at the Civil War battlefield-related Leetown Hamlet, Foster's Field, and Clemens Farmstead. The multidisciplinary methodology is being used to compile, georeference, integrate, overlay, and interpret multiple information formats. The data include archival sources, historic maps, historic and modern aerial photographs, conventional photos, and LiDAR. The resulting integrated data are fundamental to locating specific archeological features and interpreting the battle, and are being used to organize the archeological excavations.
- Working with Michael Evans and Jared Pebworth, Lockhart directed high-resolution gradiometry survey of Foster's Field and Clemens Farmstead to locate archeological features, which include former structures and associated artifacts contemporaneous to the 1862 battle. The work established the efficiency and efficacy of the Survey's gradiometer cart paired with real-time centimeter-level GPS spatial accuracy for broad-area coverage. More than 26 acres of high-resolution data were developed.
- Lockhart has begun integrating all of the data types collected and compiled during the previous 3 years of the project in order to provide a unified interpretation of the Civil War-era cultural landscape at Pea Ridge. Lockhart has processed high-resolution LiDAR data to develop highly accurate digital elevation models (DEMs) for the entire battlefield area. The DEMs will be used to locate contemporaneous transportation networks as portrayed in eye-witness and subsequent accounts of the battle. The LiDAR data are being complemented with historic and modern photo interpretation, multisensor geophysical remote sensing data, archival research, historic map interpretation, and archeological information to contribute to a comprehensive report being prepared as the final element of the four-year cooperative project.

"Bare-ground" LiDAR for Pea Ridge National Military Park battlefield landscape.





3D perspective at Pea Ridge from LiDAR data.

2018 Arkansas Archeological Society Training Program

- Lockhart used an integrated data approach to provide precise locations that guided excavations at multiple sites, including Leetown, Foster's Field, and Clemens Farmstead of the Pea Ridge National Military Park. See pp. 34–35, 68, and 120 for more information on the training program.

2018 University of Arkansas Archeological Field School

- Lockhart used an integrated data approach to provide precise locations that guided excavations for multiple structures and features in the Leetown vicinity of the Pea Ridge National Military Park. See pp. 35, 68 for more information on the field school.

Historic Wolf House

- Working with Mike Evans and Jared Pebworth, Lockhart has collected and processed remote sensing data for the ca. 1830 home and courthouse presided over by Jacob Wolf. The data will be used to inform excavations to be conducted by Dr. Jamie Brandon. See pp. 37, 95 for more information on Wolf House.

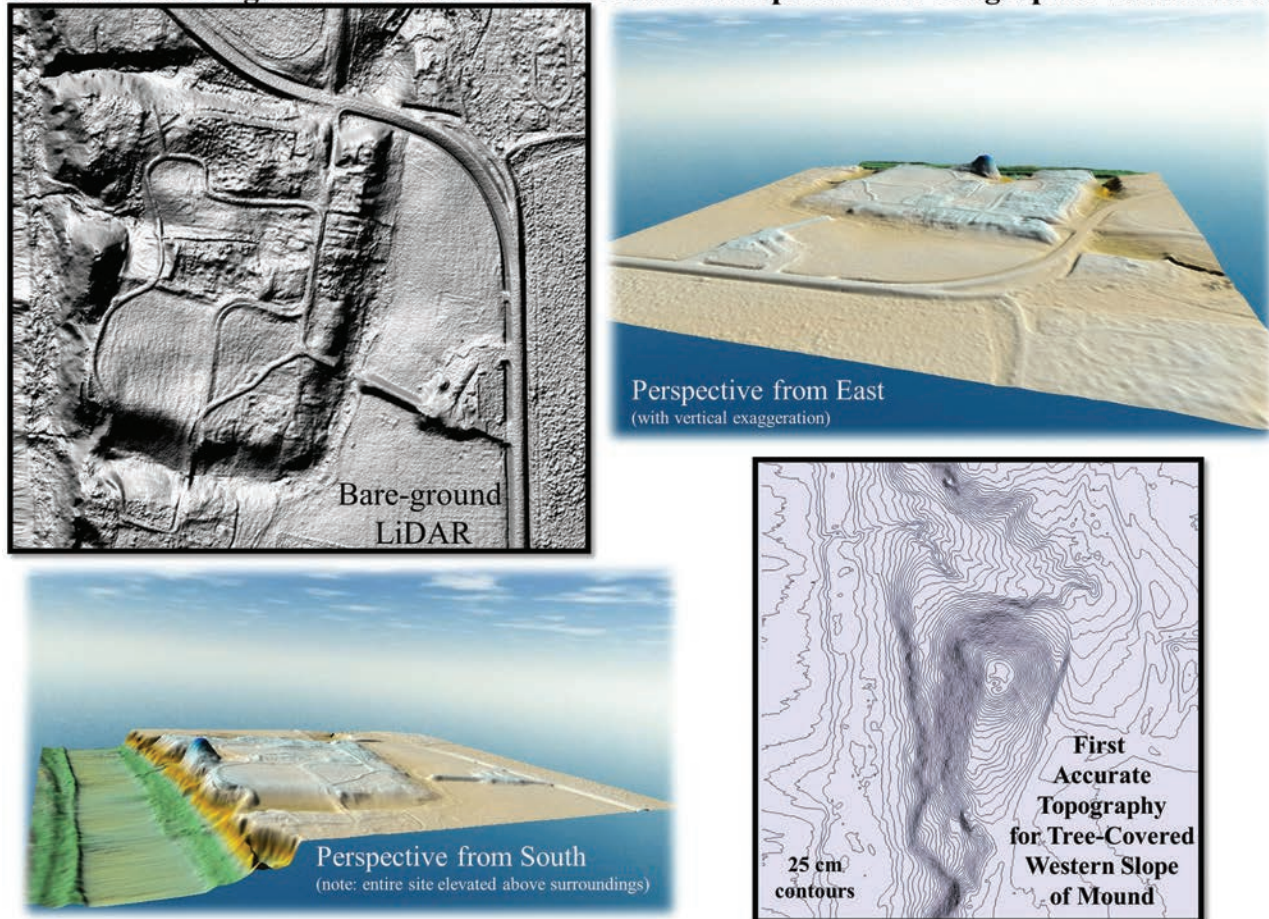
Toltec Mounds Archeological State Park

- Lockhart (with Dr. Elizabeth Horton) directed the first multisensor geophysical remote sensing survey of Mound L, which has been impacted by destructive variations in the water level of Mound Lake. The work has determined the precise location of an historic road that once traversed the southeast portion of the mound. The data have also provided insights into the original extent of the mound, and located potential features for future test excavations.

Parkin Archeological State Park

- Lockhart is continuing to develop LiDAR imagery and other GIS applications to analyze the distribution of Parkin phase sites and neighboring contemporaneous cultural affiliations as they relate to the late prehistoric and protohistoric natural and cultural landscape of northeastern Arkansas.

Parkin Archeological State Park – LiDAR Data Development and Geographic Visualization



LiDAR data development and geographic visualization for the Parkin site.

Manley-Usrey (3MS106)

- Lockhart worked with Ph.D. candidate Michelle Rathgaber to enlarge the coverage of gradiometry data collected in 2013. The 2018 data reveal the location of additional prehistoric houses and features, as well as possibly contemporaneous earthquake liquefaction features. See p. 8 for more on Rathgaber's research.

Baytown (3MO1)

- Lockhart processed raw LiDAR data to produce a high-resolution digital elevation model, which he has interpreted to identify two previously undiscovered mounds and a large raised plaza area. The data also serve as the most accurate map of the site to date with centimeter-level three-dimensional accuracy.

Protohistoric Landscape of Northeast Arkansas

- Lockhart is continuing research examining settlement patterns that distinguish a late prehistoric/protohistoric landscape in the Central Mississippi Valley. At the cultural landscape-scale, a statewide archeological site database is being used within a GIS framework to examine contemporaneous site distributions as they relate to the physical geography of the study area. Historic maps, aerial photography, digital elevation modeling, geomorphology, and GIS-driven data integration

are being employed to interpret a dynamic cultural landscape located at the epicenter of initial Native American-European contact west of the Mississippi River. The results of the research will be presented as an invited paper at the 2019 annual meeting of the Society for American Archaeology in Albuquerque, NM.

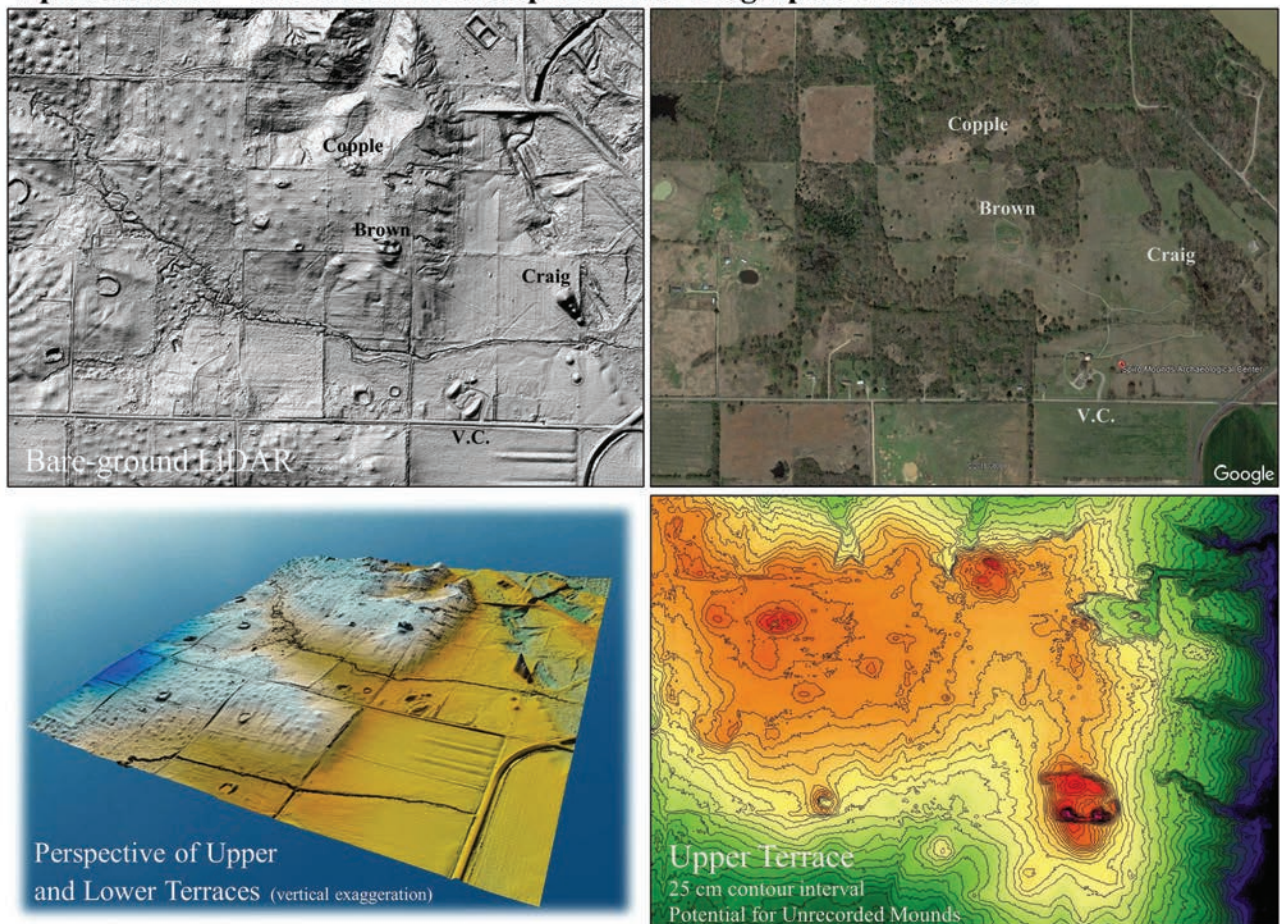
Mulberry River Project

- Lockhart continues geophysical and GIS data development relating to excavations of Woodland and Early Mississippian features and artifacts. The data were used to locate excavations for the 2017 training program. Data collected from excavations guided by the georeferenced gradiometry is providing evidence for early agricultural activities in Arkansas. In September, Lockhart collaborated with Tim Mulvihill and Drs. Brennen and Sabo to present findings at the 2017 annual meeting of the Arkansas Archeological Society in Little Rock, AR.

Spiro Landscape Archeology Project

- Lockhart is continuing his research at the Spiro Mounds, where he and his Arkansas (Sabo, Mulvihill, and Samuelsen) and Oklahoma (Hammerstedt, Regnier, Livingood) colleagues have collected multisensor geophysical data used to precisely locate archeological features at one of the most important prehistoric sites in North America. Most recently, Lockhart has processed “bare-ground” LiDAR data as part of the comprehensive GIS database he has developed for the site. These data have been used to develop the most accurate and detailed map of the site to date, and are providing insights into otherwise undetectable minute topographic variations—providing the potential for identifying previously undiscovered prehistoric earthworks.

Spiro Mounds – LiDAR Data Development and Geographic Visualization



LiDAR data development and geographic visualization for Spiro Mounds in Oklahoma.

Osotouy Unit, Arkansas Post

- Lockhart (with co-PIs Dr. Dawn Bringelson, Dr. John House, and Tim Mulvihill) continues research associated with a comprehensive archeological investigation of the Osotouy Unit of Arkansas Post National Memorial as part of collaborative research between The Midwest Archeological Center (MWAC) and Arkansas Archeological Survey (ARAS). Lockhart has directed multisensor remote sensing, as well as development and interpretation of “bare-ground” high-resolution topography from LiDAR. Lockhart has also developed a comprehensive GIS database he is using for landscape-scale analysis. Lockhart presented an invited paper on the work at a symposium held during the 74th Southeastern Archeological Conference.

Prairie Grove Civil War Battlefield

- Lockhart (with co-PIs Dr. Jamie Brandon and Dr. George Sabo) developed methodology and plans for archeological remote sensing and reconnaissance of the Borden House battlefield vicinity, planned for Fall 2018.

Statewide Archeological Site Map Updates

- Lockhart has implemented a pilot project in which he is systematically developing high-resolution 3D maps and imagery for prioritized archeological sites statewide using aerial imagery and LiDAR-derived topography. Lockhart is seeking funding to obtain, develop, and interpret these cutting-edge datasets to complement hand-drawn site sketches currently included within the AMASDA database. The new data will provide the ability not only to accurately measure horizontal distances, but also to map and measure vertical features. Types of archeological features that are being discovered and mapped include prehistoric mounds, earthworks, and bluff lines, as well as historic roads and civil war-related features.

Computer Services Program – Academic & Service Activities

Grants, Honors & Awards

- \$47,000 from National Park Service for archeological inventory at Pea Ridge National Military Park: geophysical survey, GIS, and excavation at Leetown Civil War era hamlet (2017). PIs: Jamie Brandon, Jami Lockhart, George Sabo.
- \$12,371 from the Department of Arkansas Heritage for geophysics, GIS, and excavation at the historic Wolf House. PIs: Jamie Brandon, Jami Lockhart.
- \$14,750 Doctoral Dissertation Research Improvement Grant from the National Science Foundation for John Samuelsen’s dissertation project, “An Isotopic Assessment of Late Prehistoric Interregional Warfare in the Southcentral U.S.” (Dissertation Chair/PI: George Sabo).

Teaching & Higher Ed

- **UAF Department of Anthropology.** The CSP staff and program engage on a regular basis with undergraduate and graduate students at UAF and other campuses, giving demonstrations and tours of equipment and facilities, assisting with research projects, and providing training.
- Lockhart serves as Research Faculty (Associate Professor) in the UA Department of Anthropology and Cooperating Faculty in the UA Environmental Dynamics Ph.D. Program. He is currently on graduate committees at UAF for John Samuelsen (Ph.D., Anthropology), Michelle Rathgaber (Ph.D., Environmental Dynamics), and Jeremy Menzer (Ph.D., Environmental Dynamics).
- In 2017–2018 Lockhart served as a committee member for UA Anthropology graduate students Amber Nelson-Mitchum, Seth Price, and Jordan Schaefer, who successfully defended their theses.
- Lockhart collaborated with UA Landscape Architecture Associate Professor Kimball Douglas Erdman in the development of a senior level studio class on interpreting past cultural landscapes for the public.
- Lockhart hosts tours of the CSP and discussions of ARAS projects for visiting scholars in the UA Anthropology Department Stigler Lecture series.
- Samuelsen assisted other graduate students with isotope projects, and projects involving ArcGIS and the AMASDA database.

Professional Service

- Lockhart consulted with personnel at National Park Service (Pea Ridge National Military Park, Midwest Archeological Center); U.S. Forest Service (Ozark National Forest); Arkansas State Parks (Toltec Mounds State Park, Parkin Archeological State Park); NASA; Oklahoma Archeological Survey; Oklahoma colleagues Dr. Scott Hammerstedt and Dr. Amanda Regnier on projects at Monte Alban in Oaxaca, Mexico and in Florida; and the Caddo Nation on various matters related to archaeogeophysics, LiDAR data development, and other research.
- Lockhart is President of the Caddo Conference Organization.
- Lockhart chairs the ARAS Personnel Committee.
- Lockhart provided peer review for the journals *Archaeological Prospection* and *Southeastern Archaeology*.
- Samuelsen serves as student representative for the Caddo Conference Organization.
- Samuelsen chaired a session on “Methodological Advances” at the 2017 Southeastern Archaeological Conference.
- Samuelsen provides assistance to Dr. Adriana Potra, UA Department of Geosciences, with the Stable Isotope Lab and the mass spectrometer.
- Samuelsen maintains the large format printer/scanner at ARAS. He helps print posters for conference presentations or other needs, and provides training. He also assists the UA Museum with scanning projects.
- Weddle, Lockhart, and Samuelsen are members of the ARAS Web Steering Committee. Samuelsen is part of the ARAS Digital Data Collection Initiative (DDCI) working group.

Research Station Projects

- Lockhart, with Michael Evans, assembled and tested components of a cart-mounted method for collecting large-area gradiometry that is enhancing speed and coverage for remote sensing data collection on open sites.
- Lockhart developed a methodology for reestablishing the lost site grid for the Old Town Ridge site 3CG41 in ARAS-ASU station territory. He previously provided gradiometry and published data for the entire fortified Middle Mississippian village that shows the location of a surrounding fortification ditch, palisade, possible entrances, numerous houses, mound extents, plaza, and hundreds of other features. He has recently processed high-resolution LiDAR data that pinpoints previously unlocated prehistoric earthworks at the site.
- As a co-PI (with George Sabo and John House), Lockhart is developing plans to direct archaeogeophysical surveys at the important protohistoric Thibault site near Little Rock. The work is being funded by the Quapaw Tribe of Oklahoma.
- Lockhart used georeferenced historic aerial photography and geophysical remote sensing data in consultations with Dr. Elizabeth Horton and Dr. George Sabo relating to intrasite landscape alterations and planned geomarkers at Toltec Mounds State Park.
- Lockhart made a number of contributions to the ARAS website (see below and Appendix 1).

Public Service & Outreach

- **Programs & Presentations.** Lockhart provided demonstrations of archaeogeophysical remote sensing equipment and resulting data at the ARAS “Celebrate Archeology Day” in Fayetteville during Arkansas Archeology Month (220 visitors).
- **NWA Open Space Plan.** Lockhart serves on the Northwest Arkansas Open Space Plan Steering Committee. As GIS and archeological consultant, he assists in land-planning activities aimed at preserving and conserving hundreds of the most significant archeological sites in the fastest growing area of the state and nation. He was featured in an NWA Open Space promotional video.
- **Consultations.** Lockhart provided geophysical remote sensing services to the Springdale Police, and to Mr. Jim Walton of Bentonville, AR. Lockhart is planning for multisensor geophysical remote sensing at the historic African-American East Mountain cemetery; this work will include portions of the historic Walker Cemetery, near the Confederate Cemetery in Fayetteville. Other plans for geophysical remote sensing projects were for the Old Meeting house in Historic Cane Hill, and the area of the Georgia Flat Cemetery, to look for possible Civil War dead from nearby Camp Jackson. Lockhart also provided consultation and historic aerial photos associated with a decommissioned WWII air base.
- **ARAS Website.** Lockhart authored or coauthored four entries to the 50 Moments web series celebrating the Arkansas Archeological Survey’s 50-year anniversary (see Appendix 1): “The Osotouy Project”; “Aerial & Near-Surface Remote Sensing at the Prehistoric Old Town Ridge (3CG41) Site in Northeastern Arkansas”; “Archaeogeophysical Remote Sensing”; and “The Development of AMASDA.”

Service to Arkansas Archeological Society

- **Programs & Presentations.** Lockhart (with Mary Brennan) gave a presentation to the Tunican Chapter in Monticello (19), and joined Tim Mulvihill (ARAS-UAFS), Jared Pebworth (ARAS-UAF), and Mike Evans (ARAS-UAF) in presenting a talk in the Crawford County Chronicles lecture series at the Drennen-Scott Historic Site in Van Buren (20).
- **Training Program.** Lockhart provided remote sensing, GIS, interpretation, planning, and precise excavation recommendations for the 2018 training program at Pea Ridge National Military Park in northwest Arkansas. Lockhart gave an evening lecture and Samuelsen taught guest lectures for the basic lab class at the training program.
- **Annual Meeting.** Samuelsen operated the meeting room technology. Lockhart was a panelist for a discussion on “Arkansas Archeological Survey 50 Year Anniversary: What Have We Learned in 50 Years?” at the annual meeting in North Little Rock.



The Publications Program

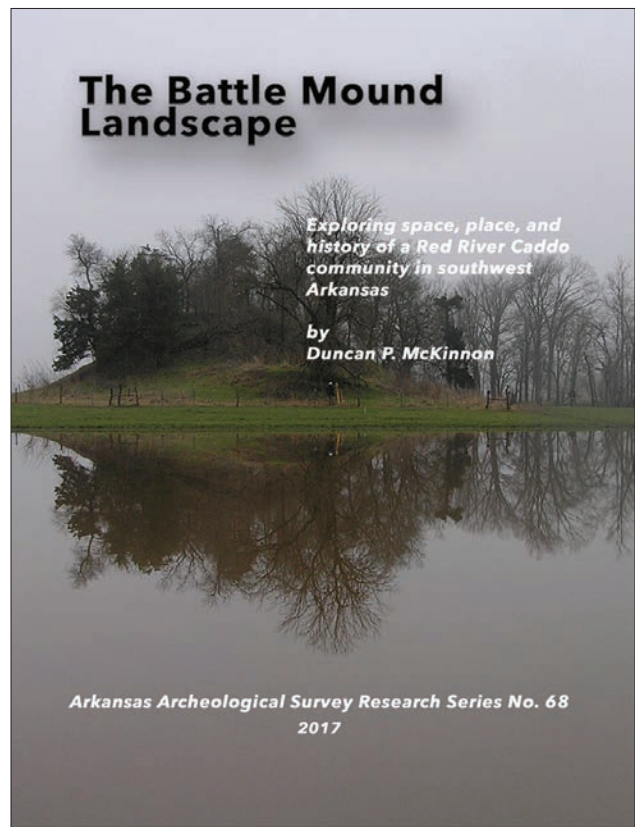
The reorganized publications program continued on a good course with Dr. Jodi Barnes (ARAS-UAM) as committee chair this year. The committee manages the submission and review process. Deborah Sabo is publications editor. She works with authors to prepare accepted manuscripts for publication, doing all final editing, book design, layout, and file preparation for the printer. She participated in interviews with candidates for a new Graphic Artist, who will assist the publications program as needed.

New Online Sales Option

Deborah Weddle (ARAS-CSP), Rachel Whitman (Assistant Director for Financial Affairs), and George Sabo (ARAS Director) began working with the University of Arkansas's new CashNet team in April to design an online order form and credit card payment processing system to facilitate and increase sales of ARAS publications. Deborah Sabo sat in on meetings with the group, and toward the end of the process provided images of all book covers and brief text descriptions for each book. She then proofread the ARAS ordering and payment website to correct errors. The new eCommerce "storefront" was launched successfully in August 2018, and is linked to our publications webpage.

Latest Publications

The Battle Mound Landscape by Duncan McKinnon, of the University of Central Arkansas, was published in 2017 as Research Series No. 68. Based upon his doctoral dissertation



RS68 is the published version of the author's doctoral dissertation. It presents a synthesis of archeogeophysical and archeohistorical data collected over many years from the Battle Mound site.

The Survey's Publications Program consists of three series: the Research Series, Technical Papers, and Popular Series present the results of Survey research projects and submissions from other qualified authors to a wide range of audiences, from professional scholars and students to public school teachers, government officials, and the general public. A Publications Committee reviews submissions internally and mediates an external review process. Program staff all have additional responsibilities in other capacities at the Survey. The Publications Program generates its own revenue for printing and equipment. <http://archeology.uark.edu/learn-discover/publications/>

Publications Committee for 2017–2018: Jodi Barnes (Chair), Elizabeth Horton, Juliet Morrow, and Deborah Sabo (*ex officio*). The three-person Committee has a rotating membership, with the senior member each year serving as Chair.

Deborah Sabo (M.A., Michigan State University, 1978) serves the program as **Publications Editor**. Sabo oversees the archive of publication masters and responds to queries about our catalog. She is (*ex officio*) a permanent member of the ARAS Publications Committee. For the Research Series, she managed initial distribution of the new RS68 and worked throughout the year on RS69 (to published in late 2018). For the Popular Series, she continued to track down permissions and to discuss developments with authors for forthcoming titles. A further major yearly commitment is to compile, edit, design, and distribute the Survey's Annual Report. Sabo also provides editorial service and advice to ARAS colleagues for articles or any written product upon request. As a member of the ARAS Web Steering Committee she participated in meetings to plan improvements to the Survey's website, contributed content, and copyedited articles submitted to the website by other ARAS staff. This included all entries submitted for the 50 Moments series and the Artifact of the Month series. Sabo also wrote two entries for the 50 Moments series. This year Sabo proposed and helped organize the Survey's first ever recognitions of Black History Month and Women's History Month. Working with Deborah Weddle and other Survey colleagues, dedicated features were produced for the website and shared on our social media, where they were well received. She then developed a calendar of commemorative focus topics throughout the year that can be highlighted with new or existing ARAS website content. For outreach, Sabo edits and updates the Survey's educational flyers, which are available on the website as downloadable PDFs, helps to create new flyers as needed, including this year a flyer for the university's new MicroCT lab, and designs and produces the Program for the Arkansas Archeological Society's Annual Meeting. She also edits and produces reports for the SRP program and contributes to other ARAS staff member projects where editorial assistance is needed. She is the editor of the Arkansas Archeological Society Newsletter, *Field Notes*, published six times per year, and serves on the Society's Executive Committee.

Rachel Whitman (ARAS Assistant Director for Financial Affairs) handles all the financial aspects of the Publications Program, including inventory management, sales invoicing, and accounting.

from University of Arkansas, the book explores the uses of the landscape at the Battle Mound (3LA1) site in southwestern Arkansas by ancestral Caddo Indians as revealed by records from past excavations and McKinnon's archeogeophysical research.

Forthcoming Publications

Throughout the year, Deborah Sabo worked on preparing the next Research Series volume for publication. The Survey was contacted by Dr. Ian Brown (University of Alabama) about a manuscript that had been slated for publication by Mississippi Department of Archives and History (MDAH). "The Mazique Site" by Brown's former student Dr. Daniel A. LaDu is the report of explorations at a Coles Creek culture mound and plaza site near Natchez, Mississippi. It is scheduled to appear as Research Series No. 69 late in 2018.

Responses from external reviewers were received for book submissions by Jodi Barnes (an educational workbook that uses preservation-oriented archeological investigations at Taylor House/Hollywood Plantation to teach the process of research from start to finish) and Elizabeth Horton (her Ph.D. dis-

sertation from Washington University St. Louis on plant fiber use and technology in the Ozarks), and sent to the authors. Another new submission for the Popular Series was received and underwent review during this year.

Popular Series Books

Two Popular Series books for general audiences are still in development. *Ways of Our Ancestors: Prehistoric Indians of Arkansas*, written by ARAS Director George Sabo III, is a summary of cultural development in Arkansas from about 13,000 years ago until the arrival of Europeans. Sabo has completed minor revisions to the text, and new illustrations are being developed.

A brief discussion of riverine boat wreck sites in Arkansas, written by retired ARAS-WRI Research Station Archeologist Skip Stewart-Abernathy, is based in part on popular public lectures he has delivered around the state. Some new progress was made finding permission sources for a few of the illustrations and the book will be finalized in 2019.

Sales & Distribution

Publication sales and distribution numbered 905 volumes in all series. While this is a decline from last year's totals, the fact that RS68 was published late in the reporting period, plus the normal cycle of fluctuating demand for RS44, combine to account for the smaller number. This includes 75 volumes given away as complimentary copies—books distributed to colleagues, teachers, reviewers, libraries and archives, students, and books contributed to the Student Paper Prize at the Southeastern Archaeological Conference. We are hopeful that the new online storefront will help future sales.

Our bestselling book continues to be RS44 (*Standards for Data Collection from Human Skeletal Remains*) with 424 units distributed this year (3 complimentary, 421 sold). Sales of our Popular Series books (*Paths of Our Children: Historic Indians of Arkansas* and *Rock Art in Arkansas*) are stable and improved slightly. In addition, 12 copies of the Gathering, Gardening, and Agriculture 5th grade curriculum workbook were given away to teachers.

Staff sold books this year at the annual meeting of the Arkansas Archeological Society, the summer Training Program, the Southeastern Archaeological Conference, and Caddo Conference (\$561 in total sales). We provided 7 volumes (\$169 value) as our contribution to the SEAC Student Paper Prize, and distributed complimentary copies of the new Research Series No. 68 to authors and reviewers and to various offices and libraries around the state.

Books On the Web

Out-of-print volumes in the SWDO (Southwest Division Overview) and CNPO (Central & Northern Plains Overview) series produced under contract for the U.S. Army Corps of Engineers in the 1980s and 1990s are still used by agency land managers, contractors, and graduate students. These books were placed on the ARAS website as free PDFs.

Publication Sales and Distribution for 2017–2018

No. of Titles	Research Series ¹ (68)	Research Reports ¹ (32)	Popular Series ² (3)	Technical Papers ² (2)	Total (105)
Sold	613	6	162	49	860
Free	64	2	9	0	75
Total	677	8	171	49	905

1 reflects the total number of titles, but not all are currently available
2 reflects the number of titles currently in print



Photographic and Graphic Arts Support

Photographic and graphic arts support at the Survey include a darkroom and desktop computer graphic arts facilities. Visual documentation is an essential part of archeology for research, publication, archives, and records management. The research stations, the registrar's office, SRP, the publications program, and the various outreach activities all benefit from the productions of this office.

M. Jane Kellett joined the Survey in 1977 while still working on a graduate degree in Art at UAF. She began a full-time position in 1979, drafting maps and other graphics, and added photographic duties in 1982. In 2017 she attained 40 years of service to the University of Arkansas. Jane retired from the Arkansas Archeological Survey at the end of December. Her talents and collegiality will be missed!

ARAS Searches for a New Graphic Artist

During 2017–2018, the ARAS Personnel Committee and ARAS Director participated in a search for someone who could meet all the needs of our photographic and graphic arts support office. Several candidates were interviewed for the position of Commercial Graphic Artist. ARAS staff who work in collections documentation and management, public outreach, and publications—activities where the graphic artist would play a role—participated in the interviews. Rachel Tebbetts was hired to begin work in July 2018. We welcome Rachel to the Survey for the 2018–2019 academic and fiscal year!

Rachel Tebbetts earned her BFA degree at the University of Arkansas.





Educational Outreach

The Educational Outreach Coordinator is responsible for sharing the wonders of Arkansas archeology by way of creating educational and interpretive materials, visiting with the general public and school children, and using hands-on activities at presentations, workshops, and conferences. This is a new position within the Survey, to facilitate and organize our increasingly diversified efforts to engage the public and assist Arkansas educators.

Melissa (Mel) Zabecki (Ph.D., University of Arkansas, 2009) joined the Survey as the new Educational Outreach Coordinator in January 2018. Before that, she taught various anthropology courses as an adjunct instructor at the University of Arkansas Fayetteville and Fort Smith campuses, and then served as a Park Interpreter at Parkin Archeological State Park for six years. She earned her Ph.D. and M.A. in Anthropology from the University of Arkansas, and a B.A. in Anthropology from Mount Holyoke College.

In the photo above, Mel Zabecki (holding the “floppy disk”) visits an education class at the University of Arkansas, to demonstrate hands-on activities that can be used in the classroom to teach how fragments of material culture tell us how people lived in the past.

Mel Zabecki shows the “trashbox archeology” activity to a teacher workshop in Helena, Arkansas.



Teacher Collaboration

Working with teachers to create relevant lesson plans is an important activity. The new ARAS Educational Outreach Coordinator, Dr. Mel Zabecki, has forged relationships with six local teachers to begin aligning current and future lessons with the Arkansas Educational Standards. This project will soon result in a major restructuring of the teacher resources section of the Survey’s website in order to offer teachers of different age groups lessons and activities appropriate for different grade levels. Zabecki also set up five teacher workshops at different Educational Cooperatives in the state to be provided in the summer. At these workshops, she and cooperating station archeologists will demonstrate different archeological lessons that can be brought to their classrooms to connect their students with the vibrant history of Arkansas and archeological concepts that are interdisciplinary.

ARAS Research Station Collaboration

Zabecki regularly works with station archeologists on website projects such as Artifact of the Month, and corresponds with them about their upcoming events so these can be publicized on the common Google calendar that she created for public notification of all archeologically related events in Arkansas. In a major collaboration with Emily Beahm at ARAS-WRI, the two worked together once a month to host a group of Faulkner County homeschoolers and their families to work through the ARAS-developed Gathering, Gardening, and Agriculture cur-

riculum. This project was spread over a six-month period that lasted through September 2018. A consistent group of about 19 attended these lessons. The homeschoolers have already asked for another such program for next year, so this may become a regular offering.

Public Collaboration

Zabecki stays busy appearing at community gatherings, library programs, museum talks, and other organized events to promote both the Arkansas Archeological Survey and the Arkansas Archeological Society, and to talk about Arkansas archeology. Her overarching themes are to teach people that (1) there is an abundance of interesting history right here in Arkansas and (2) archeology is not a treasure hunt, but a systematic science. During 2018, she contacted over 250 people spread across four different events. When other activities (Society events, school visits, civic organizations, etc.) are added in, Zabecki reached out to 678 people at 21 different events this year.

Websites & Social Media

Zabecki is now the main administrator of the Survey’s Facebook, Twitter, and Instagram accounts, and contributes to all regularly. She draws from things that are going on at the ARAS coordinating office, and also announces activities at the ten research stations and nine Arkansas Archeological Society chapters, as well as other entities around Arkansas. She organized the Artifact of the Month web series project,



Schoolchildren visiting the ARAS coordinating office in Fayetteville enjoy a range of archeology related activities. Here, a group of home-schoolers pose with Dr. Zabecki and Jared Pebworth (ARAS-UAF), who replicates and demonstrates ancient hunting technologies. The kids are showing off their blowdarts.

requesting submissions from various staff members, and works with Deborah Sabo (ARAS publications editor) and Deborah Weddle (ARAS-CSP) on getting the artifact descriptions and pictures posted in a timely manner.

Educational Materials Development

It is important to have fliers, handouts, and touchable materials when encountering the public during outreach activities. Zabecki created a flier about what the Survey and Society can do for the public—an easily referenced, bulleted list with some simple graphics. She altered programs and program handouts that she had previously created during her post as a park interpreter, including worksheets on pottery reconstruction and trash box archeology, and she altered the pottery scavenger hunt prompt at the coordinating office by instructing

participants to draw the vessels they locate. (This latter activity invites participants to explore the whole ceramic vessels that are displayed on open storage shelving, behind glass, in the hallway of the ARAS building.) She made foam animal targets for the blowdart exercise, created a rock art symbol example handout, and collated many different programs and information handouts for the teacher packets to be given out at the July teacher workshops. She also worked with Mary Suter (University of Arkansas Museum Collections curator) to borrow non-provenienced artifacts to use as touchable objects during various talks. Zabecki will continue to add more handouts and programs to this repertoire that will eventually have consistent layouts, and all of these will be shared on our website under the teacher resources menu.

Service Activities

Teaching & Higher Education

- University of Arkansas, online course, Introduction to Biological Anthropology (30 students).
- Arkansas State University Midsouth, online course, Cultural Anthropology (12 students).
- Presented talks for two University of Arkansas education classes for future history teachers (35 people).

Professional Service

- **Society for American Archaeology.** SAA Public Archaeology awards committee member and SAA Public Education Coordinator State Representative for Arkansas.
- **National Association for Interpretation.** Treasurer for NAI Region 6.
- **Peer Reviews.** Articles in *International Journal of Osteoarchaeology* and *Journal of Undergraduate Research in Anthropology*.

Public Service & Outreach

- **State Parks.** Instructed sandal workshop at Parkin Archeological State Park (4); conducted Indian Lore Merit Badge workshop for Boy Scouts at Parkin Archeological State Park (12).
- **Civic Organizations.** Talk on Mississippian Foods for Fairfield Bay Rotary Club (25).
- **Community Events.** Table at the Fayetteville Farmers Market (60); Pea Ridge Library talk about archeology (8); table at the Fayetteville Public Library Summer Reading Kickoff Event (165).
- **Private citizens.** Correspondence about five times a month from web queries.
- **K-12.** Two school field trips to the ARAS building (combined, 33); two job shadow students: one virtual internship, one on-site internship (junior high and high school students); presented a talk at the Montessori School; helped conduct three sessions for the homeschool program at ARAS-WRI (19); guided Thaden High School students taking the specially designed for youth basic excavation class during the summer training program at Pea Ridge (19).

Service to the Arkansas Archeological Society

- **Executive Committee.** Zabecki serves as an ex officio member of the Executive Committee.
- **Archeology Month.** Promotion of archeology month events via public television, radio, and morning news; table at Celebrate Archeology open house in Fayetteville.
- **Training Program.** Helped with registration and potluck; van driver; developed a modified version of the basic excavation class for high school students.
- **Ko-ko-ci Chapter.** Attends and helps out at monthly meetings.
- **Programs & Presentations.** Zabecki gave a public talk titled “Experimenting with Ancient Foods” to the Tunican Chapter in Monticello (15).

Volunteer Hours

- Volunteers contributed 57 hours at community events, the annual training program, and teacher workshops.



Many of the Survey's activities are in cooperation with the Arkansas Archeological Society (AAS), a nonprofit educational organization for interested people of all ages and vocations. The Survey and the Society have a unique and productive relationship based upon common interests of professional and amateur archeologists to protect the archeological heritage of the state, to learn about Arkansas's past, and to present that knowledge to the public. The Society elects a Board of Advisors who conduct yearly reviews of the Survey's goals, accomplishments, and needs. Society members provide proactive support for the Survey's mission of education, research, and service, and constitute a pool of skilled volunteers without whose help this mission would be much less efficiently carried out. To make the most of this energetic volunteer support, the Survey and Society jointly manage a Training Program for amateur archeologists. It was the first such program in the country and has served as a model for archeological organizations in other states and around the world.

The Arkansas Archeological Society

Arkansas River Valley Chapter, Russellville
Ark-Homa Chapter, Fort Smith
Central Arkansas Chapter, Little Rock
Central Mississippi Valley Chapter, Jonesboro
Ko-ko-çi Chapter, Fayetteville
Ouachita Chapter, Hot Springs
Red River Chapter, Magnolia
Three Rivers Chapter, Mountain Home
Tunican Chapter, Monticello

AAS Officers & Executive Committee, 2018

President: Hope Bragg, Monticello
Vice Presidents: Jessica Cogburn, Fayetteville;
Michelle Rathgaber, Fayetteville; Paul Knapp,
Fayetteville; Sarah Shepard, Fayetteville
Recording Secretary: Steve Longacre, Fayetteville
Chair, Board of Advisors: Gary Knudsen, Russellville
Chair, Stewardship: Meeks Etchieson, Hot Springs
Editors: Glen Akridge, Fayetteville (Bulletin)
& Deborah Sabo, Fayetteville (Newsletter)

Survey Liaison to Arkansas Archeological Society

Marilyn Knapp became the Survey's research assistant in the role of liaison with the Arkansas Archeological Society beginning in July 2013. She has a B.A. degree in Anthropology from the University of Arkansas and previously worked in the office of the Vice Chancellor for Business Affairs on the UAF campus. She is a long-time member and past president of the Arkansas Archeological Society. Located at the coordinating office in Fayetteville, Knapp is responsible for keeping the Society membership database up to date, assisting the Society's officers, working on logistical arrangements for the summer Training Program, and acting as Field Secretary. Knapp also assists with preparations and logistics for the Society's Annual Meeting. She coordinates many other programs and activities jointly operated by the Survey and Society, such as Archeology Month and other outreach events. She also maintains and manages Society records and archives, coordinates communications among Executive Committee members and arranges meetings, helps with social media and other public education technology, attends public events, manages distribution of the Society's newsletter, coordinates communications about field and lab projects with volunteers, and many other activities.

Activities at the UAF

- Knapp disseminates information about archeological learning opportunities and events to the general campus population and helps keep the ARAS coordinating office in touch with the Anthropology Department.

Public Service & Outreach

- Knapp assists the Fayetteville Ko-ko-ci Chapter of the Arkansas Archeological Society on a regular basis: planning and set-up for monthly meetings, publicity and media contacts, flyers and posters, moderating the Facebook group, and creating Facebook events for chapter meetings.
- Knapp planned and coordinated two local events for Archeology Month, the March Ko-ko-ci Chapter meeting at the public library, and "Celebrate Archeology."
- Ko-ko-ci Chapter special meeting at the Fayetteville Public Library, "Trading Frankincense by the Sea: Archaeology of the Arabian Port City of Al Baleed" was presented by Dr. Krista Lewis with over 50 in attendance. Knapp also secured a proclamation from Mayor Lioneld Jordan declaring March as Archeology Month in Fayetteville.
- Celebrate Archeology Day, sponsored by the ARAS coordinating office, had booths and demonstrations about archeological methods, artifacts, and interpretations. The event was combined this year with a Museum Collection Open House, and welcomed over 220 visitors.
- Melissa Zabecki, Educational Outreach Coordinator, and Marilyn Knapp were interviewed about events held in the NW Arkansas region. They recorded two Open Mic sessions for Archeology Month. These sessions were aired throughout March on Fayetteville Public Television. Each of the local events had their own Facebook event pages and professional radio advertising through the locally owned KXNA station, which aired over 200 spots through February and March.
- Knapp, Zabecki, and Michelle Rathgaber (UAF graduate student) attended the Fayetteville Farmers Market, providing information on Arkansas archeology, the Survey, and the Society.

Service to the Arkansas Archeological Society (AAS)

- **General Duties.** Knapp maintains the membership records, deposits funds, manages mailing of the newsletter, keeps brochures updated and stocked, and acts as general liaison between Society members, officers, and Survey staff.
- **Chapters.** Knapp conducted annual Chapter compliance updates and facilitated Ko-ko-ci Chapter meetings.
- **Executive Committee.** Knapp attends all meetings of the Society's Executive Committee as Liaison, assists the President in developing agenda items, maintains contact information, helps disseminate information to Committee members, and sets up the teleconference equipment for Blackboard Collaborate.
- **Training Program.** Knapp did much of the logistical planning and administered the Training Program, including registration of participants, assisting with scheduling, working with the Pea Ridge National Military Park staff, making arrangements for seminars, labs, and campground needs, evening talks and social activities, set up and break down, and all other activities as needed. She also worked to promote the program via social media, including a Facebook event page that reached over 3,000 users locally.



Archeology Month 2018 poster was presented to Governor Asa Hutchinson (center) by (left to right) ARAS Director George Sabo, AAS President Hope Bragg, and State Archeologist Ann Early. Governor Hutchinson signed the Proclamation declaring March as Arkansas Archeology Month.

AAS Board of Advisors

A Board of Advisors consisting of three members for each Survey research station is elected by the Society membership at large. BOA members meet yearly with their respective station archeologists, discuss the functions and needs of the research stations, and help ensure that the cooperative relationship between Survey and Society moves forward productively. Society member Gary Knudsen is Chair of the BOA Committee.

AAS Chapters

The Arkansas Archeological Society's total membership now averages around 550. Chapters across the state work closely with the Survey archeologists in their areas. Chapters have monthly meetings with a guest speaker or other program that is open to the public. Survey archeologists are frequent presenters and often also serve as newsletter editors and program organizers. Survey research stations host volunteer work sessions in the laboratories, and Society members participate in Survey field and lab projects throughout the year. The two newest Chapters are the Three Rivers Chapter in Mountain Home and the Central Arkansas Chapter in Little Rock. The creation of these new chapters at the grassroots level reflects citizen interest in archeology.

AAS Volunteers

Many ARAS research projects in the field and laboratory depend on volunteers, mostly Society members, plus students and others. Altogether, **volunteers contributed 14,146 hours** to archeological projects across Arkansas in 2017–2018, including 5,856 hours at the training program. This citizen participation demonstrates the level of interest and support for archeology.

The Site Stewardship Program

The Survey and Society have worked to develop a Site Stewardship Program, which enlists individuals who work with landowner permission to monitor the condition of important archeological sites. The Survey offers training and guidance via a workshop and mentoring. While some Stewards have been fielded, the program has stalled somewhat and may need revision. Meeks Etchieson chairs the Stewardship Committee.

AAS Archeological Research Fund

The Society began awarding grants from its Archeological Research Fund in 1989. The fund is composed of donations and money obtained in fund-raising raffles. Interest in the account is distributed as grants to projects in which Society members have participated.

This year's grant requests totaled \$7,840 and ARF had \$2,400 available. The executive committee authorized some additional funds. Grant recipients, announced at the 2017 annual meeting in North Little Rock, were Michelle Rathgaber (UA), \$3,000 for thermoluminescence dating of earthquake features at the Manley-Usrey site 3MS106; Mary Brennan (AAS), Tim Mulvihill (ARAS-UAFS), and Elizabeth Horton (ARAS-TMRS), \$600 for an AMS date at the Woolsey site 3FR46; and Ann Early (State Archeologist), \$900 for three AMS dates at the Johnny Ford site 3LAS.

AAS Annual Meeting

The 2017 meeting was held September 29–October 1 in North Little Rock. There were 101 registrants. Marilyn Knapp was the Program and Arrangements Chair. Of the scheduled papers, six were by ARAS staff. In addition there was a panel discussion, "Arkansas Archeological Survey 50 Year Anniversary: What Have We Learned in 50 Years?" moderated by John House. Panelists were Glen Akridge (AAS), Jamie Brandon (ARAS-UAF), Elizabeth Horton (ARAS-TMRS), Gary Knudsen (AAS), Jami Lockhart (ARAS-CO), Jeffrey Mitchem (ARAS-Parkin), Brandy Dacus (ARAS-ASU), and Ben Swadley (AAS). The keynote speaker, Dr. Jan Simek (University of Tennessee-Knoxville), spoke on "Pre-Contact Rock Art and Cave Art of the Cumberland Plateau: New Discoveries and Current Research." Deborah Sabo (ARAS) designed and managed printing of the meeting program.

AAS Publications

The Society has two publications, a bimonthly newsletter, *Field Notes*, and an annual bulletin, *The Arkansas Archeologist*. Articles for the bulletin are subject to external peer review. Deborah Sabo (ARAS Research Assistant and publications editor) is the editor of *Field Notes*. The newsletter prints short articles about archeological research in Arkansas, information about the Society's statewide activities and business matters, announcements, obituaries, and occasional book reviews. Society member (and past President) Glen Akridge of Fayetteville is editor of *The Arkansas Archeologist*. Volume 56 was distributed to 2017 members in 2018. *The Arkansas Archeologist* is abstracted and indexed by ANTHROPOLOGICAL LITERATURE and EBSCO PUBLISHING, INC.

Several Society Chapters distribute their own newsletters (primarily electronic) with regional news and announcements, plus there is a statewide email list to notify members when volunteers are needed for projects.

Archeology Month – March 2017

Archeology Month is a multifaceted public education concept to promote awareness and appreciation of Arkansas archeology. The theme each year is *Celebrate Archeology* which

AAS vice president and Ph.D. student Michelle Rathgaber explains faunal bone identification to kids at the Celebrate Archeology event in Fayetteville (photo by Marilyn Knapp).

allows for flexibility in programming. Marilyn Knapp sends out a Call for Programs, creates a printed events brochure, and works with the poster volunteer(s) on design and printing. Two FPTV Open Mic segments aired for local events, plus an extended interview about Archeology Month on local NPR affiliate stations. Marilyn manages a mailing list of the free Archeology Month materials and supplies updated information for the web page.

The poster, supported by the Bill Jordan Public Education Fund of the Society, was designed and created this year by Marilyn and featured a landscape photo of excavations during the 2017 training program.

Some 1700 people attended the 51 scheduled programs at 27 venues across the state, including six museums, five state parks, five schools, and other locations such as libraries and nature centers. Events included illustrated talks, exhibits, tours, artifact identification programs, and hands-on activities. Some highlights were "Behind the Big House," which explored extant slave dwellings and the lives of enslaved people; "Archeology Day" in Fayetteville featuring flintknapping, basketry/weaving, spear throwing, animal bone, and other demonstrations; the fourth annual ArcheOlympics event at Toltec Mounds State Park with archeology related competitions for teams from institutions of higher education; and volunteer excavations at Historic Washington State Park. Examples of other activities led by ARAS staff include an update on bluff shelter studies and a hike through Camp Monticello, a WWII prisoner-of-war camp. There were a variety of other talks, demonstrations, and outreach events.



“Society Dig”: The ARAS/AAS Training Program

This program is co-managed with the Arkansas Archeological Survey. Every year in June a two-week field school is conducted at an archeological site. The site is chosen according to criteria of ongoing research interests within ARAS, educational potential, and logistical needs. The program requires extensive preparation by Survey staff, along with volunteer Society members, beginning months in advance. Field and laboratory work are supervised by Survey staff, other professionals, and experienced Society members. Survey archeologists and other qualified individuals also teach a series of five-day seminars on various archeological topics during the training program. The Survey stations devote years to analyzing the material collected during the summer “Digs,” usually with help from Society volunteers. Training program participants must be members of the Arkansas Archeological Society. Ages eight and up are welcome, but children under 18 must be accompanied by a registered adult participant. The training program is our most visible outreach activity and has been widely imitated throughout the United States.

The 2018 Training Program at Pea Ridge National Military Park

Fieldwork at Pea Ridge Battlefield

The 2018 training program was a collaboration among the Arkansas Archeological Survey, Pea Ridge National Military Park, and the Arkansas Archeological Society. The program supported an ongoing multiyear research project by the Arkansas Archeological Survey and the National Park Service. It was a great opportunity for volunteer members of the Society to work at a National Park and help provide interpretive information that reaches thousands of people a year.

108 Society members registered for the June training program, along with 20 ARAS staff (Emily Beahm, Jamie Brandon, Kathy Cande, Chelsea Cinotto, Jessica Cogburn, Brandy Dacus, Carl Drexler, Ann Early, Mike Evans, Elizabeth Horton, Marilyn Knapp, Jami Lockhart, Jared Pebworth, Michelle Rathgaber, George Sabo, Robert Scott, Sarah Shepard, Sarah Stuckey, Fiona Taylor, and Mel Zabecki). Co-directors of the project were Dr. Jamie Brandon (ARAS-UAF) and Dr. Carl Drexler (ARAS-SAU) with Dr. Jami Lockhart (ARAS-CSP) in charge of all geophysical aspects.

The work at Pea Ridge is part of an ongoing cooperative research endeavor between the Arkansas Archeological Survey and the National Park Service. Over the past three years collaborative research has been conducted at several important battlefield sites, including Ruddick’s Field and the so-called “broad ridge,” and domestic sites that would have been occupied during the battle, such as the nineteenth-century hamlet of Leetown. The training program also took place in conjunction with the 2018 University of Arkansas archeological field school (May 29–June 29) taught by Dr. Drexler, and with workshops sponsored by the NPS Midwest Archeological Center.

This year’s fieldwork focused on several areas of the landscape, including portions of the battlefield and farmsteads that were occupied during the battle. The latter were Clemens Farm and Foster’s Field. In addition, participants returned to Leetown, to follow up on investigations begun there the previous year.

This research is adding to the historical knowledge about the battle at Pea Ridge, which has been called the “Gettysburg of the West” for the fierceness of the fighting and for its strategic importance to the outcome of the Civil War. The information gleaned from all aspects of the research—geophysical remote sensing, LiDAR, mapping, documentary research, archeological excavation, artifact and feature analysis, and cultural landscape reconstruction—will assist ongoing public interpretation at the National Park.

Training & Seminars

Training program participants work under supervision of professionals and skilled, experienced Society members. What they learn helps prepare them for additional volunteering at lab and field projects throughout the year. Interested participants may also enroll in classroom and “field school” seminars for more intensive learning. Newcomers are encouraged, but not required, to take the “basic” seminars that provide an introduction to fieldwork and laboratory processing. All newcomers must attend an in-depth beginner’s orientation class. Seminars taught at the “dig” this year were basic excavation (two sessions taught by Elizabeth Horton and Brandy Dacus), basic lab (two sessions taught by Michelle Rathgaber and Chelsea Cinotto), site survey (taught by Robert Scott), and battlefield archeology (taught by Carl Drexler).

A group from the Thaden School in Bentonville participated in a special youth version of the basic excavation class. This year’s Dig also took place in conjunction with the University of Arkansas archeological field school, attended by 10 enrolled students.

The cooperation and support of Northeast Benton County (NEBCO) Community Center provided facilities for classrooms and training program headquarters. Visitors had an opportunity to tour the lab and one of the open excavation sites on a Saturday mid-way through the “dig” during a scheduled open house.



Society members Ashley Hennessee and Jojo Houff use a line level to measure the depth of their excavation unit. Ashley was the recipient of the Society's first Hester Davis Training Program Scholarship. ARAS digital photo.



Society member Gary Knudsen (left) tells young participants from the Thaden School in Bentonville about the goals of excavation. ARAS digital photo.

Accounting & Administrative Staff 2017–2018

Assistant Director for Fiscal Affairs

Rachel Whitman

Rachel Whitman has been with the Survey since 2015 as Assistant Director for Fiscal Affairs. In this role, she works with the Director on annual budget preparation and is responsible for day-to-day management of all fiscal matters. As the chief fiscal officer, she is responsible for all financial reports submitted to the UA System Office, Arkansas Department of Higher Education, and University of Arkansas-Fayetteville Division of Finance and Administration. She administers the financial portions of Survey grants, travel, and purchasing. She also serves as the Arkansas Archeological Survey building executive. Rachel provides fiscal affairs training to the employees of the Survey at the annual staff meeting, such as how to properly fill out required forms, and information about changing university policies and procedures. Rachel serves as a board member of the Arkansas Association of College and University Business Officers (AACUBO) and regularly attends conferences and meetings of the organization. She received her Master's in Business Administration from Southern Arkansas University in December 2016.

Fiscal Support Specialist

Nancy Smith

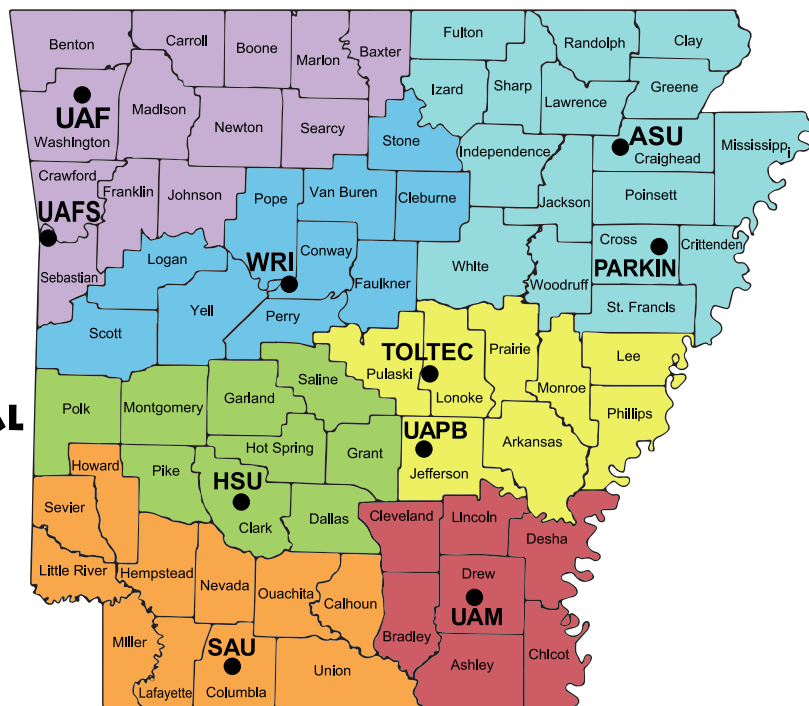
Nancy Smith has been with the Survey since November 2014, initially as an Administrative Assistant. She moved to her current position as Fiscal Support Specialist in November 2017. Nancy works hand in hand with Rachel Whitman, performing a variety of fiscal related tasks such as hourly and work-study payroll reporting, leave reporting, vehicle fleet management and reporting, capital property accounting, travel processing, and procurement. She processes accounts payable invoices of all Purchase Orders and Purchase Card transactions for all the ARAS research stations and the coordinating office. Registrations for 16 assigned motor pool vehicles and their records are maintained and reported to the university and state. Nancy assists in the process of capital property accounting, ensuring property is tagged and accounted for as required by the university. When the equipment is no longer of use to the Survey she initiates the process to surplus and dispose of the equipment within the university system operations.

Administrative Assistant

Carly Riggs

Carly Riggs was born and raised in Fayetteville, Arkansas. She graduated high school in 2015 from Haas Hall Academy, where she spent most of her senior year studying her passions: literature, art, photography, and German. Carly's interests led her to pursuing freelance photography and videography, giving her the opportunity to work with a local Cirque troupe's promo video. Through exceptional luck, Carly landed in the Archeological Survey where she has developed a knack for cataloging. Carly's skills at administrative tasks proved to be a valuable asset.

How to Contact the Arkansas Archeological Survey

<http://archeology.uark.edu>**UAF: University of Arkansas, Fayetteville**

2475 N. Hatch, Fayetteville, AR 72704
(479) 575-3556
Jared Pebworth, Station Assistant
jaredp@uark.edu
Mike Evans, Station Assistant
mmevans@uark.edu

UAFS: University of Arkansas, Fort Smith

Tim Mulvihill, Station Archeologist
Email: tim.mulvihill@uark.edu
UA Fort Smith Research Station
Echols Building #204
5210 Grand Avenue, P.O. Box 3649
Fort Smith, AR 72913-3649
(479) 788-7812

Toltec Mounds Archeological State Park

Dr. Elizabeth Horton, Station Archeologist
Email: ethorton@uark.edu
490 Toltec Mounds Road
Scott, AR 72142-9212
(501) 961-2420
Katy Gregory, Station Assistant
Email: kwg001@uark.edu

UAPB: University of Arkansas, Pine Bluff

Dr. Bob Scott, Interim Station Archeologist
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Pine Bluff, AR 71601
(870) 535-4509

University of Arkansas-WRI

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(501) 727-6250 or 1-866-972-7778
Larry Porter, Station Assistant
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ASU: Arkansas State University, Jonesboro

Dr. Juliet Morrow, Station Archeologist
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320 University Loop West Circle
ASU Museum, Rm 168
State University, AR 72467
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Sarah Stuckey, Station Assistant
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Parkin Archeological State Park

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(870) 755-2119
Edna Faye Futch, Station Assistant
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Brandy Dacus, Station Assistant
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UAM: University of Arkansas, Monticello

Dr. Jodi Barnes, Station Archeologist
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UAM-Box 3087
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(870) 460-1290

HSU: Henderson State University

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Arkadelphia, AR 71999-0001
(870) 230-5510
Chelsea Cinotto, Station Assistant
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(870) 230-5463

SAU: Southern Arkansas University

Dr. Carl Drexler, Station Archeologist
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SAU Campus
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MSC 9381
Magnolia, AR 71753-9381
(870) 235-4230
Fiona Taylor, Station Assistant
Email: fnt001@uark.edu
(870) 235-4229

For the ARAS Director, State Archeologist, and
all Coordinating Office units (Registrar, CSP,
SRP, Society Liaison, Educational Coordinator,
Publications, Graphic Artist):

Arkansas Archeological Survey
2475 N. Hatch Ave.
Fayetteville, AR 72704
(479) 575-3556

Appendix 1. Reports & Publications by ARAS Staff during 2017–2018*

Barnes, Jodi

2018 Camp Monticello. *The Encyclopedia of Arkansas History & Culture*. Online document available at <http://www.encyclopediaofarkansas.net/encyclopedia/entry-detail.aspx?entryID=9286>.

2018 Nails, Tacks, and Hinges: The Archeology of Construction of Camp Monticello, a World War II Prisoner of War Camp. *Southeastern Archaeology Online*. Online document available at <http://www.tandfonline.com/doi/full/10.1080/0734578X.2017.1420840>.

2018 Public Archaeology is Citizen Science in Arkansas. *Journal of Community Archaeology and Heritage* 5(1):4–16.

Barnes, Jodi, and Mary Heady

2017 From the Archives: The Rest Room and Library Cook Book. *Drew County Historical Journal* 32:41–46.

Bowman, Mia, Rome Bowman, Adelia Burns, Hugh Earnest, Rachel Jones, Elizabeth Leding, Josh Miles, Raphael Schwarz, Cole Seffense, Craig Tanner, and **Jodi Barnes**

2017 They Were Cultivators, Builders, Crafters: Basic Excavation at the Mulberry River Project. *Field Notes, Newsletter of the Arkansas Archeological Society* 398:3–9.

Brandon, Jamie C., and Carl G. Drexler

2018 Archeology at Pea Ridge National Military Park: Plans for the 2018 Arkansas Archeological Society Summer Training Program. *Field Notes, Newsletter of the Arkansas Archeological Society* 401:3–7.

Cande, Kathy

2017 National Park Service Collections Curation at ARAS, 1988 to Now. ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/npscuration/>.

Cande, Kathy, Jerry Hilliard, and Mary Beth Trubitt

2017 Collaborative Research with the Ozark-St. Francis and Ouachita National Forests. ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/nationalforests/>.

Cande, Kathy, and Jared Pebworth

2017 Metal Conservation at the Arkansas Archeological Survey. ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/metalconservation/>.

Cande, Kathleen, and Mary Beth Trubitt

2017 Cemetery Preservation: Working with the Arkansas Humanities Council & Descendant Communities. ARAS 50 Moments web series. Online document available at archeology.uark.edu/who-we-are/50moments/cemeterypreservation/.

Cinotto, Chelsea

2017 Uncovering a Pit: Ceramics from Caddo Hills 3MN22. Online document available at <http://archeology.uark.edu/learn-discover/current-research/caddohillsceramics/>.

Diaz-Granados, Carol, Jan Simek, **George Sabo III**, and Mark Wagner (editors)

2018 *Transforming the Landscape: Rock Art and the Mississippian Cosmos*. Oxbow Books, Oxford.

Drexler, Carl G.

2018 The Danville Landmine: Digging into an Explosive Question. *Field Notes, Newsletter of the Arkansas Archeological Society* 402:5–7.

Early, Ann, and Mary Beth Trubitt

2018 Contributions to State and National Encyclopedias. ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/encyclopedias/>.

Hammerstedt, Scott W., **Jami J. Lockhart**, Patrick C. Livingood, **Tim Mulvihill**, Amanda L. Regnier, **George Sabo III**, and **John R. Samuelsen**

2017 Multisensor Remote Sensing at Spiro: Discovering Intrasite Organization. In *Archaeological Remote Sensing: Applications in North America*, edited by Duncan P. McKinnon and Bryan Haley, pp. 11–27. The University of Alabama Press, Tuscaloosa.

* ARAS authors are shown in boldface for works coauthored with non-ARAS colleagues

House, John H.

- 2017 A C-14 Date from Barrett Mound A, Lee County, Arkansas. *Field Notes, Newsletter of the Arkansas Archeological Society* 399:9–12.

House, John H., and George Sabo III

- 2017 Collaborations with the First Peoples of Arkansas. ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/collaboration-with-first-peoples/>.

Kistler, Logan, and Natalie Mueller

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Lockhart, Jami J.

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Lockhart, Jami J., and Juliet E. Morrow

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- 2017 Investigating the Possible Base of the Cross Raised at Casqui by Hernando de Soto in 1541. ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/parkincross/>.
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Morrow, Juliet

- 2017 The Sloan Site. ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/sloansite/>.

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- 2018 Points Formerly Typed as Sedgwick “PFTAS”: A New Point Type for Northeast Arkansas. Online document available at <http://archeology.uark.edu/learn-discover/current-research/pftas/>.

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- 2017 Growing Lost Crops: New Directions in the Study of Eastern North America’s Original Agricultural System. *Nature: Plants* 3:1–5.

Porter, Larry

- 2018 Another Atlatl Hook from the Wild Violet Site, 3LO226. *Field Notes, Newsletter of the Arkansas Archeological Society* 402:3–4.

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Rees, Lydia I., and Jamie C. Brandon

- 2017 “Beyond the Bluff Dweller”: Excavating the History of an Ozark Myth. *Arkansas Historical Quarterly* 76(2):95–114.

Sabo, Deborah

- 2017 The Survey Publications Program. ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/publicationsprogram/>.

Sabo, George III

- 2017 Birth of the Arkansas Archeological Survey (1957–1967). ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/birthofthesurvey/>.
- 2017 Archaeomagnetic Dating at the ARAS. ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/archaeomag/>.
- 2017 Studying Arkansas Rock Art. ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/arkansasrockart/>.
- 2017 Investigating Spiro Mounds. ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/spiromounds/>.
- 2017 A Voice for Archeology. Introduction and Parts I–IV. ARAS 50 Moments web series. Online documents available at <http://archeology.uark.edu/who-we-are/50moments/voice-for-archeology/>.

Sabo, George III, Ann Early, Lela Donat, and Mary Suter

- 2017 ARAS Gets a New Home. ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/newbuilding/>.

Sabo, George III, Jerry E. Hilliard, Jami J. Lockhart, and Leslie C. Walker

- 2018 Petroglyphs, Portals, and People along the Eastern Ozark Escarpment, Arkansas. In *Transforming the Landscape: Rock Art and the Mississippian Cosmos*, edited by Carol Diaz-Granados, Jan Simek, George Sabo III, and Mark Wagner, pp. 76–98. Oxbow Books, Oxford.

Sabo, George III, and Jan F. Simek

- 2018 Materiality and Cultural Landscapes in Native America. In *Transforming the Landscape: Rock Art and the Mississippian Cosmos*, edited by Carol Diaz-Granados, Jan Simek, George Sabo III, and Mark Wagner, pp. 1–28. Oxbow Books, Oxford.

Samuelson, John R., Jerry E. Hilliard, Kathleen H. Cande, and Jami J. Lockhart

- 2017 The Development of AMASDA (Automated Management of Archeological Site Data in Arkansas). ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/development-of-amasda/>.

Scott, Robert J.

- 2018 Investigating the Causes and Consequences of Depopulation in Southeast Arkansas, AD 1500–1700. PhD dissertation, Department of Anthropology, Southern Illinois University, Carbondale.

Stewart-Abernathy, Skip, and Deborah Sabo

- 2018 The West Memphis Boatwrecks Project. ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/boatwrecks/>.

Taylor, Fiona M., and Carl G. Drexler

- 2018 Revisiting the 1984–1986 Training Program Excavations at Holman Springs (3SV29): A Caddo Salt-Processing Site in Sevier County, Arkansas. *Field Notes, Newsletter of the Arkansas Archeological Society* 400:6–9.

Trubitt, Mary Beth

- 2017 Current Projects at the ARAS/HSU Research Station: A New Curated Collections Inventory. *Field Notes, Newsletter of the Arkansas Archeological Society* 397:10–13.
- 2017 Archeology in Communities across Arkansas. ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/communities/>.
- 2017 Arkansas Novaculite and Quarries Research. ARAS 50 Moments web series. Online document available at <http://archeology.uark.edu/who-we-are/50moments/novaculiteresearch/>.
- 2017 Update on Spanish Diggings Novaculite Quarry Research. *Field Notes, Newsletter of the Arkansas Archeological Society* 399:3–8.

Trubitt, Mary Beth, and Chelsea Cinotto

- 2018 Current Research at Arkansas Archeological Survey's Henderson State University Research Station. *Caddo Archeology Journal* 28:124–127.

Appendix 2. Papers, Symposia & Workshops by ARAS Staff during 2017–2018*

Barnes, Jodi

- 2017 Organizer. Archaeology Matters: Celebrating 50 Years of Public Archaeology. Symposium at the 74th Southeastern Archaeological Conference. Tulsa, OK.
- 2018 Organizer. Many People, Many Plates: Archaeologies of Foodways. Symposium at the Annual Meeting of the Society for Historical Archaeology. New Orleans, LA.
- 2018 Panelist and Organizer (with Michael Nassaney). Confronting Structural Racism in Historical Archaeology. Symposium at the Annual Meeting of the Society for Historical Archaeology. New Orleans, LA.
- 2018 Foodways at the Intersections at Hollywood Plantation. Paper presented at the Annual Meeting of the Society for Historical Archaeology. New Orleans, LA.
- 2018 Behind the Big House in Arkansas. Paper presented at the Best Practices of Interpreting Slavery workshop, Behind the Big House. Holly Springs, MS.

Barnes, Jodi, Emily Beahm, Elizabeth Horton, and George Sabo

- 2017 Gathering, Gardening, and Agriculture: Public Archaeology, Education, and the Future. Paper presented at the 74th Southeastern Archaeological Conference. Tulsa, OK.

Barnes, Jodi, and Kim Christensen

- 2018 Revisiting Programme to Practice: Public Archaeology as Feminist Archaeology. Paper presented at the Annual Meeting of the Society for Historical Archaeology. New Orleans, LA.

Beahm, Emily L.

- 2017 Interpreting Imaginary Cultures: The Project Dig Program. Paper presented at the 74th Southeastern Archaeological Conference. Tulsa, OK.

Beahm, Emily, Jodi Barnes, Elizabeth Horton, and George Sabo

- 2018 Gathering, Gardening, and Agriculture: Arkansas Archaeological Survey's Plant-Based Public Archeology. Paper presented at the 83rd Annual Meeting of the Society for American Archaeology. Washington, D.C.

Brandon, Jamie C.

- 2017 Archeology in Ozark Bluff Shelters: Managing Cultural Resources in Karst Systems. Paper presented at the National Cave and Karst Management Symposium. Eureka Springs, AR.

Brandon, Jamie C., **Jami J. Lockhart**, **Carl G. Drexler**, and Victoria Jones

- 2017 Looking for Leetown: Preliminary Archeology at a Nineteenth-Century Hamlet in Pea Ridge National Military Park. Paper presented at the Annual Meeting of the Arkansas Archeological Society. North Little Rock, AR.

Brandon, Jamie C., and Lydia I. Rees

- 2017 Organizers. Ozark Bluff Shelters: Past, Present and Future Research. Symposium at the 74th Southeastern Archaeological Conference. Tulsa, OK.
- 2017 Beyond the Bluff Dweller: A History of Archeology in Arkansas Ozark Bluff Shelters. Paper presented at the 74th Southeastern Archaeological Conference. Tulsa, OK.

Cande, Kathleen

- 2018 Davidsonville, Arkansas, Frontier Settlement or Mercantile Powerhouse? Paper presented at the 77th Annual Meeting of the Arkansas Historical Association. Fort Smith, AR.
- 2018 Panelist. Who's Answering the Call? Panel Discussion at the 11th Preservation of African-American Cemeteries Conference. Little Rock, AR.

Cinotto, Chelsea

- 2017 Uncovering a Pit: Ceramics from Caddo Hills 3MN22. Poster presented at the Annual Meeting of the Arkansas Archeological Society. North Little Rock, AR.
- 2018 Uncovering a Pit at Caddo Hills (3MN22). Paper presented at the 60th Caddo Conference. Idabel, OK.

* ARAS authors are shown in boldface for works coauthored with non-ARAS colleagues

Dacus, Brandy, and Julie Morrow

- 2017 Paleoindian Period Archeology in Arkansas, circa 13,000 to 12,400 Calendar Years before Present. Paper presented at the Annual Meeting of the Arkansas Archeological Society. North Little Rock, AR.

Drexler, Carl G.

- 2018 Analyzing the Features at the Holman Springs Site (3SV29), a Caddo Saltworks in the Little River Basin. Paper presented at the 60th Caddo Conference. Idabel, OK.
- 2018 Excavating the Edge of America: Historical Archaeology at Historic Washington State Park. Paper presented at the Annual Conference of the Arkansas Living History Association. Washington, AR.
- 2018 Leaving Lost Prairie: The Expulsion of Cherokee Settlers from the Red River Valley, 1819–1820. Paper presented at the Annual Conference of the Arkansas Historical Association. Fort Smith, AR.
- 2018 Modern Military Theory and the Camden Expedition of 1864: Assessing Benefits and Limitations. Paper presented at the Annual Meeting of the Society for Historical Archaeology. New Orleans, LA.

Early, Ann M.

- 2017 Prehistoric Salt Making among the Southern Caddo of Arkansas. Paper presented (in absentia) at the Second International Congress on the Anthropology of Salt. Los Cabos, Mexico.
- 2017 Securing a 50 Year Legacy for Current and Future Research, Preservation, and Public Education. Paper presented at the 74th Southeastern Archaeological Conference. Tulsa, OK.
- 2017 Presenter in a Workshop, Native Artists Bring Past to Present: Multi-Disciplinary Perspectives for Mississippian Culture Pottery at the Gilcrease Museum. 74th Southeastern Archaeological Conference. Tulsa, OK.
- 2017 Participant. Native Artists and Scholars Bring Past to Present: Cataloguing from Home. 2017 International Conference of Indigenous Archives, Libraries, and Museums. Santa Ana Pueblo, NM.
- 2018 Legacy Collection Update: The Johnny Ford Site, 3LA5, and Its Cremation Cemetery. Paper presented at the 60th Caddo Conference. Idabel, OK.

Gillam, J. Christopher, **Juliet E. Morrow**, and **Brandy A. Dacus**

- 2017 Paleoindians of Arkansas: From the Mountains to the Mississippi of the Interior Southeast. Paper presented at the 74th Southeastern Archaeological Conference. Tulsa, OK.

Grass, Andy, and **Juliet E. Morrow**

- 2017 The Arkansas King Mastodon Site and Associated Mastodon Tusk Alveolar Pathologies. Poster presented at the Annual Meeting of the Society for Vertebrate Paleontology. Calgary, Alberta.

Horton, Elizabeth T.

- 2017 The Threads of Time: The Paleoethnobotany of Perishable Technologies in the Ozark Plateau. Paper presented at the 74th Southeastern Archaeological Conference. Tulsa, OK.

House, John H.

- 2017 European Trade Goods and Chronology on the Lower Arkansas River. Paper presented at the 38th Mid-South Archaeological Conference. Oxford, MS.
- 2017 Participant. Arkansas Valley Summit. Little Rock, 28 September. This conference brought together researchers active in contact-era investigations along the Arkansas River in Arkansas.
- 2017 Discovering Menard. Paper presented at the 74th Southeastern Archaeological Conference. Tulsa, OK.

Jones, Victoria, and **Jamie C. Brandon**

- 2018 Discovering Leetown: A Small Hamlet's Role in the Battle of Pea Ridge and Beyond. Poster presented at the Annual Meeting of the Society for Historical Archaeology. New Orleans, LA.

Knapp, Marilyn, George Sabo III, and Ann M. Early

- 2017 The Training Program in Archeology: Citizens Supporting Science. Paper presented at the 74th Southeastern Archaeological Conference. Tulsa, OK.

Lockhart, Jami J.

- 2017 Multiscale GIS in Arkansas Archeology. Invited presentation, University of Arkansas GIS Day 2017. Fayetteville, AR.

Lockhart, Jami J., and Timothy S. Mulvihill

- 2017 GIS and Archaeogeophysics at Prehistoric to Protohistoric Osotouy. Paper presented at the 74th Southeastern Archaeological Conference. Tulsa, OK.

Mitchem, Jeffrey M.

- 2017 The Glass Beads of Arkansas: An Overview. Paper presented at the 74th Southeastern Archaeological Conference. Tulsa, OK.
- 2017 Reinterpreting the Parkin Phase Based on Excavations since 1990. Paper presented at the Annual Meeting of the Arkansas Archeological Society. North Little Rock, AR.
- 2017 Show Me the Artifacts: Updating Our Knowledge of the Hernando de Soto Expedition West of the Mississippi River. Paper presented at the 38th Mid-South Archaeological Conference. Oxford, MS.

Mitchem, Jeffrey M., and Jessica Fleming Crawford

- 2018 Saving Sites in Florida: The Archaeological Conservancy. Paper presented at the 70th Annual Meeting of the Florida Anthropological Society. St. Petersburg, FL.

Moore, Michael C., Kevin E. Smith, Aaron Deter-Wolf, **Emily L. Beahm**, and Sierra M. Bow

- 2017 An Update on Crystalline Artifact Research in the Middle Cumberland Region of Tennessee. Paper presented at the 74th Annual Southeastern Archaeological Conference. Tulsa, OK.

Morrow, Juliet, E.

- 2018 Discussant. Fluted Point Technology: Variation across a Hemisphere. Symposium at the 83rd Annual Meeting of the Society for American Archaeology. Washington, D.C.

Morrow, Juliet E., J. Christopher Gillam, and **Brandy Dacus**

- 2018 Paleoindians of Arkansas: From the Mountains to the Mississippi of the Interior Southeast. Paper presented at the 83rd Annual Meeting of the Society for American Archaeology. Washington, D.C.

Pettigrew, Devin, and **Jared Pebworth**

- 2017 Ancient Weaponry from Ozark Bluff Shelters. Paper presented at the 74th Southeastern Archaeological Conference. Tulsa, OK.

Rees, Lydia, **Jared Pebworth**, and **Jamie Brandon**

- 2017 Saltpeter Cave and Its Potential for Better Understanding Archaic Chronology in the Ozarks. Paper presented at the 74th Southeastern Archaeological Conference. Tulsa, OK.

Runyan, Heather, and **Mel Zabecki**

- 2018 Introverts vs. Extroverts: Does It Have to be a Battle? Presentation at the Annual Meeting of the National Association for Interpretation Region 6 Workshop. Grapevine, TX.

Sabo, George III

- 2017 Cherokee Old Settlers in Arkansas. Paper presented at the 22nd Annual Trail of Tears Conference and Symposium. Pocola, OK.
- 2017 Discussant. Ozark Bluff Shelters. Symposium at the 74th Southeastern Archaeological Conference. Tulsa, OK.
- 2018 T-Bar and Wedge-Mouth versus Lightning and Thunder. Paper presented at the 60th Caddo Conference. Idabel, OK.
- 2018 Caddo Story-Telling. Paper presented at the Annual Metro Caddo Culture Club Symposium. Norman, OK.
- 2018 Large-Scale Rock Art Surveys. Paper presented at the 2018 To Bridge a Gap Conference. Tulsa, OK.

Sabo, George III, **Jerry E. Hilliard**, Leslie C. Walker, **Jami. J. Lockhart**, **Ann M. Early**, and Rebecca L. F. Wiewel

- 2017 Carden Bottoms: Indigenous Responses to Europeans on the Far Reaches of the Mississippian Shatter Zone. Paper presented at the 38th Mid-South Archaeological Conference. Oxford, MS.

Samuelsen, John R., and Adriana Potra

- 2017 Biologically Available Lead Isotopes in the Southcentral US: A Pilot Study for Ancient Human Sourcing. Paper presented at the Annual Meeting of the Arkansas Archeological Society. North Little Rock, AR.
- 2017 Biologically Available Lead Isotopes in the Southcentral US: A Pilot Study for Ancient Human Sourcing. Paper presented at the 74th Southeastern Archaeological Conference. Tulsa, OK.

Taylor, Fiona M.

2018 Beginning the Ceramic Analysis of 3SV29, Holman Springs: A Caddo Salt-Processing Site in Sevier County, Arkansas. Poster presented at the 60th Caddo Conference. Idabel, OK.

Thibodeau, Alyson, and **Jeffrey M. Mitchem**

2017 Lead Isotope Studies of Presumed Early Metal Artifacts from Northeast Arkansas. Paper presented at the 38th Mid-South Archaeological Conference. Oxford, MS.

Trubitt, Mary Beth

2017 Comparing Two Caddo Mound Sites in Southwest Arkansas. Paper presented at the Annual Meeting of the Arkansas Archeological Society. North Little Rock, AR.

2017 What We've Learned: Woodland/Mississippian Cultures in Arkansas. Paper presented at the Annual Meeting of the Arkansas Archeological Society. North Little Rock, AR.

2017 The Spiro Arrow Points. Paper presented at the 74th Southeastern Archaeological Conference. Tulsa, OK.

Photo Identifications & Credits

Most photographs used in this report are ARAS images. Cover and Banner images are as follows:

- Front Cover Tablescape: working on Saltpeter Cave maps and projectile points from 1970s excavations, ARAS-UAF digital photo by Jamie Brandon.
- p. i Mary Beth Trubitt recording information about an old railroad line during a visit to site 3HS712, ARASHSUD_K13227, photo by Chelsea Cinotto.
- p. ii Ceramic sherd from Historic Washington (ARAS-SAU photo); Caddo pottery from the Arkadelphia area, part of the 1969 Alford donation to ARAS-HSU (photo by Mary Beth Trubitt); Jerry Hilliard and Jared Pebworth looking at 3NW29 artifact photos in the ARAS archeology lab (photo by Jamie Brandon).
- p. 1 View of excavations at Carden Bottoms, 2009 training program, photo by Leslie Walker.
- p. 2 Tablescape: prehistoric Ozark ceramics being sorted in the ARAS-UAF lab, photo by Jamie Brandon.
- p. 4 Portrait photos of Michael Evans and Jared Pebworth taken in the field by Jamie Brandon.
- p. 5 Portrait photo by Rachel Tebbetts; Plum Bayou Garden, photo by Elizabeth Horton.
- p. 6 Survey flags at Pea Ridge, photo by Carl Drexler, SAU20180128D.
- p. 16 2018 Diamond Award presented to ARAS by the Arkansas Historical Association, photo by Rachel Tebbetts.
- p. 20 Entrance to the Plum Bayou Garden at Toltec Mounds State Park, photo by Elizabeth Horton.
- p. 26 View of the Parkin Mound, Parkin Archeological State Park. Photo by Chuck Haralson, Arkansas State Parks. photo courtesy of Arkansas Department of State Parks & Tourism.
- p. 32 Michael Evans collecting resistivity data at the Jacob Wolf House in Baxter County, ARAS-UAF digital photo, 2018, by Jamie Brandon.
- p. 40 Test excavations at the Willhaf House showing filled-in cellar window and the builder's trench for construction of the cellar. ARAS-UAFS digital photo DSC_1712, 2018, by Tim Mulvihill.
- p. 45 Little barley growing in the Native American Woodland Period Garden at the ARAS-WRI station, photo by Emily Beahm.
- p. 51 Volunteer Gabrielle Hargrove of Gillett, Arkansas, working at Tarelton Creek Mounds (2AR15) in 2017, ARAS-UAPB digital photo.

- p. 56 Volunteers help clean the cemetery at Taylor Plantation on Martin Luther King, Jr. Day, ARAS-UAM digital photo by Jodi Barnes.
- p. 61 “Quartz Crystals in Archeology,” September 2017 exhibit in Henderson’s Huie Library. This “Pieces of the Past” display changes monthly with artifacts from ARAS-HSU curated collections, ARASHSUD_K13303, photo by Chelsea Cinotto.
- p. 67 View of Holman Springs, ARAS-SAU digital photo by Carl Drexler.
- p. 72 Julie Morrow examines the soil profile in a trench at the Old Town Ridge site 3CG41, ARAS-ASU IMG_4469.
- p. 82 ARAS Director George Sabo with Michael Evans at Pea Ridge, ARASHSUD_8659.
- p. 84 State Archeologist Ann Early, Mark Christ (AHPP), and Kathleen Cande (ARAS-SRP) at the annual meeting of the Arkansas Historical Association, where ARAS was presented with a Diamond Award for contributions to Arkansas history.
- p. 87 ARAS Registrar Lela Donat. Photo by Jane Kellett.
- p. 91 Jared Pebworth (ARAS-SRP) discusses site layout with Dr. Carl Drexler (ARAS-SAU) at Pea Ridge, photo by Jamie Brandon.
- p. 98 Jami Lockhart (ARAS-CSP) visits with descendants of the Mayfield family about our excavations at the Lee/Mayfield House in Leetown, Pea Ridge National Military Park, ARAS-UAF photo by Jamie Brandon.
- p. 108 Tools of the editor’s trade, photo by Deborah Sabo.
- p. 111 Jane Kellett receives her 40-year service award from Chancellor Steinmetz, University of Arkansas photo.
- p. 112 Mel Zabecki presents an archeology-related classroom activity to education students at the University of Arkansas.
- p. 116 Participants in the 2018 training program at Pea Ridge National Military Park, Arkansas Archeological Society photo.
- Back Cover Jerry Hilliard during a visit by canoe to check the condition of several known sites in northwest Arkansas.

