

# Arkansas Archeological Survey

Annual Report for 2019–2020



A Division of the University of Arkansas System

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Annual Report for fiscal year 2019–2020



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University of Arkansas System

# Arkansas Archeological Survey

## Introduction

**T**he Arkansas Archeological Survey (ARAS) is a unit of the University of Arkansas System.

Our mission is to study 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) is located in Fayetteville. The Director, the State Archeologist, the ARAS registrar, the fiscal office, publications staff, and outreach programs operate from the CO. Through our websites and publication series we seek to keep educators, colleagues, and the public informed of new findings. Our registrar maintains a central archive of all archeological site records in 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 CO our sponsored research program (SRP) and computer services program (CSP) support themselves in part through grants, contracts, and cost-share agreements with local, state, and federal agencies. The CSP offers an archaeogeophysical program with 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, PhD*  
**Director**



# Highlights for the Year



## Scientific Achievements & Archeological Mission 2019–2020

- Survey staff authored or coauthored **53 print or digital publications and reports**, and presented **32 papers or posters at meetings and conferences** in 2019–2020.
- 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.
  - **412 new archeological sites** were recorded, bringing the total number of sites in Arkansas site files to **50,162**.
  - **172 new archeological projects** were entered into the database, bringing the projects total to **7,540**.

Archeological sites recorded into our AMASDA database passed the 50,000 mark this year. Here, Sarah Shepard (ARAS Assistant Registrar) officially puts the stamp onto the site form, with ARAS Director George Sabo looking on.

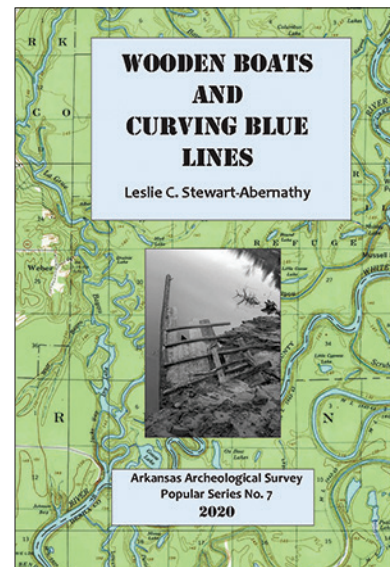
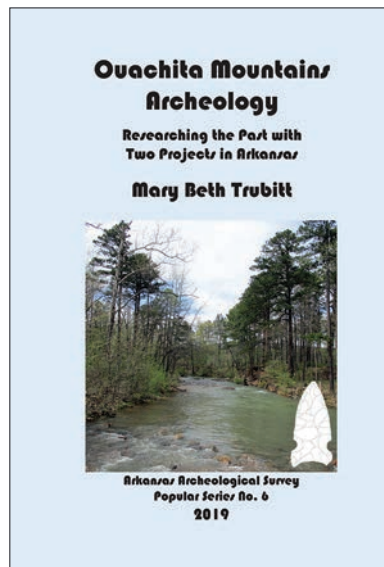


- The Survey registrar facilitated **1,500 requests for information** from the Arkansas site files by students, researchers, and project managers. This included **20 graduate student and academic research** projects. We assisted **local, state, and federal entities**, four **American Indian Tribes**, and **39 private firms** conducting projects in Arkansas.
- We conducted projects supported with **new funds generated by grants and cost-share agreements totaling \$145,668**.

- Despite curtailment of in-person opportunities in March and cancellation of the annual June Training Program due to Covid-19, **volunteer participation** in our projects totaled **1,384 hours**, showing a high level of continued 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-Toltec), the late Jamie Brandon (ARAS-UAF), Emily Beahm (ARAS-WRI), John Samuelson (ARAS-CSP), and Teka McGlothlin (ARAS-CO).
- Our **publications program** continues to develop with **two new Popular Series volumes** (No. 6 and No. 7) published in 2019–2020, and another in production. We have additional submissions to Research Series and Popular Series under review.
  - Thanks to cooperative effort with the University of Arkansas's CashNet team, our program now has an online eCommerce storefront, linked from our main website, where individual customers can order books. Online sales were shut down for several months during the pandemic.

*Ouachita Mountains Archeology* tells the story of American Indian life through two major projects in SW Arkansas, while simultaneously explaining how archeologists work to answer questions about the past.

*Wooden Boats and Curving Blue Lines* is a brief survey of water transportation in Arkansas with examples of various boatwreck sites and archeologically studied boat remains.

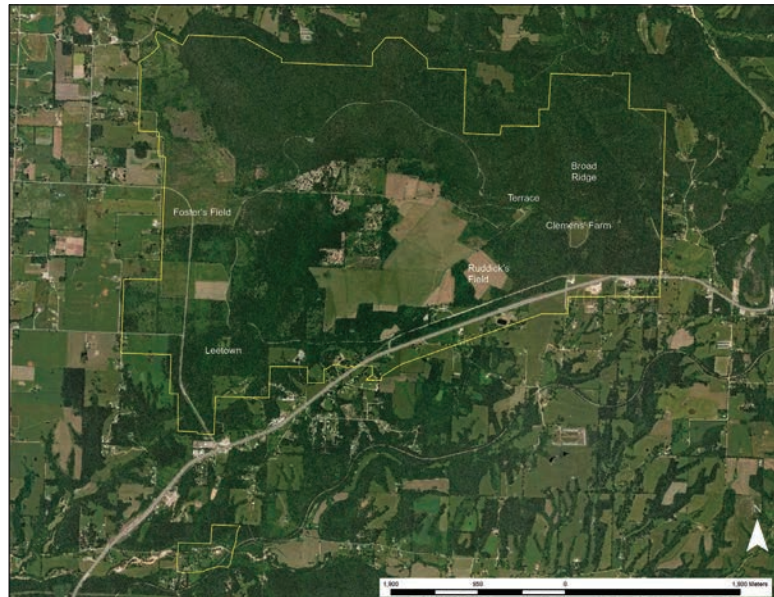


- In conjunction with our 50th year in 2017, we embarked on a **major initiative to create a systematic archive of all our accumulated project documentation, including digitization of paper records for long-term preservation.** We also started to inventory and organize our collections at the coordinating office and all ten research stations to ensure that records are complete and storage is according to modern curatorial standards. Kathleen Cande has organized this effort, and the ARAS registrar's office helps with digitization.
  - In 2019–2020 Kathleen Cande completed work on organizing and numbering black and white prints and color slides created by archeologist Daniel Wolfman at the former ARAS-ATU research station in the early 1970s. These are related to Wolfman's work with archeomagnetic dating and alpha recoil track dating of samples from sites in Arkansas.
- See the Research Station and Coordinating Office sections of this report for information on the **many ongoing archeological projects** carried out around Arkansas during 2019–2020.



- A Final Report on the Survey's **four-year archeological project at Pea Ridge National Military Park** was submitted. This project was funded through a cooperative agreement with the National Park Service Midwest Archeological Center's CESU (Cooperative Ecosystem Studies Units) program. Six main areas on the battlefield landscape were studied using geophysics, GIS, archival research, and archeological excavation.

Study areas targeted in the 4-year CESU project at Pea Ridge National Military Park.



- Emily Beahm (ARAS-WRI) and Carl Drexler (ARAS-SAU) were coauthors of a 2020 article, "Creating and Supporting a Harassment- and Assault-Free Field School" in the journal *Advances in Archaeological Practice*. The two are co-principal investigators on a **\$300,000 grant from National Science Foundation** led by Carol Colaninno (Southern Illinois University Edwardsville STEM Center) and Shawn Lambert (Mississippi State University). This multiyear research project is aimed at **making archeological field schools safer and more inclusive for all students**. It will ultimately benefit not only field schools but all archeological fieldwork contexts, as well as other field-based disciplines, and will improve the overall quality of archeological research for the future.
- **Preserving and Presenting Arkansas History through Artifacts—The Tom Jones Site** is a project funded by a grant from the Arkansas Natural and Cultural Resources Council. ARAS-CO lab staff Madelyn Rose and Melody Astle compiled a detailed digital inventory of more than 150,000 artifacts excavated from the Grandview Prairie Wildlife Management Area during 2001–2004. The project included application of the Survey's new Digital Imaging Lab resources to create 3D models of several diagnostic artifacts, along with development of educational outreach materials for the Rick Evans Grandview Prairie Conservation Education Center, located near Hope in Hempstead County.
- **The JEC Hodges Collection Study** was supported by funding from several sources. Mary Beth Trubitt and Tommie Cotton (ARAS-HSU) collaborated with ARAS-CO staff members Teka McGlothlin and Sarah Shepard, and HSU students and staff, to create an extensive open storage exhibit for many of the 38,000 ceramic vessels and stone tools comprising the Joint Educational Consortium's Hodges Collection. These materials, from Clark and Hot Spring counties, reflect the long developmental history of the Caddo Indians. The display, which includes interactive websites and 3D models of dozens of artifacts, is open for viewing at the Caddo Center on the HSU campus.

### Meeting the Challenges of 2019–2020

- **Workday Transition:** In July 2020, following a two-year period of development, the cloud-based Workday system of integrated human resource and financial management software applications "went live" for the first cohort of University of Arkansas System institutions. The ARAS implementation was capably guided by our Workday Change Champions Rachel Whitman and Shavawn Smith. Workday is used to manage all business processes for UA System employees.
- **Covid-19:** As one of numerous institutions of higher education in Arkansas, the ARAS administration worked closely this year with the UA System Office, the Arkansas Division of Higher Education, the Arkansas Department of Health, and the University of Arkansas for Medical Sciences to monitor Covid-19 cases within and across the



institutions; provide support for affected faculty, staff, and students; and assist in contact tracing programs. At our coordinating office and research stations, staff adopted work protocols and schedules to ensure maximum protection against the risk of infection.

- **Virtual Public Archeology and Teaching:** As part of our adoption of safe and physically distanced work practices this year, ARAS staff devoted considerable time to the creation of innovative and successful virtual presentations for a wide range of audiences including the avocational archeology community, members of the general public interested in all aspects of Arkansas history, and the public education community who frequently turn to us for resources that can be adapted to classroom settings. Our PhD staff who hold teaching positions at campuses across the state adapted their coursework for implementation on the variety of platforms adopted at their host institutions.

## Staff News

- Dr. Ann Early, State Archeologist since 1999, and Archeologist at the ARAS-HSU research station from 1972–1999, retired at the end of June 2020.
- Katy Gregory was appointed Interim Station Archeologist at ARAS-Toltec Mounds research station.
- Dr. Elizabeth Horton (ARAS-Toltec Mounds) was on remote assignment and resigned from the Survey at the end of this fiscal year. She will continue to pursue ethnobotanical research on a contractual basis through her own company.
- Dr. Jami Lockhart (ARAS-CSP) was promoted from Associate Archeologist to Archeologist.
- Dr. John Samuelsen (ARAS-CSP) completed his PhD degree at the University of Arkansas with a dissertation entitled *An Isotopic Assessment of Late Prehistoric Inter-regional Warfare in the Southcentral US*.
- Lydia Rees (ARAS-CO) completed her MA degree in the University of Arkansas Department of Anthropology.
- Jessica Kowalski (ARAS-UAF) was hired as station archeologist on the UAF campus.
- Shavawn Smith (ARAS-CO) was hired as the new Assistant Director for Fiscal Affairs. She comes to us from Business Services at the University of Arkansas and has helped guide us through the Workday transition.
- Rachel Whitman (ARAS-CO) left us as Assistant Director for Fiscal Affairs for a new position as Director of Business Fiscal & Support Services with the University of Arkansas Fayetteville campus Facilities Management. Whitman was our Workday Champion, who paved the way for a smooth transition.



Dr. Ann Early, Arkansas's second State Archeologist, has retired after 48 years with the Survey. See pp. 14 & 79 for a brief outline of her career.

## Contributions to Higher Education in Arkansas 2019–2020

- **George Sabo III**, Survey Director since 2013 and **Professor of Anthropology**, serves as **Co-Director of the Environmental Dynamics Interdisciplinary PhD Program**, which is part of The Graduate School and International Education at the University of Arkansas.
- Survey archeologists held **research faculty titles in the Department of Anthropology** at the University of Arkansas in 2019–2020: Jodi Barnes, Emily Beahm, Andrew Beaupré, the late Jamie Brandon, Carl Drexler, Ann Early, Elizabeth Horton, John House (Emeritus), Jami Lockhart, Jeffrey Mitchem, Juliet Morrow, and Mary Beth Trubitt.

- Survey archeologists **taught 20 courses for 318 students enrolled at university campuses** in Arkansas: UAF, UAFS, UALR, UAM, UAPB, ASU, ATU, HSU, and SAU. This included **four online courses** for University of Arkansas and Arkansas State University – Midsouth, and three students in Independent Studies classes or Internships at UAF, HSU, and UALR
- 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; the 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** for college and university students in Arkansas.
- Survey archeologists **supervised three student interns**: Andrew Beaupré and Robert Scott (ARAS-UAPB) worked with a Boston University student on a digital internship, and with another student at UAPB; Mary Beth Trubitt and Tommie Cotton (ARAS-HSU) worked with a student intern in Museum Studies at HSU.
- Survey archeologists filled **13 master's or doctoral degree committee positions (as member or chair) for graduate students** in Anthropology (UAF, UALR) and Environmental Dynamics (UAF), and **1 master's committee for a University of Oklahoma student**.
- 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 provides **employment to students, when possible, at several campuses** through grant funding, assistantships, and direct employment.
- **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, and
  - 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 and other collections at Arkansas Tech Museum (ATU).



HSU student Emma Adams photographed pieces from the JEC Hodges Collection as part of her museum studies internship during spring semester (ARASHSUD\_C2450 photo by Mary Beth Trubitt).

### 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.

- **Jessica Cogburn** is a PhD student in the Anthropology Department at the University of Arkansas Fayetteville. Previously supported by a Survey graduate assistantship, Jessica was hired as a Historic Preservation Specialist at the Mississippi Department of Archives and History in Jackson, Mississippi. She continues to pursue her dissertation research 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.
- **John Samuelsen** completed his dissertation research at the Crenshaw site (3MI6), using lead and strontium isotopes as a method to biologically source human remains and to interpret the skull and mandible cemetery at the Crenshaw site. Samuelsen's results suggest the remains are from people who may have lived in the surrounding area and therefore represent a local burial practice. Funding from several sources supported Samuelsen's research, including grants from the University of Arkansas Department of Anthropology, the Arkansas Archeological Society, and the National Science Foundation. This project aids the Caddo Nation in determining whether the unusual burials at the site represent their ancestors or their ancestor's war opponents. Samuelsen successfully defended his dissertation and was awarded his PhD in May 2020.
- **Lydia Rees** completed her MA degree in Anthropology from the University of Arkansas. With the portfolio option, Rees studied prehistoric ceramics in the Arkansas Ozarks. She had previously 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. She assisted the ARAS Publications Program this year, helping to update and revise a number of fliers and other documents. Lydia Rees's advisor is Dr. Wesley Stoner (UAF Department of Anthropology).

## Contributions to Public Schools and K-12 Education 2019–2020

- **Gathering, Gardening & Agriculture – 5th Grade Social Sciences Curriculum.** With funding from 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-Toltec)** developed a 5th grade social sciences curriculum that is now **available as free downloads on the ARAS website** at <https://archeology.uark.edu/gga/>. The 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 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. Complete lesson plans, exercises, and PowerPoints are on the website, along with background information for teachers. The Survey also offers teacher workshops to help educators implement the curriculum. A hardcopy workbook is available to Arkansas educators on request.
- **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. Project Dig is an interactive hands-



Project Dig kids develop spatial and observational skills by learning how to map artifacts in a grid and record data.



on program designed to improve students' cultural awareness and impart in them the importance of archeological resource preservation. Incorporating STEM and Humanities concepts, students learn about culture by using evidence-based critical thinking and the scientific method. Students from Dardanelle, Dover, Perryville, Pottsville, and Hector participated, along with their teachers and some parents. The last day of Project Dig, a student symposium, had to be canceled in 2020 due to Covid-19. Emily Beahm wrote an analysis of the program that was published in *Field Notes*.

- **Teacher Workshops.** ARAS Educational Outreach Coordinator Mel Zabecki offered six teacher workshops at Educational Cooperatives in Branch, Farmington, Monticello, Blytheville, and Valley Springs, with 67 teachers earning professional development credits. Tim Mulvihill (ARAS-UAFS) joined Zabecki for one of these events. George Sabo (ARAS Director) participated in the 2019 Teacher's Workshop sponsored by Caddo Mounds Historic Site in Texas, with 50 teachers in attendance.

- **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. This year Lydia Rees, with assistance from Deborah Sabo, updated and re-formatted the entire suite of fliers, and added a few new ones. Educational Outreach Coordinator Mel Zabecki wants to reorganize these on our website in a way that will be more useful for Arkansas educators.

- **School Visits, Programs & Tours.** Survey archeologists typically give numerous **talks and demonstrations** on archeology, American Indians, and early Arkansas history throughout the year. During 2019–2020, we were able to conduct in-person classroom visits, tours, and other events that engaged **over 1,770 K–12 students and their teachers** before Covid-19 restrictions curtailed these efforts.



Mel Zabecki (ARAS Educational Outreach Coordinator) visits Don Tyson School of Innovation in Springdale to teach about human osteology.

- **GT Archeology Semester.** Educational Outreach Coordinator **Mel Zabecki (ARAS-CO)** worked with a **Gifted & Talented** teacher in northwest Arkansas on a semester-long archeology project that included classroom visits, lesson planning, and field trips. The final part of the semester was completed via Zoom.
- **Engineering & Archeology Day Camp.** Zabecki worked with Amy Warren (UA Engineering Department) to develop a pilot 5-day camp in Fayetteville for 7th and 8th grade girls, with hands-on learning that combines archeology and engineering. Warren won a grant to continue the camps in Blytheville and Morrilton (postponed to 2021 due to the pandemic).

### Public Service and Outreach 2019–2020

- **Zooming Forward: Public Education in the Time of Covid.** ARAS did not abandon its public education efforts in the face of Covid. Our staff moved quickly to adopt strategies for virtual presentations and events in 2020. For example, a series of short educational videos presented via Facebook and collected as a playlist called Lab Work on the Survey's YouTube channel was developed by Michelle Rathgaber (ARAS-Parkin). Other educational events including working with schools and public presentations were carried out over Zoom and placed online.
- **NAGPRA Documentation.** We continued our **NAGPRA compliance program** in cooperation with several American Indian Tribes. Under the federal Native American Graves Protection and Repatriation Act (NAGPRA), many

institutions and agencies are obligated to provide an inventory of all items in their collections that are subject to repatriation. Such items are human remains, funerary objects, sacred artifacts, and items of cultural patrimony. 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. The remains and objects may then 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.

- As of 2019 ARAS has completed the steps necessary to be substantially in compliance with our NAGPRA obligations for collections that we currently curate. This process took a number of years, and was overseen by the ARAS registrar's office, with Sarah Shepard in charge.
- This year Notices of Inventory Completion (records that are required to be published in the Federal Register) for the JEC Hodges collection were published; Lake Dumond site material was received from John House to be added to inventory; Transfer of Control of collections for the Quapaw Tribe was facilitated; and the office worked with Mel Zabecki (ARAS Educational Outreach Coordinator) and bioarcheology graduate students to document remains and file all SOD paperwork relating to burials.
- Registrar staff also assisted several outside agencies with NAGPRA compliance and information: Arkansas Department of Transportation, Arkansas State Parks, University of Arkansas Department of Anthropology, US Army Corps of Engineers, University of Arkansas Museum, and the US Forest Service.
- **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:
  - Department of Arkansas Heritage and the Arkansas Historic Preservation Program; Arkansas Department of Transportation; Arkansas Department of Parks and Tourism/Arkansas State Parks; Arkansas Game and Fish Commission; National Park Service; USDA Forest Service; US Natural Resources Conservation Service; US Army Corps of Engineers; and US Fish and Wildlife Service.
- **Training Program & Field School.** Sadly, the annual Training Program (see p. 118 ) was canceled this year due to the Covid-19 pandemic. If all goes well, the plans made for 2020 will be implemented instead in 2021.
- **Public Programs & Presentations.** Survey staff normally give dozens of public talks and set up information booths at community events that reach several thousand listeners and visitors each year. In 2019–2020, the Covid-19 pandemic threatened this outreach mission. Nevertheless, our staff gave at least **83 public lectures, workshops, tours, information booths, and other presentations** reaching audiences of **over 1,975** Arkansans and people in neighboring states. An additional **23 public talks to chapters of the Arkansas Archeological Society** reached combined audiences of about **330**. Most of these were in-person events prior to the pandemic, and a few were free Zoom events.
- **Historic Cemeteries.** Kathleen Cande (ARAS-CO) coordinates Survey research, assistance, and advice with groups and individuals working on projects to document and protect **historic cemeteries, especially African-American cemeteries**. ARAS staff assisted several volunteer groups with cleaning and documenting cemeteries, or helped investigate locations of unmarked but suspected gravesites, including at Arkansas School for the Deaf in Little Rock.

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Robert Scott (ARAS-UAPB) uses the total station to map an area where unmarked graves are suspected at Arkansas School for the Deaf in Little Rock.





- **Encyclopedia of Arkansas.** Survey staff have so far contributed about **60 articles** and reviewed many others for the CALS online *Encyclopedia of Arkansas*.
- **Public Contacts.** Survey staff members respond to thousands of **requests for information** from members of the public every year, by telephone, email, social media, and in person.
- **Exhibits & Museums.** Survey staff have created or assisted with a number of **exhibits** around the state:
  - Last year Mary Beth Trubitt and Tommie Cotton (ARAS-HSU), with student intern Rae'Shawn Jones and volunteers, installed Hodges Collection artifacts into open storage exhibit space at the refurbished Caddo Center on the HSU campus. This year ARAS-HSU staff developed content for interactive computer stations to accompany the exhibit space, Grants from Arkansas Archeological Society and the Arkansas Humanities Council helped fund the project.

Visitors view items from the JEC Hodges collection on open storage exhibit at the Caddo Center on the HSU campus.



- ARAS-HSU station staff maintain displays using Hodges collection artifacts at the HSU Huie Library, the OBU Hickingbotham Library, and the Clark County Historical Association Museum in Arkadelphia.
- Melissa Zabecki (with Elizabeth Horton) provided materials and installed an Archeology Month exhibit at the Arkansas State Library in Little Rock.

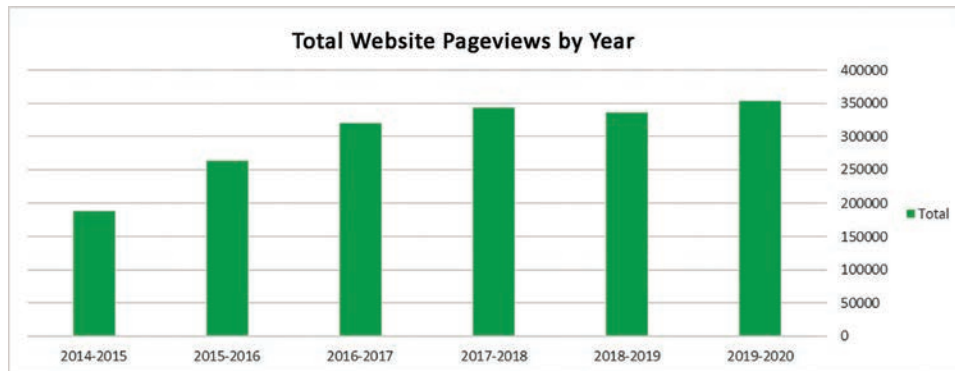
Mel Zabecki (at right, shown with former Senior Librarian Natalie Marlin and Circulation Librarian Win Gates) organized and installed an Archeology Month exhibit at the Arkansas State Library in Little Rock.



- 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, collections, or programs at museums was provided to American Museum of Natural History; ASU Museum; Arkansas Tech Museum; Parkin and Toltec Mounds State Parks Visitors Centers; Davidsonville Historic State Park; Turner Neal Museum at UAM; Old Statehouse Museum; Helena Museum of Philips County; Pine Bluff-Jefferson County Historical Museum; Clark County Historical Association Museum; The Gilcrease Museum; Shiloh Museum of Ozark History; Rogers Historical Museum; University of Arkansas Museum Collections; Arkansas Game and Fish Center in Springdale; and National Cowboy and Western Heritage Museum in Oklahoma City.



- **Website and Social Media.** Our website, designed and maintained by our own Computer Services Program staff (Deborah Weddle and John Samuelsen), offers a modern, graphic home page that is easy to navigate, with rotating content that emphasizes interesting information about archeological research and discoveries in Arkansas, and educational materials for public and schoolroom use. We also maintain **topical websites for the general public and fellow scholars.**
  - Visitor traffic to the main ARAS website increased by about 9% in FY20, with **126,705 pageviews** by 21,609 users over 33,921 sessions. For all our websites combined, traffic reached **350,000 pageviews.**



- A new website about the Joint Educational Consortium’s Hodges Collection is in development by Mary Beth Trubitt (ARAS-HSU) with technical assistance of Deborah Weddle (ARAS-CSP).
- Emily Beahm (ARAS-WRI) is working on an updated redesign of our Rock Art in Arkansas website, also with Weddle’s help. The new websites should be ready to launch next year.
- A popular continuing feature on the website is our **Artifact of the Month** series, now in its third year. These brief illustrated stories tell visitors about Arkansas’s prehistoric and historic heritage, and how we learn about the past, one artifact at a time. <https://archeology.uark.edu/artifacts/>
- **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. The new online eCommerce site enables a more streamlined process for contractors to access their accounts. More information is in this Annual Report in the registrar’s office section and the computer services section. AMASDA Online had **98,712 pageviews** in 2019–20. There were 125 paid-per-project and 7 annual subscriptions.
- The Survey continues to increase the use of **social media** to provide information about Arkansas archeology, our projects and discoveries, and local volunteer opportunities. Our Educational Outreach Coordinator manages the social media administrative functions for the main accounts. Each research station also has its own Facebook page. This year, during Covid-19, we used social media to provide informative short videos as virtual “lab sessions” and talks.
- **Survey staff work with local landowners** who are concerned about site looting and trespassing on their property. We respond to requests from landowners to investigate and to recover information from sites that have been damaged by unauthorized digging.
- Survey staff served on a number of **Boards and Commissions** in Arkansas and beyond:
  - Jodi Barnes (ARAS-UAM): Executive Committee, VP of Governance, and VP of Advocacy for **Preserve Arkansas**; board member, **Drew County Historical Society and Museum Commission**.
  - Kathleen Cande (ARAS-SRP): Board of Directors, Recording Secretary, **Washington County Historical Society**; Board of Trustees, **Arkansas Historical Association**.
  - Carl Drexler (ARAS-SAU): Board of Trustees and chair of the Foster Award committee, **Arkansas Historical Association**; Arkansas representative, **Caddo Conference Organization**.
  - Ann Early (State Archeologist): Vice Chairman of the **State Review Board for Historic Preservation**; board member and historian of the **Arkansas Genealogical Society**; board member of the **Arkansas Women’s History Institute**; board member of the **National Association of State Archaeologists**.

- 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.**
- Deborah Sabo (Editor), Marilyn Knapp (ex officio), and Melissa Zabecki (ex officio) (ARAS-CO): Executive Committee of the **Arkansas Archeological Society.**
- Deborah Weddle (ARAS-CSP): Board of Directors, **Fan Association of North America.**
- Melissa Zabecki (ARAS-CO): board member, REACH committee, and Programs committee of the **Arkansas Humanities Council**; State Coordinator for Arkansas, Project Dig.

### Professional Service 2019–2020

- **Jeffrey Mitchem (ARAS-Parkin) sits on the Board of Directors of The Archaeological Conservancy.** 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 acquisition, and helping to negotiate this process. The Parkin site, now preserved within Parkin Archeological State Park, was acquired 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.
- Survey staff provided **expert advice or other assistance** to over **150** 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 organizations and journals.
  - Jodi Barnes serves as associate editor of the journal *Historical Archaeology*.
  - Andrew Beaupré is news editor for the **Council of Northeast Historical Archaeology Newsletter.**
  - Emily Beahm serves as a member of the editorial board of the journal *Southeastern Archaeology* and as newsletter editor for the **Southeastern Archaeological Conference.**
  - Kathleen Cande serves as Gulf States current research editor for the *Society for Historical Archaeology Newsletter*.
  - Jeffrey Mitchem is on the editorial board for the journal *The Florida Anthropologist*.
  - Mary Beth Trubitt serves as editor of the journal *Southeastern Archaeology* and is on the editorial board of the *Journal of Texas Archeology and History*.
  - Mary Beth Trubitt and George Sabo serve on the editorial board of the *Caddo Archeology Journal*.



- Multiple Survey staff members served as officers, members of various committees, or in other service capacities for these **professional organizations**. Details can be found throughout this Annual Report.
  - 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 Archaeologists
  - National Association for Interpretation
  - 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 2019–2020

- Extensions of existing ARAS projects with outside funding agreements totaled \$58,574. These include support from Arkansas State Parks, Department of Arkansas Heritage, and National Science Foundation.
- Funding for new ARAS Projects during FY2020 totaled \$145,668. These include support from Arkansas Humanities Council, Arkansas Archeological Society, Arkansas Natural and Cultural Resources Commission, National Science Foundation, Institute for Heritage Education, and the UA Anthropology Department.
- Jessica Kowalski (ARAS-UAF) and Emily Beahm (ARAS-WRI) received a \$1455 grant from the ARAS Hester A. Davis Fund for “Documenting Archeological Sites Using Photogrammetry.”
- Jared Pebworth (ARAS-UAF) received \$1500 from University of Arkansas Anthropology Department for “Teaching Lithics,” a project to create Paleolithic tool set replicas for instructional use.
- Carol Colaninno (SIUE), Shawn Lambert (Mississippi State), Carl Drexler (ARAS-SAU), and Emily Beahm (ARAS-WRI) as co-Principal Investigators received \$300,000 from the National Science Foundation for “Evidence-based Transformation of Undergraduate Field Schools to Promote Safety and Inclusivity among Southeastern Archaeology,” a multi-year project.
- Mary Beth Trubitt (ARAS-HSU) was awarded a \$1472 grant from the ARAS Hester A. Davis Fund for “New 3D Scanning of Hodges Collection Effigies.”
- Mary Beth Trubitt (ARAS-HSU) received a \$1000 grant from the AAS Bill Jordan Public Education Fund and a \$2000 grant from the Arkansas Humanities Council for “Interpreting the Hodges Collection and Caddo History for the Public.”
- Carl Drexler (ARAS-SAU) received a \$2750 grant from the Arkansas Archeological Society’s Archeological Research Fund for radiocarbon dates from the Holman Springs and Lockesburg Mound sites.
- George Sabo III (ARAS Director) is a co-Principal Investigator (with Claire Terhune, Wenchao Zhou, Paul M. Gignac, and Haley D. O’Brien) on a \$687,161 multiyear grant from National Science Foundation, “MRI: Acquisition of micro-computed tomography system for advanced imaging and inter-disciplinary multi-user access for the University of Arkansas and the US Interior Highlands.”
- George Sabo III (ARAS Director) is a co-Principal Investigator (with Kathryn Sloan, Michael Pierce, Kim Sexton, Robert Cochran, David Fredrick, Sean Teuton, Eric Funkhouser, and Joshua Youngblood) on an \$88,735 University of Arkansas Chancellor’s Discovery, Creativity, Innovation, and Collaboration Fund Grant for “Arkansas Stories of Place and Belonging.”



- Mel Zabecki (ARAS-CO) received a \$1000 grant from the Insititute for Heritage Education for the purchase of books from Project Archeology to furnish to teachers at the summer workshops.
- Mel Zabecki (ARAS-CO) received a \$1242.39 grant from the Arkansas Archeological Society's Bill Jordan Public Education Fund for purchasing supplies to make archeological lesson props for the 10 ARAS research stations.

### Honors & Awards 2019–2020

- Ann Early (State Archeologist) was awarded the Arkansas Archeological Society's McGimsey Preservation Award in recognition of her 40-year career devoted to archeology in Arkansas.

#### McGimsey Preservation Award for 2020 – Ann M. Early

Dr. Ann M. Early joined the Arkansas Archeological Survey (ARAS) in 1972 as research station archeologist at Henderson State University (Arkadelphia). Throughout her long career with ARAS, Ann conducted extensive research on Caddo Indian culture history in and south of the Ouachita Mountains region of southwest Arkansas, authoring several important books, book chapters, and journal articles.

An initial foray into studying the archeology of the region involved examination of archival, artifact collection, and literature sources to develop a series of chronologically ordered Caddo settlement models for the Ouachita River basin. Her first major excavation project, designed in part to refine those models, took place at the Standridge site, where she supervised excavations conducted in 1975 and 1976 as part of the Arkansas Archeological Society Training Program and University of Arkansas field schools.

She took part in developing one of the first "State Plans" for archeological site conservation and research, as part of the NPS Resource Protection Planning Process and also worked to develop the first volume of a series of cultural resource overviews for the Southwest District of the US Army Corps of Engineers, devoted to the Ozark and Ouachita Mountain regions of Arkansas and Oklahoma. Both studies continue to serve as important general references for those areas.

Throughout much of her tenure as the Survey's HSU research station archeologist, Dr. Early served as Certification Program Coordinator for the Arkansas Archeological Society Training Program and she taught numerous seminars including the Beginner's Orientation for the past several years. She consequently directed more of the annual two-week Training Programs than many of her colleagues, and also succeeded in producing publications for most of those projects.

In addition to her extensive list of projects centering on Caddo settlement and subsistence organization in the Ouachita Mountains, Dr. Early directed a significant part of her research to the study of Caddo ceramics. While at HSU, she oversaw the curation and management of the HSU Museum as well as the Joint Educational Consortium Hodges Collection. As part of her long-time examination of these and other Caddo decorated ceramics she reconstructed a series of "grammars" or rule-based procedures that track the application of decorative variations aligning with discrete communities. She also contributed to the development of the so-called "collegiate" system for classifying Caddo ceramic decorative treatments.

Dr. Early directed archeological investigations and reconstruction efforts at HSU's J. E. M. Barkman House site in preparation for its nomination to the National Register of Historic Places. She also served a term on the faculty senate and contributed to numerous other HSU committees.

One of her most noteworthy achievements as State Archeologist was managing a series of projects funded by grants awarded by the National NAGPRA office to complete the repatriation process for all subject materials in ARAS collections. She has consulted with numerous state and federal agencies, held many elected offices for a variety of organizations, and received numerous awards for her preservation and education efforts. But these awards hardly begin to measure up to the overall impact Dr. Early has contributed to the study of archeology in Arkansas and the Southeast.



## 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 identify, assess, and rescue archeological information without impeding normal land use.**
  - We also work with government agencies, including the Arkansas Historic Preservation Program, advocacy groups such as Preserve Arkansas and the Northwest Arkansas Open Space Plan, and descendant communities to promote efforts to protect valuable natural and cultural properties.
  - Rock shelters in the Ozarks are often exploited for illicit purposes, including methamphetamine production, and sites on private, state, and federal property across Arkansas are subject to persistent vandalism. **The Survey works with various law enforcement agencies and Tribal Historic Preservation Officers 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. **Jeff Mitchem (ARAS-Parkin) is a member of the Conservancy’s Board of Directors.**
- **Funding for Backlog of Reports.** For more than half a century we have responded to many emergency situations requiring the salvage of information from archeological sites as they were being destroyed, transferring collections from other institutions that no longer wished to curate materials from Arkansas, and inventorying donations from private individuals. Funding to support such activities is seldom available, yet timely handling of these tasks is an important ethical responsibility. We earmark a portion of our annual budget in anticipation of these needs. Staff at our coordinating office and all ten research stations devote significant time each year to archival and collections maintenance tasks including digitizing paper records, producing comprehensive inventories of legacy collections, and undertaking research projects that bring new perspectives and emerging technologies to the study of materials that have long been in our possession. **For many years, significant support for these efforts has been provided by grants awarded to the Survey by the Arkansas Natural and Cultural Resources Council. During FY2018–2019, ANCRC funds supported a coordinating office lab project that served to implement a new tablet-based, digital collection inventory system that will greatly increase the efficiency of our collection management operations across the entire organization. Funding from other sources, including the Roy and Christine Sturgis Charitable and Educational Trust, helped underwrite the development of our Digital Imaging Lab to support our inventory efforts.**
- **Public Education and Heritage Tourism Opportunities.** Even after more than half a century of efforts by our staff, many Arkansans still do not know that Arkansas possesses archeological sites recognized for their importance by scholars throughout the United States and around the world. **We continue to refine the stories we tell about the long history of our state and region through the “voice” of archeology.**
  - During the past year our **Educational Outreach Coordinator** (see pp. 86–91) has developed new public programming and reached out to hundreds of people in multiple settings to deliver our message about the educational uses of archeology and the inherent importance of learning about and preserving information on Arkansas’s past. Dr. Mel Zabecki engaged **audiences numbering over 4,291** in public education settings.
  - Our **5th grade social sciences curriculum** “Gathering, Gardening, and Agriculture” is available for free to Arkansas educators (and to the public) on our website.
  - New **Popular Series volumes for general readers on Arkansas prehistory and historic boat wrecks are now available and more books in this series are in development.**

- Our *Indians of Arkansas*, *Bluff Shelters of the Arkansas Ozarks*, *Arkansas Novaculite*, and *Rock Art in Arkansas* websites continue to serve the public education community as primary sources of information and materials for learning and teaching about archeology and anthropology in Arkansas and the South. **We added new material to several of these sites, and continue to work on expanding their educational content.**
- Arkansas has only a few archeology-themed parks where the public can visit interpreted archeological sites. **We are working with State Parks, the US Forest Service, and the National Park Service to develop archeological heritage tourism.**
- Archeologists from the Survey's coordinating office and UAF and SAU research stations completed a four-year program of **investigations at Pea Ridge National Military Park, organized in concert with the National Park Service** under the federal Cooperative Ecosystem Studies Units (CESU) program, designed to contribute extensive new information benefitting the park's many historical, educational, and visitor programs and amenities.
- The June 2020 **annual Training Program, sponsored jointly by the Survey and the Arkansas Archeological Society, was planned to return to Lockesburg Mound site, again with headquarters on the De Queen campus of the Cossatot Community College of the University of Arkansas.** The Training Program sadly was canceled this year due to Covid-19. Our presence in Arkansas communities each summer generates significant local interest and new opportunities for our educational outreach programs.
- After completing her PhD, **Michelle Rathgaber was added to the Survey's staff at Parkin Archeological State Park** to assist with the analysis of collections and development of new interpretative information and educational outreach materials.
- We continue to provide archeological support for ongoing development at several state parks including **Davidsonville, Devil's Den, Hampson, Historic Washington, Hobbs State Park and Conservation Area, Petit Jean, Poison Springs, and Prairie Grove Battlefield.** These are in addition to the regular programs of research at **Toltec Mounds and Parkin State Parks.**
- Our **educational/experimental gardens** exploring plant use in prehistoric and pioneer Arkansas (at Parkin and Toltec state parks and at the UA System's Winthrop Rockefeller Institute campus) continue to attract large numbers of visitors and also now are part of a network of such gardens supporting research by a national team of scholars investigating the genetics of early plant domestication across the eastern US.
- **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.

### Covid-19 Pandemic Compliance

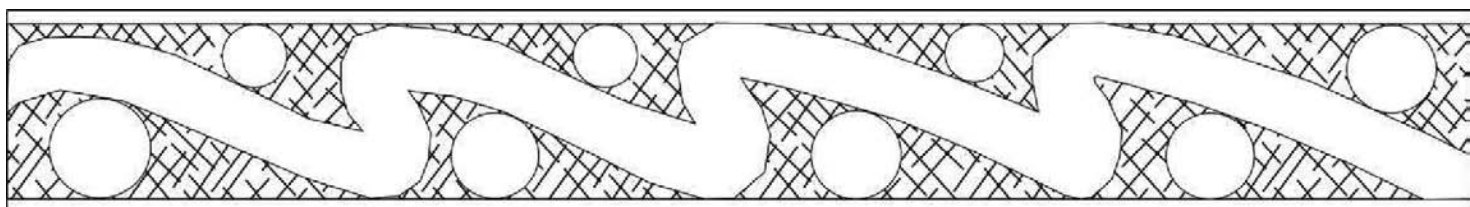
The Arkansas Archeological Survey has complied with all CDC recommendations and with the requirements of the State of Arkansas and the University of Arkansas System in order to protect our staff and the public from Covid-19. To illustrate: our building has been locked and closed to the public (some visitors such as research firms can make an appointment if our online services do not meet their needs); masks and social distancing are strictly enforced at our facilities; events have been cancelled or postponed; remote "work-from-home" procedures established, and all meetings conducted remotely. It has been possible, with precautions, to carry out a few outdoor activities, including some fieldwork and site visits with small numbers of participants. Our archeologists who teach university courses switched to remote learning. As the pandemic developed, we initiated a system to provide "virtual" public talks and educational videos on our website, social media accounts, and YouTube channel.

Throughout this report, we mention talks given by our staff and other events. Whenever these were conducted as in-person events, it was before the pandemic. After restrictions were implemented in March 2019, all such events, meetings, etc., were canceled or switched to remote online presentations.





# Research Station Reports





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 Collections 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.

**Jessica Kowalski** (PhD, University of Alabama, 2019) is the Survey's Station Archeologist for the UAF research station and a Research Assistant Professor at the University of Arkansas-Fayetteville. Prior to joining the Survey, Kowalski directed archeological projects in the Lower Mississippi Valley and along the Gulf Coast in both research and legal compliance settings. Her interests include the archeology of the Mississippi period, ancient sociopolitical complexity, cultural landscapes, the production and use of Native American ceramics, and archeological applications of Geographic Information Systems (GIS). Her dissertation research focused on Mississippi period political organization in the Yazoo Basin of the Lower Mississippi River floodplain.

**Michael Evans** (Research Associate) officially joined the UAF research station in January 2018. He 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 ancient technology and replication. He continues to lend his skills to other collaborative projects around Arkansas.

**Jared Pebworth** (Research Associate) joined the UAF research station in January 2018. He 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. He continues to lend his skills to other collaborative projects around Arkansas.



## ARAS-UAF Research Stations Activities

### Borden House Hillslope Project, Prairie Grove Battlefield State Park

Between the spring and summer of 2020, staff of the ARAS-UAF research station along with Jami Lockhart (ARAS-CSP) conducted an intensive metal detecting survey of the Borden House Hillslope at Prairie Grove State Park Battlefield in Prairie Grove, Arkansas. The survey was done in partnership with the Arkansas Department of Parks, Heritage, and Tourism. The hillslope to the north and northwest of the Borden House, a significant landmark during the battle that took place on December 7, 1862, was densely wooded, perhaps since the battle, and it was suspected that this area is relatively intact archeologically (i.e., protected from amateur metal detectorists). The proposed clearing of this area provided an opportunity for the ARAS to conduct a sweeping metal detecting survey, recover artifacts in good context, and link those artifacts to the historical record, helping the park with its mission of both preserving and interpreting the past.

As a result of this metal detecting survey, more than 600 artifacts were recovered over 6.5 acres, including small arms ammunition, both fired and dropped, hardware, and military accoutrements. After analysis, Jared Pebworth determined that all of the lead-based small arms ammunition is directly related to the battle ( $n=354$ ), while the vast majority of other items such as percussion caps and friction primers are more likely related to historic reenactments and the filming of the 1980s miniseries *The Blue and The Gray*.



Jared Pebworth holds up a Civil War bullet recovered at the Prairie Grove study area.

### Teaching Collections & 3D Printing

In May of 2020, Jared Pebworth and Michael Evans received a grant from the University of Arkansas Department of Anthropology to create a lithic teaching collection. This collection includes all stages of the lithic reduction sequence, different hafting techniques, and various Paleolithic technologies in addition to complete stone tools commonly found in Arkansas. Pebworth and Evans used materials native to northwest Arkansas.

Jared Pebworth has been working closely with the ARAS registrar's office to make 3D-printed replicas of artifacts, including pipes, vessels, and tools for use in teaching and public outreach settings. Pebworth used a variety of finishing techniques to make these 3D printed artifacts look remarkably similar to the real artifacts. A story about these techniques was posted to the ARAS website.

### Northwest Arkansas Mound Project

As part of the long-term research goals of the ARAS-UAF station, staff are scanning field records and drawings from the 1980s and early 1990s excavations at the Huntsville Mounds (3MA22), curated by the University of Arkansas Museum. These excavations were directed first by George Sabo III and then by Marvin Kay of the University of Arkansas. The goal of this work is twofold: 1) digitize records for preservation and access; 2) aid in preparing a research design for future work in the Ozark Highlands to better understand how Mississippian groups in the region were organized. A Bayesian analysis, using radiocarbon dates obtained from the largest mounds at Huntsville and Goforth-Saïndon (3BE245) in the 1980s, supports the original interpretation that major mounds at these sites were built in stages beginning in the 11th century, and continued to be used for ceremonial activity over a period of centuries.

An ongoing aspect of this project consists of building a geodatabase of sites that have Mississippian components along the Illinois and White rivers in Arkansas. This will help us to document settlement patterns and understand how Mississippian occupation in the Ozarks may have changed through time.

As part of the Northwest Arkansas Mound Project, and in keeping with the current ARAS mission of inventorying and publishing legacy collections, staff of the ARAS-UAF research station are analyzing artifacts from the early 2000s excavations at site 3BE536, a small Mississippian farmstead located on the Illinois River near the mound center of Goforth-Saïndon. The goal of this analysis is to separate components and closely examine the spatial distribution of artifacts from the Mississippian occupation of the site. Little is currently known about the function and spatial structure of non-mound Mississippian sites in the Illinois River watershed.

Photo on facing page: ARAS-UAF staff visit the Whitehouse Cemetery with members of Beaver Lake Watershed Alliance to assess bank line erosion and complete a site form.



### Leon Allen Collection

In June of 2020, Brenda Allen Siker contacted the ARAS-UAF station about donating a sizeable assemblage of artifacts collected by Leon Allen from bluff shelters in the Beaver Lake vicinity. Leon Allen, an Arkansas Archeological Society member, collected a substantial amount of material from two bluff shelters in Benton County, made minor collections from other shelters in Washington County, and kept field notes on his findings. ARAS-UAF staff, with the help of the ARAS administrative specialist, Laura Kowalski, are inventorying the collection which contains perishable material unique to dry bluff shelters and diagnostic stone tools stretching back to the Early Archaic Dalton period.



Emily Beahm and Seth Price work with photogrammetry equipment on Petit Jean Mountain.

### Bluff Shelter Photogrammetry Project

In collaboration with Emily Beahm, at the ARAS-WRI research station on Petit Jean Mountain, and Seth Price, a doctoral student in Environmental Dynamics at the University of Arkansas, the ARAS-UAF station is working on a photogrammetry project designed to document archeological sites, rock art, and ancient landscapes. The project consists of piloting methods, including both photogrammetry and 3D scanning, at Petit Jean State Park to create 3D models of bluff shelters with rock art for use in historic preservation, research, and public outreach.

Seth Price received the 2020 Hester A. Davis Internship from the ARAS after submitting a proposal to use photogrammetry to document rock art in bluff shelters. Jessica Kowalski and Emily Beahm received a Hester A. Davis small project grant to purchase specialized computer software and lighting equipment in support of this project. A component of the project will be to host workshops and create tutorials for staff of the ARAS who are interested in using these methods in their own research.

### Buffalo River Watershed Geology Project

Jessica Kowalski is collaborating as a faculty associate with Jill Marshall, a professor of geology at the University of Arkansas, Abigail Langston, a professor of geography and geospatial sciences at Kansas State University, and the National Park Service on the broader impacts portion of an early career National Science Foundation proposal entitled, "Collaborative Research: Beyond Lithologic Control of Bedrock Valley Width: Investigating the Role of Persistent Valley Cover in Bedrock Valley Width Development." If funded, an interactive GIS tool for the public will be created integrating geological and archeological data, interpreted through a landscape perspective along the Buffalo River.

### Cemetery Work

In January of 2020, the Beaver Lake Watershed Alliance asked for assistance in assessing bank line erosion at the Whitehouse Cemetery in Washington County (see the photo on page 18). This 19th century to modern cemetery contains grave architecture unique to Middle Fork of the White River, consisting of mid-19th century false crypts that taper on one end much like an actual burial casket. In March 2020, Monte Harris, the Programs Coordinator at the Rogers Historical Museum, asked for assistance from the ARAS-UAF station in assessing a previously undocumented cemetery containing enslaved persons near Pea Ridge, Arkansas. ARAS-UAF staff visited the cemetery, made plans to map the small cemetery and record the grave architecture and headstone information, and conduct a geophysical survey to determine cemetery limits.

### Ko-ko-ci Volunteer Lab Project

The ARAS-UAF station has been working closely with Mel Zabecki (the ARAS Educational Outreach Coordinator) and volunteers from members of the Ko-ko-ci Chapter of the Arkansas Archeological Society to inventory and prepare a collection for curation at the coordinating office. This collection was generated from an ARAS sponsored research program (SRP) project in the early 1990s that consisted of a survey of 500 acres along the Mississippi River near Helena, Arkansas. Volunteers are looking at a wide range of artifacts from Woodland and Mississippi period campsites and 20th century tenant homes. Banks Conditt and Joe Rainey are currently helping with the data entry portion of the project.



Some ARAS-UAF station outreach activities: (left) Jessica Kowalski with Ko-ko-ci Chapter volunteers during a Lab Night; (right) Jared Pebworth and George Sabo at the Anthropology Department Open House.

### UA Department of Anthropology Open House

On February 19, 2020, Jessica Kowalski, Jared Pebworth, and ARAS Director George Sabo III set up a table at the Department of Anthropology's Open House in Old Main on the campus of the University of Arkansas. Pebworth's and Michael Evans's stone tool replicas were showcased along with 3D-printed artifacts made by the ARAS registrar's office.

### Monitoring at the Jacob Wolf House Historic Site

On June 24, 2020, Michael Evans and Jessica Kowalski monitored a waterline placed adjacent to the administrative building at the Jacob Wolf House Historic site, an Arkansas Historic Preservation Program-owned property in Norfolk, Arkansas. Artifacts recovered consist of 20th century items such as whiteware and wire nails. These artifacts post-date the use of the site as the first permanent courthouse in the Arkansas Territory in the 19th century.



Teaching collection of stone tool replicas made by Jared Pebworth and Michael Evans. Both are skilled flint-knappers. These examples are hand-crafted, not 3D-printed replicas.

## ARAS-UAF Awards, Service & Outreach

### Grants, Honors & Awards

- A \$1455 Hester A. Davis Fund grant for “Documenting Archeological Sites Using Photogrammetry,” Co-PIs Jessica Kowalski and Emily Beahm.
- A \$1500 grant from the University of Arkansas Anthropology Department to Michael Evans and Jared Pebworth to make Paleolithic tool replicas.

### Teaching & Higher Ed

#### *Jessica Kowalski*

- participated in the University of Arkansas Department of Anthropology’s Open House event on February 19, 2020
- worked closely with two Environmental Dynamics doctoral students to develop Hester A. Davis internship proposals, one of which she supervised (Seth Price)
- supervised doctoral student Samuel Martin on an independent research project looking at hydrological impacts to archeological sites in Arkansas

#### *Jared Pebworth*

- assisted a UAF Anthropology student’s edge wear projects
- taught lithic flake manufacturing for Marvin Kay’s class at UAF

#### *Michael Evans*

- assisted several students in accessing information and museum collections for their projects
- numerous flint knapping demonstrations, discussions, and technical support for students
- set up flint knapping demonstrations for school groups and visitors to ARAS

### Service to Host Institution

- Pebworth conducted artifact ID and ancient technology demonstrations for tour groups throughout the year.
- Pebworth and Evans conducted flint knapping and other ancient technology demonstrations for the UAF Department of Anthropology, and assisted the University of Arkansas Anthropology Atlatl Club with equipment and training.

### Records & Collections

- In June 2020 Kowalski and Pebworth retrieved a large collection from the Allen family in Springdale (Acc# 2020-408). The Leon Allen collection will result in at least 30 boxes of material and notes from nearly 30 years of unsanctioned excavations in major bluff shelters in Benton and Washington counties that will eventually be curated at the ARAS-UAF station.
- The ARAS-UAF station is currently inventorying a legacy collection from excavations at 3BE536 (Acc #2000-334 and 2001-335), as part of the Northwest Arkansas Mound Project, using the ARAS inventorying system developed by John Samuelson. This collection consists of 102 boxes.
- Kowalski scanned field notes from 1980s–1990s excavations at the Huntsville Mounds (3MA22), curated by the UA Museum.
- The ARAS-UAF station created box inventories for 66 boxes of material from Pea Ridge National Military Park. These materials are being transferred to the National Park Service. Accession numbers include 2017-380, 2018-363, 2018-377, 2018-438, 2018-441, 2019-378.
- Jared Pebworth worked on records from the Prairie Grove and Wolf House projects

### Professional Service

- **Professional Organizations.** Kowalski serves as the Arkansas State Representative for the Society for American Archaeology’s Government Affairs Network (GANSR). Kowalski is helping to plan the 2022 Southeastern Archaeological Conference to be hosted by ARAS in Little Rock.
- **ARAS Committees.** Pebworth and Evans assisted with the Personnel Committee’s search for a new station archeologist to replace the late Dr. Jamie Brandon. Kowalski and Evans serve on the Hester Davis Memorial Fund Committee.



### Public Service & Outreach

- **Programs & Presentations.** Kowalski gave a presentation, “The Archeology of Northwest Arkansas,” to the Springdale Public Library for Archeology Month (audience 10). Evans provided demonstrations at Hobbs State Park, Searcy County Historical Society, Benton County Historical Society, Benton County Cemetery Association, The Bella Vista Property Owners Association, The Arkansas Cattlemens Association, and the Arkansas Archeological Society.
- **Exhibits.** Pebworth gave assistance to Cane Hill Museum for their exhibit about historic potteries, Men of Clay.
- **K–12 Education.** Pebworth gave a demonstration of ancient hunting weapons for a Gravette Elementary School Group.
- **Cemeteries.** ARAS-UAF visited an undocumented cemetery containing graves of enslaved persons near Pea Ridge, with Ms. Monte Harris of the Rogers Historical Museum in Rogers. ARAS agreed to document the cemetery. ARAS-UAF visited the Whitehouse Cemetery in Arnett, at the request of the Beaver Watershed Alliance, to assess bank line erosion and complete an updated site form. Evans consulted with Monte Harris and Mr. Black at the Rogers Historical Museum about possible cemeteries in Benton County near Pea Ridge, and with James Johnston about possible field visits to historic sites in Searcy County.
- **Consultations & Reports.** Kowalski consulted with a Fayetteville city council member about a potential new housing development near Waxhaws (the historic home of Archibald Yell). Kowalski and Evans monitored water line construction at the Jacob Wolf House Historic Site in Norfolk. ARAS-UAF and Jami Lockhart (ARAS-CSP) consulted multiple times with the Department of Parks, Heritage, and Tourism about changing the project footprint for Borden House Hillslope Project at Prairie Grove Battlefield Park. Kowalski served as intermediary for private contractors and Kristina Boykin at the Department of Transportation for a borrow pit near Fayetteville; she reviewed the project in an advisory non-regulatory role, explaining the Section 106 process to the contractors. Pebworth consulted by phone with Herbert Williams (New York state) about procedures for donating a family artifact collection from Baxter County, Arkansas made in the 1950s. Evans followed up on last year’s excavations at the Crescent Hotel, Eureka Springs, and consulted with numerous landowners and individuals wanting information about items they had purchased or discovered. Evans assisted Tim Mulvihill (ARAS-UAFS) with excavations at the Drennen-Scott House and the Mulberry River project. Evans consulted with Wasson House and Reams Property, Springtown. Pebworth gave assistance on artifact collections, sites, and other archeological matters to University of Arkansas Museum Collections, and certain private citizens. Evans assisted in finishing the final report on the four-year CESU project at Pea Ridge National Military Park, and did some additional small fieldwork projects at the park for National Park Service.
- **Media Outreach.** Kowalski visited KNWA and Fayetteville Public Television with Mel Zabecki (ARAS Educational Outreach Coordinator) to promote the March 2020 Archeology Month. Evans provided information about archeology at Prairie Grove Battlefield Park in a telephone interview for “The Civil War Picket,” an in-depth historical blog, published April 1, 2020, by Phil Gast. Evans provided information about archeology at Prairie Grove Battlefield Park in an interview for a story by Lynn Kuttar, published in *Arkansas Democrat-Gazette*, May 31, 2020.

### Service to the AAS

- **Programs & Presentations.** Kowalski presented “Community and Ceremonialism in Northwest Arkansas: A Research Design for Investigating Mississippian Occupation in the Ozarks” at the Ouachita Chapter in Hot Springs (3/10/20, audience 10); and via zoom to a joint meeting of the Ark-Homa and Red River Chapters (4/10/20, audience 10). She presented “On the Mississippi Mound Trail: Excavations at Mound Centers in the Mississippi Delta” at the Arkansas Valley Chapter in Russellville (2/2/20; audience 20) and at the Three Rivers Chapter in Mountain Home (1/25/20, audience 35).
- **Ko-ko-ci Chapter.** The ARAS-UAF station assists and supports the Ko-ko-ci Chapter of the AAS, serving the UAF community and northwest Arkansas. Prior to the pandemic restrictions, Kowalski and Mel Zabecki (ARAS Educational Outreach Coordinator) worked to revive a lab night for Chapter volunteers.

### Volunteer Hours

Volunteers contributed a total of 40 hours to ARAS-UAF station projects during 2019–2020.



## 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 ARAS-UAF and ARAS-WRI research stations.

**Timothy S. Mulvihill** (MA, 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.



With help from Jami Lockhart (ARAS-CSP), Introduction to Archeology students at UAFS gain some hands-on learning of ground-penetrating radar at the Dyer Cemetery.



## ARAS-UAFS Research Station Activities

### The Woolsey Site 3FR46, Mulberry River Project

The Woolsey site has been an ongoing project since 2017 when it was the subject of the annual Training Program conducted by ARAS with the Arkansas Archeological Society. That year the Training Program's additional partners were Ozark National Forest and the USDA Job Corps center at Cass, Arkansas. The Ozark National Forest, on whose land the site is located, wanted to investigate this type of site in the Mulberry River valley. Previous research by the Forest Service had been limited to surface collections and shovel testing. Prior to the Training Program, areas of the site were surveyed using magnetometry—a form of geophysical survey or remote sensing that measures differences in magnetism in the ground. This technique helps find cultural features and other anomalies, and allows archeologists to target their excavations. Just over 100 volunteers helped to excavate twenty 2x2 meter units during that summer. With the help of retired Forest Service archeologist Mary Brennan (co-director for the project), much of the past year has been focused on finishing the basic analysis of the artifacts recovered from the site and getting the counts and weights entered into a database to help with final analysis and write-up of the project, hopefully within the next year. Natalie Mulvihill (our part-time lab assistant) finished cleaning and numbering the last of the artifacts from additional work completed at the site in the fall of 2017. And this past fall, Jared Pebworth, of the ARAS-UAFS research station, helped complete the sorting of chert debitage into different chert types. Sorting of the artifacts from the heavy fraction of the flotation samples continues, but should be finished soon.



2017 Training Program on the Mulberry River. Photo by Kevin Daugherty, Cherokee Nation GeoData Center, used with permission.



Natalie Mulvihill cleaning artifacts from the Woolsey site.

The portion of the site where excavations were conducted was used to manufacture a specific type of stone tool—argillite hoes or digging tools. Argillite is a local stone, often found in tabular form, which makes it an ideal raw material in this area for these tool types. The discovery of storage pits (one with evidence of a grass lining) in the same part of the site indicates the inhabitants also used the hoes at this location. We did not find typical settlement debris such as animal bone and large quantities of ceramics nearby, so perhaps there was no permanent settlement on this site, or at least on this portion of it.

### Drennen-Scott Historic Site

The Drennen-Scott Historic Site is an antebellum property, owned by the University of Arkansas - Fort Smith, located near the downtown area of Van Buren, Arkansas.

It was the former home of one of the town's founders, John Drennen. The ARAS-UAFS research station has conducted archeological research on the property since shortly after it was acquired by UAFS in 2004. During the fall of 2019, the site once again served as an archeological "laboratory" for UAFS Introduction to Archeology students. As part of the



class, Mulvihill requires the students to participate in excavations on the property so they can acquire hands-on experience. The students participate in the fieldwork for 5 hours during the semester, and for many this is their favorite part of the class. This year two new units were opened over anomalies identified a few years ago by an electrical resistance survey supervised by Jami Lockhart (ARAS-CSP). As the name implies, electrical resistance measures the resistance an electrical current meets when passed through something, in this case the soil. This technology depends on physical properties of the soil. The physical properties of archeological features commonly differ from the surrounding natural soil matrix, resulting in measurable differential resistance to the flow of electricity. For example, the greater moisture within a filled-in pit might provide a less resistant pathway for electrical current than the surrounding dry and compacted natural soil matrix. Buried stone foundations would be even more resistant to the flow of electricity. At Drennen-Scott, the backyard locations of structures and features long forgotten were rediscovered, including the detached kitchen, smokehouse, stone drainage features, and buried retaining walls. The anomalies uncovered this year were due to a small concentration of artifacts (nails, brick fragments, etc.) that had accumulated near the lower corner of the backyard.

### Dyer Cemetery

During the spring of 2019, the ARAS-UAFS station was contacted by the manager of the Dyer Cemetery (located in Dyer, Arkansas—a short drive from Fort Smith) who had questions about the process of identifying unmarked graves in cemeteries. After discussions about geophysical survey, the manager of the cemetery offered their cooperation if Mulvihill ever needed a place to demonstrate geophysical techniques and equipment to students as part of a class. During the fall of 2019, such an opportunity arose and Mulvihill made arrangements with Jami Lockhart, Director of Archaeogeophysical Research for the Survey, for a hands-on demonstration of ground-penetrating radar (GPR) for the Introduction to Archeology class at UAFS. Students were able to learn about geophysical survey, not only by reading about it, but also by operating the equipment under Lockhart's supervision (see photos on p. 24). They were also able to see the results of their work later in the semester when the data they collected using the GPR were processed.

### Clarksville Airport Cemetery

State Archeologist Ann Early alerted Mulvihill to a situation ongoing at the Clarksville Airport during the late summer of 2019. Located out from the end of a runway was an overgrown cemetery and the fence surrounding it. These features were viewed by the FAA as a danger to aircraft that might overrun the paved runway. It was determined that the cemetery should be cleared of vegetation and the fence removed and replaced with concrete pavers to mark the



Mapping equipment and survey flags in place at the small cemetery near Clarksville Airport.

boundary of the cemetery. Dallin Scott, a local scout, took this on as an Eagle Scout project. Only a few of the graves were marked with commercial headstones. The rest of the markers at the cemetery were shaped fieldstones, some of which had been knocked down or fallen down over time. Mulvihill assisted Dallin Scott by mapping the location of all commercial headstones and other grave markers, and the location of the fence before it was removed. Mulvihill and Scott also filled out a site form so the cemetery would be recorded in the ARAS archeological site files.

### Historic Aerial Photos

Work has continued on the scanning of a series of historic aerial photos that are on loan to the Survey. The photos date from the late 1930s, 40s, and 50s. These photos provide important information on former land use and the location of historic structures and features on the landscape. These photos are used prior to beginning new archeological research, including site survey, excavation, and geophysical survey projects on historic and prehistoric sites. So far, 17 Arkansas counties have been scanned, with each set consisting of 300–500 photos. Natalie Mulvihill, part-time lab assistant, has been doing the scanning and, when needed, creating a new key for the flight path when that information is missing.

### Interaction with the Public

Mulvihill presented a program to the Fort Smith chapter of Master Naturalists in February. The program consisted of two parts: 1) What is Archeology? and 2) A Summary of the Prehistory of Arkansas. Programs like these are given by ARAS personnel across the state each year as part of our mission to share knowledge of the state's archeological heritage with the public. Often, as it did this time, public presentations put Survey employees in touch with members of the public who have information about previously unrecorded archeological sites (we now have over 50,000 archeological sites recorded in Arkansas). All Survey employees field calls, emails, and social media contacts from teachers, city administrators, law enforcement, and interested people needing help identifying possible artifacts, fossils, or human remains, or with general questions about archeology or Arkansas's past. During the last part of the fiscal year when social distancing was encouraged, these contacts continued remotely, usually identifying artifacts from photos, or providing information through other forms of communication.

## ARAS-UAFS Awards, Service & Outreach

### Teaching & Higher Ed

- Mulvihill taught ANTH 2203, Introduction to Archeology (8 students), during Fall 2019.
- Mulvihill gave guest lectures in two History of Arkansas classes at UAFS (36 students total) during Fall 2019.
- Ongoing consultation and archeological research at the Drennen-Scott Historic Site.

### Records & Collections

- The station continued to scan historic aerial photos on loan to the Survey from the Geology Department at Arkansas Tech University. Seventeen counties have been completed.

### Professional Service

- **ARAS Committees.** Mulvihill served as chair of the Hester A. Davis Endowment Committee (one grant proposal was reviewed).

### Public Service & Outreach

- **Programs & Presentations.** Mulvihill gave presentations on "What is Archeology" and "Prehistory of Arkansas" to Fort Smith Master Naturalists (audience, 12).
- **K-12.** Mulvihill participated in a teacher workshop with ARAS Educational Outreach Coordinator Melissa Zabecki at the Guy Fenter Education Service Coop (audience 10). He gave three presentations on "What is Archeology?" to 3rd and 4th graders at Lavaca Schools (62 students); two presentations on Arkansas Prehistory to Ozark High School AP History classes (38 students); and met by Zoom with a teacher workshop conducted by Melissa Zabecki at the Guy Fenter Education Service Coop, giving a short presentation on some of the ARAS-UAFS projects (7 participants).
- **Other Outreach & Public Service.** Mulvihill responded to 12 contacts from the public about possible artifact identification, and/or site information. Mulvihill met with an officer from the Sebastian County Sheriff's Office about human remains, thought to be archeological, that were transferred to the Survey for analysis.

### Service to the Arkansas Archeological Society

- **Programs & Presentations.** Mulvihill presented a talk, "A View from the Bluff," to the Tunican Chapter in Monticello (audience 10).
- **Ark-Homa Chapter.** The station advises and supports the Ark-Homa Chapter of the AAS, serving the Fort Smith area. Mulvihill makes arrangements for guest speakers and provides information to UAFS for press releases. The station hosts lab sessions for Chapter members and provides fieldwork opportunities for volunteers (curtailed during the pandemic).

### Volunteer Hours

- Volunteers contributed 45 hours to station research projects in the field and laboratory during 2019–2020.



## University of Arkansas at Monticello Research Station

The ARAS-UAM research station is located on the University of Arkansas at Monticello campus, where the station archeologist teaches anthropology courses in the School of Social and Behavioral Sciences, conducts research, and hosts public outreach programs. The station territory covers seven counties in southeastern Arkansas. This portion of the state consists of landforms deposited by the ancestral Arkansas and Mississippi Rivers and their tributaries. People have lived in this region for at least 9,000 years and archeologists have investigated the lives of the American Indians and the African, Asian, and European Americans who lived here in the past. Among many significant sites in the station territory is the oldest known Indian mound in Arkansas. Archeological research shows that the people who built it 3,500 years ago were affiliated with the famous Poverty Point culture. At the opposite end of the time scale, the Taylor/Hollywood Plantation 1840s log house in Drew County and Lakeport Plantation in Chicot County are the sole remaining pre-Civil War plantation houses on the Mississippi Delta in Arkansas. Southeast Arkansas is also the location of several sites from Arkansas's World War II Home Front Heritage, including Rohwer and Jerome, both Japanese American internment camps, and Camp Monticello, an Italian prisoner-of-war camp.

**Jodi Barnes** (PhD, American University, 2008) is the Survey's Research Station Archeologist at UAM and Research Associate Professor for the Department of Anthropology, University of Arkansas Fayetteville. She joined the Survey in January 2013. She was previously staff archeologist and GIS coordinator for South Carolina's State Historic Preservation Program. Her research ranges from the archeology of the African diaspora to World War II Home Front Heritage. She has published articles in journals such as *International Journal of Historical Archaeology*, *Historical Archaeology*, and *Southeastern Archaeology*, plus a number of book chapters. She recently edited a thematic issue of *Historical Archaeology* on the intimate archeologies of World War II. She also edited the book *The Materiality of Freedom: Archaeologies of Post-Emancipation Life*, and co-edited the volume *Managing Cultural Resources: Global Context, National Programs, and Local Actions*, with Frank McManamon and Andy Stout.

Jodi Barnes gives the keynote address at the annual meeting of the Archaeological Society of South Carolina. Photo by Bach Pham.



## ARAS-UAM Research Station Activities

### Foodways

Foodways continue to be a part of the research at the ARAS-UAM research station. In 2018, Barnes received a small grant for the analysis of the faunal collections from the Brownlee House (3PU30) in Little Rock and Lakeport Plantation (3CH90) in Chicot County. Leslie Stewart-Abernathy and a team of archeologists had excavated around the kitchen, cistern, smokehouse, and dairy during the restoration of the house. The Tunican Chapter of the Arkansas Archeological Society held a lab night to count the animal bones in February of 2020. Dr. Lucretia Kelly at Washington University is currently analyzing these collections. The results will be used to better understand how differences in religious practices, ownership of enslaved laborers, access to butchers and local markets, and rural or urban location influenced people's diets during similar time periods.

### Teaching

Barnes taught Cultural Anthropology and developed a new course on Race and Ethnic Relations this spring. She set the classes up as hybrids. On Tuesdays, students completed an online activity where they answered questions based on the readings, did online research, and reflected on their experiences. For example, for a class on art and culture, they learned about Mardi Gras Indians. They watched an episode of *Treme*, the television series about post-Katrina New Orleans, to see Mardi Gras Indians in action, conducted research on West African dance, and viewed Cherokee fancy dancing to think about the ways people formed new cultural traditions in the South. On Thursdays, the class met in person to discuss and complete in-class activities. When classes moved online in March because of Covid-19, it was an easier transition. There were problems when students moved home, as some had limited access to the internet. But despite the tornadoes and a week of power outages, overall the hybrid class format encouraged students to read and engage in classroom activities and listen and learn from each other.



Tunican Chapter volunteers at work sorting faunal remains from Lakeport Plantation. Photo by Don Bragg.

### Presentations & Public Engagement

Barnes collaborated with the University of Arkansas Fayetteville to hold "Arkansas Stories" in Monticello and McGehee during the fall of 2019. The program helped tell the stories of Japanese Americans interred in Arkansas, Italian and German POWs held in the state, and African Americans living under Jim Crow laws during World War II. She arranged for Joseph Brajcki to prepare food based on the menus from Rohwer and Jerome. Barnes gave a talk about Camp Monticello and provided a tour of the site area. Other presentations included Dr. Johanna Lewis, Dr. Kimball Erdman, the Tesseract Center for Immersive Environments and Game Design, a look at the "The Other Side of the Fence" by painter and native of Rohwer, John Newman, and a screening of the documentary "Faces Like Ours." A tour of Rohwer was led by Richard Yada, who was born in the Rohwer camp.

Barnes was invited to give two public presentations in the first part of 2020. The National Park Service hosts ArcheoThursdays, a monthly webinar for federal archeologists. She prepared a talk on the archeology of the Home Front in Arkansas with a focus on Camp Monticello and a wider look at Arkansas's role in World War II. She was also invited to be the keynote speaker for the annual meeting of the Archaeological Society of South Carolina. Her talk for that group was titled "Public Archaeology 2020" and used Arkansas as a lens for thinking about the future of public archeology.

Three other papers/workshops had to be canceled this year due to the pandemic.

### Report Writing & Publications

Writing continued to be a focus in 2020. Barnes continued to revise the Hollywood Plantation report. It compiles all the data from the site with an overview of research methods and previous research on the 10,000-acre plantation site. She expanded the historic context and mapped the sites in the Hollywood area to examine the way people inhabited and transformed the landscape over time. In the report, Barnes examines the artifacts connected to foodways, health, infrastructure, and small finds.

Barnes continued to work with co-editors Stacey Camp (University of Michigan) and Sarah Surface-Evans (Central Michigan University) on a volume about the archeology of health for the *International Journal of Historical Archaeology*. They completed the round robin peer review. Barnes revised her article on the medicine bottles from Hollywood Plantation and contributed to the introduction. The trio anticipates submitting the volume for publication in August 2020.

Barnes also submitted revisions of an article on the archeology of reproductive health to the journal *American Anthropologist*.

### ARAS-UAM Awards, Service & Outreach

#### Teaching & Higher Ed

- Barnes taught ANTH 2203, Cultural Anthropology and SOC 3453, Race and Ethnic Relations (13 students), in the School of Social and Behavioral Sciences at UAM. Race and Ethnic Relations is a new course that Barnes developed this year.
- Barnes provided a guest lecture for Krista Lewis's Public Archaeology class at UALR, and led a tour of Hollywood Plantation and Camp Monticello for Kimball Erdman's (Fay Jones School of Architecture, UAF) Landscape Architecture class.
- Barnes served on Master's thesis committees for Devin Sorrows (Public History, UALR), Breanna Wilbanks (Anthropology, UAF), and Lydia Rees (Anthropology, UAF).
- Barnes attended meetings about the future of the Heritage Tourism program at UAM.
- Barnes assisted with restoration plans at Hollywood Plantation, reviewed content for interpretive panels, coordinated a meeting and preliminary interview with descendant, Mrs. Auzzie McGehee, and led tours as requested.

#### Records & Collections

- organized files and collections, updated databases, and created a database for site records and other paper documents
- updated site information for 3DR102
- consulted with Barbara Jensen, who donated a painting by Mildred Saunders, the Taylors' granddaughter, of the flowers from the Hollywood Plantation (3DR26) china, for display in the house exhibits

#### Professional Service

- **ARAS Committees.** Barnes served as Chair of the Publications Committee, and as Chair of the Personnel Committee, participating in the search and hiring of a new archeologist for the UAF research station.
- **Professional Organizations.** Barnes was elected to the Board of the Society for Historical Archaeology; served on the Gender and Minority Affairs Committee and Academic and Professional Training Committee; reviewed papers for the 2019 Jamie C. Brandon Student Paper Prize; facilitated a memorandum of agreement between SHA and the Society for Black Archaeologists. Barnes also was a member of the Public Outreach Committee of the Southeastern Archaeological Conference; prepared a ceremonial resolution honoring Dr. Jamie Brandon for SEAC; and assisted with planning for SEAC 2021 (date shifted to 2022), to be hosted by ARAS in Little Rock.



Dr. Kimball Erdman talking to UAF Landscape Architecture students at Hollywood Plantation.

- **Editorships & Peer Review.** Barnes served as Associate Editor for the journal *Historical Archaeology*. She completed peer review of a book manuscript for Berghahn Books, an article submission for the journal *Southeastern Archaeology*, and a grant proposal for the NSF Advisory Board.

#### Public Service & Outreach

- **Programs & Presentations.** Barnes helped the University of Arkansas Fayetteville’s Arkansas Humanities Center organize a two-day “Arkansas Stories: Captivity and Resistance” workshop. She assisted with local arrangements, led a tour of Camp Monticello, and gave a talk, “Monticello’s Italian PoW Camp,” at the workshop. Barnes presented a talk, “Archeology of Food in Drew County,” to the Clark County Historical Society in Arkadelphia (2019).
- **Archeology Month.** Barnes planned events for Archeology Month (March 2020), and coordinated the Martin Luther King Jr. Day of Service with the ARAS-UAPB research station, where the Tunican Chapter, UAM students, VISTA volunteers, and Desha County 4-H members cleaned and mapped Bates Cemetery (3DE261) in McGehee.
- **Preserve Arkansas.** Barnes served on the Executive Committee of Preserve Arkansas as VP of Governance and VP of Advocacy; participated in monthly meetings and quarterly Board meetings; attended the Annual Membership Meeting; served on the 2020 Most Endangered Places selection committee; and assisted with the Behind the Big House planning for 2020 (unfortunately, the program was canceled due to Covid-19).
- **K–12 Education.** Barnes participated in Star City Middle School’s student research showcase.
- **Cemeteries.** Barnes mapped Mount Olive Cemetery (3DE302) with Bob Scott and Tim Mulvihill.
- **Consultations.** Barnes helped the Arkansas Historic Preservation Program identify historic resources recorded in the 1980s. Barnes assisted the Drew County Sheriff’s office with a looting case, and worked with Special Agent Brandon Bland (US Fish and Wildlife Service), Wildlife Officer Ben Huggins (Arkansas Game and Fish Commission), and the Potlatch Corporation to investigate looting on Potlatch land in Cleveland County. Officer Huggins transferred the collections he confiscated to the ARAS-UAM research station.
- **Media Outreach.** Barnes wrote an entry for the ARAS “Artifact of the Month” web series.

#### Service to the Arkansas Archeological Society

- **Programs & Presentations.** Barnes presented “Archeology of Food in Drew County” at the Arkansas River Valley Chapter in Russellville; “Archeology at Hollywood Plantation: What have we done? What have we learned?” at the Tunican Chapter in Winchester; and “Make No Bones About It: Kitchens, Foodways, and Public Archeology in Arkansas” at the 2019 Annual Meeting in Hot Springs.
- **Tunican Chapter.** The station supports the Tunican Chapter of the AAS, serving the Monticello campus community and southeast Arkansas. Barnes organized the speaker series, prepared press releases and newsletter content, served as treasurer, led a tour of Hollywood Plantation, and gave a talk at the December meeting.

#### Program & Event Attendance

- Approximately 525 people attended various programs and events throughout 2019–2020.

#### Volunteer Hours

- Volunteers contributed 57 hours to lab work and cemetery clean up during 2019–2020.





## University of Arkansas at Pine Bluff Research Station

The ARAS-UAPB research station is located on the University of Arkansas at 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.

**Andrew Beaupré** (PhD, College of William and Mary, 2017) is the Research Station Archeologist for UAPB, and Research Assistant Professor of Anthropology, University of Arkansas Fayetteville. He has been interested in archeology since his first visit to an excavation in the fourth grade. His current research interests include historical archeology, culture contact and colonialism, landscape archeology, heritage studies, and public archeology. He has excavated throughout the eastern seaboard of the United States, in Canada, and as far away as Australia. Prior to joining ARAS, Beaupré was the inaugural Postdoctoral Teaching and Research Fellow in the McCormick Center for the Study of the American Revolutionary Era at Siena College in Loudonville, NY. He has also taught courses at the University of Vermont, several community colleges, and has worked as a cultural resource management archeologist.

**Robert J. Scott** (PhD, 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 was station assistant at the ARAS-UAM research station from 2004–2007, and re-joined the Survey at ASU in 2010 after attending the PhD program at SIU. He transferred to the UAPB station in 2013. Scott served as the Interim Station Archeologist for ARAS-UAPB between January and August of 2019, and returned to the position of station assistant when Andrew Beaupré came on board. His research interests include Lower Mississippi Valley archeology and ethnohistory, the archeology of colonial era Native Americans, pottery analysis, material culture studies, and applied zooarcheology.

## ARAS-UAPB Research Station Activities

### Arkansas School for the Deaf (3PU1042)

In September, a stretch of roadway collapsed on the grounds of the Arkansas School for the Deaf (ASD). Due to the location of grave markers nearby, oral history of a cemetery on campus, and the identification of a ferrous metal feature in the open pit, it was determined by the ASD administration that the collapse may represent a grave. The authorities contacted Ann Early, Arkansas's State Archeologist, who referred the project to the ARAS-UAPB station. After an initial visit, a site form was filed (3PU1042). Since then, ARAS-UAPB has participated in multiple meetings with the ASD administration and representatives from the Department of Education and the Governor's office. In the autumn, the story was featured in both *Arkansas Times* and *Arkansas Democrat-Gazette*. In early February, Beaupré coordinated a geophysical survey/public archeology event at the site. With the help of Jami Lockhart (ARAS-CSP), Robert Scott, and Mel Zabecki (ARAS Educational Outreach Coordinator), as well as our student intern Kevin Latting (UALR), the geophysics was completed while interpreting the activities for students and teachers at the ASD. Fox16 News (<https://www.fox16.com/news/local-news/now-arkansas-school-for-the-deaf-researching-burial-ground/>) reported the story. Lockhart and Beaupré shared the geophysical results with ASD Superintendent Jennifer Dickenson via zoom meeting. The team are currently working on a report of all information and recommendations for handling site stewardship.



Looking north toward the “sinkhole” and grave markers at Arkansas School for the Deaf.

Andrew Beaupré leads a tour for officials during investigations at Arkansas School for the Deaf.



The lead seal shown on facing page was recovered from Fort Desha (3DE23), the Arkansas Post occupied from 1756 to 1779.



### Arkansas Post

After a strong windstorm struck the Arkansas Post National Memorial (3AR47), Beaupré was contacted by the administrators of the park and archeologists from the National Park Service Midwest Archeological Center (MWAC) to aid with documentation of a number of uprooted trees or “treetips” that may have intact archeological contexts in the root-and-soil mass. He traveled to the APNM and, with Erik Dietzer as a guide, documented 32 treetips. The few artifacts recovered were accessioned by the NPS. A report for MWAC and a site revisit form were filed. A paper accepted for the 2021 Society for Historical Archaeology conference that will focus on the nineteenth century French descendant inhabitants at the site is informed by this recent work.



Beaupré wrote a piece for the ARAS web series Artifact of the Month (April 2020) on a lead seal recovered from the site of Fort Desha (3DE23), which is believed to be the fourth iteration of the Arkansas Post, occupied from 1756–1779. The site was located in the 1960s by artifact collector, Mr. Harvey McGhee. The lead seal is still in private hands. The web story was based on photos and limited notes on file in the ARAS-UAPB and ARAS-UAM stations. To complete this piece, Beaupré called upon the assistance of Judge Morris Arnold as well as noted lead seal expert, Cathrine Davis.

### Boy Scouts of America

In the early spring 2020, Beaupré was approached by Butch Walker, Program Director of the Quapaw Council of the Boy Scouts of America. Beaupré agreed to travel to Camp Rockefeller once a week for four weeks in June to teach the Archaeology Merit Badge. After the Covid-19 pandemic necessitated the closure of in-person instruction at the camp, the plan was altered to include creation of small instructional videos for each badge requirement, with virtual instruction. The program was administered over the Flipgrid platform to 32 Boy Scouts from Arkansas and surrounding states. Plans were also made to reprise the merit badge instruction for scouts in the DeSoto Council of Southeast Arkansas. Beaupré also administered the Cub Scout STEM – NOVA Uncovering The Past archeology module. This necessitated creation of an additional six videos. The badge was administered over the same Flipgrid platform, instructing 14 Cub Scouts from around the country. Beaupré and the Arkansas Archeological Survey retained the rights to all instructional videos and they have been posted on the Survey's YouTube channel.

### Heber Spring Mound (3CE68) Mussel Shell

Robert Scott analyzed freshwater mussel shell from the Heber Spring Mound site (3CE68) for Emily Beahm, station archeologist at ARAS-WRI. A total of 13,631 mussel shells were recovered at the site during test excavations in 1979, 10,053 of which are identifiable to genus and species. A minimum of 27 species of freshwater mussels could be identified. Taxonomic identifications were made by comparing the archeological specimens to modern shell in an extensive reference collection of Arkansas mussels housed in the Ecotoxicology Laboratory at Arkansas State University (Jonesboro). One of the identified species, *Epioblasma triquetra*, is a new stream record for the Little Red River. Identification of this species at 3CE68 highlights the applied value of archeological mussel shell to conservation efforts.

Interior measurements were recorded on shells of the dominant taxa in the site assemblage (*Eurynia dilatata* and *Fusconaia flava*) from each excavation level in two test units to investigate possible changes in size/age distributions of mussels through time. Significant decreases in the average size of mussels through time may indicate human over-exploitation of these organisms. A refit study (systematically “fitting unarticulated mussel shells together to identify them as the remains of a single animal”) is currently being conducted to estimate the duration of site occupation(s) and infer site formation processes. Shells have also been selected for stable oxygen isotope analysis to determine the seasonality of shellfish capture at the Heber Springs site.





### Mike Wilson Donation

In May of 2018, Mike Wilson of Jacksonville, Arkansas contacted ARAS-UAPB to discuss his wish to donate surface collections of Native American artifacts from two sites located on his property near Bayou Meto in eastern Pulaski County. For nearly 40 years Mr. Wilson plowed the surface of sites 3PU752 and 3PU919 for the sole purpose of finding Indian artifacts. As a result, he had accumulated an impressive collection of flaked projectile points (knives, spear points, and arrow points) and ground stone implements, many of which have been on display at the Esther D. Nixon Public Library in Jacksonville since 2012. The exhibit includes over 2,000 stone tools arranged chronologically to illustrate nearly 11,000 years of Native American occupation in central Arkansas. These artifacts were officially donated to the ARAS-UAPB research station in May of 2019, but will remain on display at the library for three more years.

The library display, however, comprises a fraction of the artifacts Mr. Wilson had surface-collected from the two sites. Unlike most amateur archeologists and collectors, Mike also picked up unmodified debitage, ground stone tools, and samples of fire-cracked and unmodified rock which he stored in large containers behind his house. Each site had its own container(s) against which he staked cobble tools, large ground stone implements, as well as pieces of unmodified and fire-cracked rock. After the donation of the library display artifacts was finalized, Mr. Wilson generously offered to donate the remainder of his collection.

The artifacts from both sites were transferred to 5-gallon buckets and taken back to UAPB to be cleaned and sorted by lithic material and artifact category. The unmodified debitage was size graded, sorted by raw material (chert, novaculite, or quartz crystal), counted, and weighed. Robert Scott completed this process in April. In course of the work, thousands of additional flaked stone tools and numerous groundstone artifacts were identified in both collections. Debitage (the debris from the making or resharpening of flaked stone tools), however, comprised the bulk of the donated artifacts from both sites (3PU752  $n=17,738$ ; 3PU919  $n=80,206$ ). Comparison of the two assemblages revealed differences in the reduction of chert and novaculite between the two sites. For example, not only does novaculite make up a greater percentage of the debitage from 3PU752 (Figure 1), a comparison of debitage size distributions between the two sites suggests the production of early and middle stage preforms or bifaces was a more common activity at 3PU752 (Figure 2). Further analysis of the debitage assemblages and bifacial tools has the potential to contribute to ongoing research into the organization of novaculite production in Arkansas prehistorically.

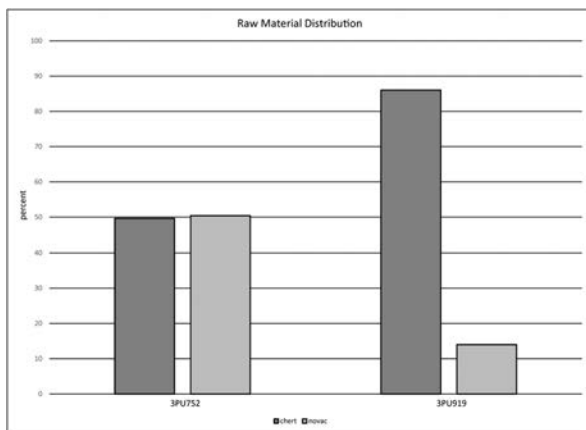


Figure 1. Debitage raw material distributions in the Wilson collection.

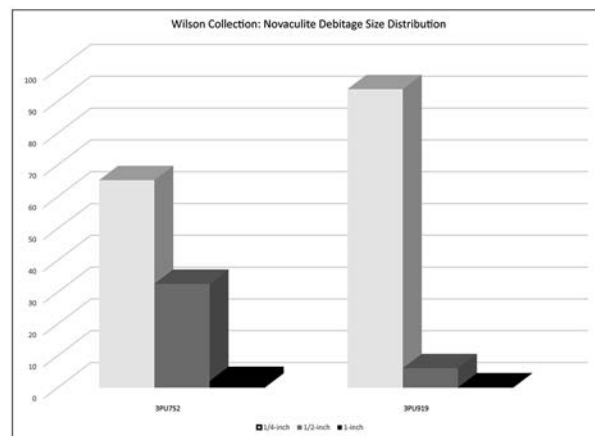


Figure 2. Novaculite debitage size distributions in the Wilson collection.

### Other Publication Projects

During the Covid-19 pandemic, Beaupré devoted some time to completing writing projects begun prior to his tenure at the Arkansas Archeological Survey. An article entitled “‘The Jesuits Mission Proves We Were Here’: The Case of 18th Century Jesuit Missions Aiding 21st Century Tribal Recognition,” an outgrowth of a 2019 Society for Historical Archaeology conference paper, was submitted to the *Journal of Jesuit Studies* and is undergoing review. Beaupré also completed a chapter entitled “Skeletons in the Cabinet: Historical Memory and the Treatment of Human Remains Attributed to the Schenectady Massacre of 1690,” coauthored with two former students at Siena College. This is for a University of Florida Press volume, *Beyond the Battlefield: Historical Memory, Archaeology, and the Social Experience of War and Conflict*, edited by Mark Axel Tveskov and Ashley A. Bissonnette, also undergoing peer review.

### Records & Collections

**John E. Boyette Donation.** John E. Boyette of Carlisle, Arkansas contacted us about donating his prehistoric artifact collection to the ARAS-UAPB station. It consists of grog- and shell-tempered sherds, novaculite and chert debitage, diagnostic projectile points, fire-cracked rock, and unmodified rock, all collected from cultivated fields between Bayou Meto and Two Bayou. The majority of the artifacts came from a location that corresponds to recorded site 3LN412.

**Moore Bayou Site (3AR12) Collections.** UAPB students and Arkansas Archeological Society volunteers assisted in reorganizing collections from the Moore Bayou site (3AR12) excavated in 1972 and 1974 by former ARAS-UAPB station archeologist Burney McClurkan. McClurkan had sorted artifacts from all excavated contexts together by type (or species in the case of faunal remains). The lab volunteers worked on re-sorting animal bone, sherds, and lithics back to their respective FSNs, getting through about 65 percent of the collection. Analysis and stratigraphic seriation of the ceramics from McClurkan's excavations should be a valuable contribution to Mississippi period pottery chronology for the Lower Arkansas Valley in the vicinity of the Menard Locality.

**Wallace Bottoms (3AR179) Faunal Collection.** Beaupré acquired the paperwork from US Fish and Wildlife for analysis of faunal remains from Wallace Bottom feature 12. A pro bono analysis of these remains was contracted to Dr. Terrance J. Martin, Curator Emeritus of Anthropology at the Illinois State Museum, who provided a preliminary report. Martin counted over 2,400 specimens, including dozens of refits and crossmends. Mammals dominated the collection, especially very large mammals such as cattle and possibly bison. White-tailed deer, swine, and black bear were also present, along with some small mammals, a little more than 80 bird bones, 24 fragmentary turtle remains, and at least four varieties of fish. Because of the Covid-19 pandemic, the Illinois State Museum Research & Collections Center (ISM-RCC) closed with a one-day notice on March 12th. Given the lack of access to the comparative collection, about 60 bones require more finite identification, for example bison/cattle, etc. Martin described "an interesting mix of domesticated and wild animal remains in Feature 12" and said "Wallace Bottoms is definitely interesting in terms of looking at European influence on a post-contact village whose inhabitants are interacting with the local French settlers/residents." A team of researchers will coauthor an article combining the recent faunal study and artifactual and historical information centered on foodways at Arkansas Post.

## ARAS-UAPB Awards, Service & Outreach

### Teaching & Higher Ed

- Scott taught SOCI 2330, Introduction to Anthropology, at UAPB during the fall 2019 (23 students) and spring 2020 (25 students) semesters. Beaupré taught SOCI 1320, Introduction to Social Sciences, at UAPB during the spring 2020 semester (32 students).
- Beaupré worked with Jerry Ingram, Chair of the Department of Social and Behavioral Sciences at UAPB, to develop a new Introduction to Archeology course. African Americans are underrepresented in the field of archeology, and archeology courses are underrepresented at Historically Black Colleges and Universities nationally. UAPB is now one of four HBCUs in the US that teach Introduction to Archeology.
- Beaupré was added to graduate faculties at UAF and UALR.
- Beaupré established a digital internship, with Elijah Collier, an undergraduate at Boston University, in the position. Robert Scott administered the internship, which focused on the analysis of end scrapers from Protohistoric and early Historic period sites on the lower Arkansas River. In the Spring 2020 semester, the station hosted an undergraduate anthropology intern from UALR. The Covid-19 pandemic forced the intern to complete his hours via distance learning, but he may return for an independent study in the Spring 2021 semester.
- Beaupré presented "The Role of a Public Archeologist in Government Issues of Identity, Sovereignty and Cultural Resource Management among the Abenaki People of Vermont" to Krista Lewis's Public Archeology class at UALR.

### Professional Service

- **Professional Organizations.** Beaupré is serving with several other members of the ARAS on the Southeastern Archaeological Conference (SEAC) 2021 (now moved to 2022) planning committee.
- **Editorships & Peer Review.** Beaupré conducted review of a book proposal for Berghahn Books. He is news editor for the Council of Northeast Historical Archaeology Newsletter.
- **ARAS Committees.** Scott was elected to the Hester A. Davis Fund Committee in July 2019, and voluntarily took over as chair of the committee in June 2020.

### Public Service & Outreach

- **Programs and Presentations.** Scott presented “Reconstructing Hernando De Soto’s Route through Southeast Arkansas: A Critical Reexamination of Archeological and Ethnohistoric Evidence” to the White County Historical Society in Searcy (audience 25; also shown live on the group’s Facebook page). Beaupré and Scott assisted with ArcheOlympics and ArcheObstacle games at UALR in October 2019.
- **Archeology Month, March 2019.** ARAS-UAPB scheduled nine Archeology Month activities in six of our constituent counties, but seven of these events were cancelled due to the Covid-19 pandemic. Scott presented “Native American Artifacts at the Helena Museum of Philips County” at the Helena Museum (audience 40), and the station hosted lab days March 7 and 8 for volunteers who worked on the Moore Bayou site (3AR12) collections.
- **Exhibits.** Scott installed a small, temporary exhibit of Native American and French artifacts from the Wallace Bottoms site (3AR179) at the Arkansas Post National Memorial Interpretive Center in late July 2019. He worked with the Elaine Legacy Center and Edward Salo, Heritage Studies Program at ASU, to develop temporary exhibits for future installation.
- **K-12.** Beaupré and Scott gave presentations on prehistoric Native Americans in Arkansas to 5th graders at De Witt Elementary School in Arkansas County (84 students and 8 adults).
- **Cemeteries.** Scott assisted Edna Briggs with her plans to document graves in two large cemeteries in Pine Bluff (Graceland and Pine Bluff Cemeteries). Beaupré investigated reports of an undocumented cemetery on the grounds of the Pine Bluff Country Club and filed a site form (3JE518). Scott assisted Jodi Barnes (ARAS-UAM) with mapping an African American cemetery (3DE302) east of Reed, Arkansas as part of the Historic Cemetery Preservation Initiative. Scott later visited and recorded two African American cemeteries (3JE519 and 3JE520) south of Pine Bluff, and again assisted Barnes in mapping an African American cemetery in Chicot County. Beaupré was contacted by a landowner who wanted information on protecting a family burial ground after a property transfer. Beaupré and Scott continued to work with volunteer Elle Thompson on documentation of African American cemeteries in and around Pine Bluff and Jefferson County.
- **Consultations.** Scott provided information on the Tillar site (3DR1) and other Tillar Complex sites to Dorothy Lippert at the American Museum of Natural History; corresponded with an undergraduate at the University of California, Berkeley, whose thesis project concerns the Elaine Massacre; discussed regional archeology and possible site proveniences of artifacts from Arkansas held in private collections with Illinois State Archaeological Survey archeologist Steve Boles. Beaupré met with a private landowner about investigating a nineteenth-century plantation on her property in Scott County. The station also answered requests for information and consultation from multiple municipalities, state agencies, and CRM firms including Flat Earth, Stone Point Services, the City of Pine Bluff, Mississippi River State Park, Delta Rivers Nature Center, Department of Arkansas Heritage, the US Army Corps of Engineers, and USDA Natural Resources Conservation Service, among others.
- **Media Outreach.** Scott administers a Facebook page for the UAPB station, with 1,052 followers in 9 counties. Beaupré administers the station’s Instagram, with 194 followers. The project at the Arkansas School for the Deaf was featured on Fox16 News in Little Rock as well as in *Arkansas Times* and *Arkansas Democrat-Gazette*.
- **Other Outreach & Public Service.** Scott helped Helena Museum of Philips County curator Joseph Alley with artifacts, photographs, and records as the museum continues its room-by-room renovations. The station held a holiday open house in December 2019 (attendance 15). Scott identified artifacts for people in Arkansas, Phillips, Grant, Cleveland, Saline, and Jefferson counties. In December, Beaupré attended a meeting of the Arkansas State House Society (the young professional affiliate of the Old State House Museum Associates); he was named to its board of directors and serves on the events committee.

### Service to the Arkansas Archeological Society

- **Programs and Presentations.** Beaupré presented “...at war over a few acres of snow’: The Role of Archeology in Understanding the Seven Years’ War” at the Ouachita Chapter in Hot Springs (audience 22) and at the Central Arkansas Chapter (audience 1); and “Toward an Archeology of French Colonial Arkansas: Chasing French Settlement in the Documentary and Archeological Records” at the Red River Chapter in Magnolia (audience 20).
- **Volunteer Opportunities.** The station invites local Society members to assist in the lab or fieldwork whenever opportunities arise.

### Volunteer Hours

- Volunteers contributed 83 hours to station research projects in the lab and field during 2019–2020.





## 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, with a mission “to develop diverse programs that nurture ideas, policies and activities to make life better in Arkansas.” The ARAS-WRI research station conducts archeological research in 11 counties of mountainous west-central Arkansas, including the southern fringe of the Ozarks 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 nineteenth-century town of Cadron in Faulkner County.

**Emily Beahm** (PhD, 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. She 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 Mississippian 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.

Above, students get instructions from Andrew Beaupré (ARAS-UAPB) for the popular ArcheOlympics games hosted at WRI.



## ARAS-WRI Research Station Activities



### Rock Art Website

Station Archeologist Emily Beahm has been crafting the Arkansas Archeological Survey’s new rock art website since April. While it is not yet complete, the redesigned website will feature extensive photographs and will hopefully inspire new interest in Arkansas’s fantastic rock art sites.

The major headings for the website include “Foundations,” “Context,” “Interpretations,” “Preservation,” “Arkansas Data,” “Additional Resources,” and a “Kid’s Corner.” Each of these main sections has a number of subsections designed to put Arkansas’s rock art sites in context both culturally and within the landscape, and to present this information in a way that is accessible and engaging to a wide audience. Content includes rock art definitions and frequently asked questions, a history of rock art research in Arkansas, a list of rock art related references, as well as Arkansas-specific information. Information for Arkansas rock art sites will include site background and overview, photographs of the site setting and rock art images, a black and white rendering of rock art elements, D-stretch modification to photos of pictographs, and published references to each site when relevant. On a landscape scale, the website will explore the distribution of rock art sites, motifs, and styles across the state. Larry Porter contributed projectile point identifications and an illustration.



Arkansas rock art elements being studied in the classroom at the ARAS-WRI station.

Larry Porter excavating a shovel test on Mount Nebo.

### Mount Nebo and Resort Springs

In January 2020 the ARAS-WRI station was contacted by the Arkansas State Parks planner about the possibility of doing an evaluation of cultural resources for a proposed gravel parking lot along Highway 155 in Mount Nebo State Park. In addition to background research, Dr. Beahm and Larry Porter conducted a surface collection and seven shovel tests over the area around the proposed parking lot. This investigation resulted in the identification of a historic site (dating to approximately 1880–1910), which was assigned state site number 3YE1348.

Beahm submitted a report of these findings to State Parks and wrote an article on Mount Nebo for the Arkansas Archeological Society's newsletter, *Field Notes* (No. 416).



### Homeschool Education Series

The 2019 Homeschool Education Series, “Not Just Food: The Many Uses of Plants in Arkansas’s History,” continued into the fall semester. At the beginning of August guest speaker Jeanette Larson from the Ozark Folk Center came to the class to show the students how to use a drop spindle. Students also had the opportunity to try out a spinning wheel, and used dogbane fiber or raffia to spin fiber into cordage. At the end of August, the subject of study was weaving. Students wove mats out of cattails and made their own fish traps. Students then went on a field trip down to Rockhouse Cave to see the pictograph of a woven fish weir. Emily Beahm set up a display explaining how archeologists can study perishable cloth material that is preserved on ancient sites. The September class was focused on plants used as dye for cloth as well as their use in healing. A number of different dyes were prepared from native plants that have been documented both historically and archeologically. These dye plants included elderberry, poke berries, sumac berries, Osage



Fabric dyed with native plants by the Homeschool Education Series students.



Homeschool Education Series students making Mississippi period house replicas.



orange, coreopsis, and walnut. Students experimented with dying fabric using these plants. Students also went on a scavenger hunt to locate various plants to put in their own plant identification booklet. October's class focused on plants used in architecture. Students made models of houses documented archeologically from Carden Bottom using foam board, wooden dowels, cordage, and reed.

### 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 program, Emily 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." You can read more about this program in the July/August 2020 issue of *Field Notes* (No. 415).

In December of 2019, Beahm visited five schools participating in Project Dig: Pottsville, Dover, and Clinton 5th grade GT students, and Perryville and Dardanelle 6th grade GT students. Each class traveled up to the WRI station in March 2020 to excavate the artifacts from the culture they were to study. Unfortunately, we were unable to complete the research symposium portion of the program due to Covid-19. Even so, students were able to learn and use important concepts about science, math, culture, and archeology during the field portion of this program.

### Teaching Gardens

In the fall of 2019 corn was harvested and nuts were gathered, but the WRI Teaching Gardens largely took a hiatus for the spring/summer of 2020. No corn, beans, or squash were planted in the Mississippian Garden, and the Woodland Garden saw little intervention. Even so, some plants in the garden continue to thrive including the fiber plants rattlesnake master and dogbane, the maypops that produce a tropical-tasting fruit, and especially the marsh elder (*Iva annua*).

### Safe Field Schools

Emily Beahm is working with Carol Colaninno (Southern Illinois University, Edwardsville), Carl Drexler (ARAS-SAU), and Shawn Lambert (Mississippi State University) on the NSF-funded project entitled "Evidence-Based Transformation of Undergraduate Field Schools to Promote Safety and Inclusivity among Southeastern Archaeology." The overall goal of this research is to determine what field directors are doing, or not doing, to create a field school environment free of sexual harassment, assault, and violence, to determine if these practices are or are not working, and to develop evidence-based recommendations and best practices for creating field schools that are safe, inclusive, and free of harassment, assault, and violence for all students regardless of racial identity, gender identity, or sexual orientation. This research will be undertaken in three phases over the course of three years. The first year has involved a thorough literature review of strategies to reduce harassment in various professional fields. The research team presented a paper at the Southeastern Archaeological Conference and a publication in the journal *Advances in Archaeological Research* (Volume 8, Issue 2) titled "Creating and Supporting a Harassment- and Assault-Free Field School." The research team has also sent out questionnaires to field school directors and coded documents related to field schools.

## ARAS-WRI Awards, Service & Outreach

### Grants, Honors & Awards

- \$300,000 for “Evidence-Based Transformation of Undergraduate Field Schools to Promote Safety and Inclusivity among Southeastern Archaeology,” a multiyear National Science Foundation grant; co-PIs Carol Colaninno (SIUE), Shawn Lambert (Mississippi State), Carl Drexler (ARAS-SAU), and Emily Beahm (ARAS-WRI).

### Teaching & Higher Ed

- Beahm taught ANTH 3303, Southeastern Archeology, at Arkansas Tech University in the Fall 2019 semester as a split online and in-person class (9 students).
- Beahm provided a guest lecture about Project Dig to Krista Lewis’s Public Archaeology class at UALR (10 students).

### Records & Collections

- Porter continued to inventory existing collections at the ARAS-WRI station, including Chism House (3LO946). He revisited six of the sites that were accessible, and filled out site forms using older site information. Porter prepared 23 donated collections for curation, which included inventory, photography, and accessioning.

### Professional Service

- **Professional Organizations.** As the lead planner for SEAC 2021, to be held in Little Rock, Beahm worked to secure contracts for the hotel and conference center, opened a bank account for use in conference planning, and made other logistical plans (e.g., communicating with AV vendors and creating a budget). Beahm hosted bi-weekly planning meetings with other members of the planning committee (Melissa Zabecki, Carl Drexler, Andrew Beaupré, Jodi Barnes, Elizabeth Horton, Jessica Kowalski, and Michelle Rathgaber). All established arrangements were moved from 2021 to 2022 due to the pandemic.
- **ARAS Committees.** As a member of the Publications Committee, Beahm worked with author Leslie Stewart-Abernathy and ARAS Editor Deborah Sabo to secure permissions for images in Popular Series No. 7, solicited peer review for George Sabo’s Popular Series manuscript “Ways of Our Ancestors,” and began working with David Dye on a possible submission to the Popular Series. Beahm served as an inaugural member of the new Hester Davis Memorial Fund Committee; the members discussed general procedures and reviewed an application for funding.
- **Editorships & Peer Review.** Beahm served as a member of the Southeastern Archaeological Conference editorial board and as newsletter editor for SEAC.
- **Diversity in Archeology.** In the aftermath of the killing of George Floyd, there was a desire to take concrete steps to combat racism and the general underrepresentation of minorities and women in archeology. Beahm joined a number of professionals (including Jodi Barnes, ARAS-UAM) to compile a bibliography focusing on publications by and about underrepresented segments of the population in archeological research. Called “Re-Centering Southeastern Archaeology,” it will be made publically available online. Viewers will be able to submit references to be added to the Bibliography. The site will be hosted by hcommons.org.

### Public Service

- **Programs & Presentations.** Beahm gave a talk and led a tour of the ARAS-WRI station for Petit Jean State Park’s Archeology Day in March. She consulted with park interpreters about plans for a museum display for the new visitor’s center. Each year the ARAS-WRI station highlights the WRI Teaching Gardens by attending the “Go Native, Grow Native” event at the Russellville Forest Service Building (estimated attendance 25). Beahm (with Mel Zabecki) gave a talk about local archeological sites at the Pope County Library (audience 8). Beahm spoke about Arkansas rock art to the Morrilton Rotary Club (audience 20). Beahm hosted the Central Arkansas Master Naturalists meeting at the ARAS-WRI research station with a morning presentation on “What is an Archeological Site?” and an afternoon tour of Rockhouse Cave (attendance 25). Beahm helped host a visit to Petit Jean Mountain by members of the Osage Nation; she created displays at the station on Arkansas Rock art and past excavations in Rock House Cave. Beahm helped plan and hosted the ArcheOlympics at WRI in October 2019 (attendance 45).

- **K–12.** Beahm talked to four 5th grade classes at Booneville Elementary School about archeology (102 students), and continued the Homeschool Education Series classes (with Mel Zabecki) during August, September, and October of 2019 (101 students). Along with Katy Gregory (ARAS-Toltec), Beahm set up and supervised an archeology activity for Homeschool Day at the Old State House Museum (attendance 286).
- **Media Outreach.** Beahm and Porter each wrote contributions for the ARAS “Artifact of the Month” web series: “Pitted Stone from Rockhouse Cave,” by Emily Beahm, for August 2019; and “Antler Atlatl Hook” by Larry Porter, for January 2020. Beahm collaborated with Jodi Barnes and Carl Drexler to write a short farewell tribute to Elizabeth Horton for the ARAS website and the *Field Notes* newsletter.

#### Service to Arkansas Archeological Society

- **Programs & Presentations.** Beahm gave a talk, “Arkansas Rock Art and Archeology: Putting Arkansas’s Rock Art in Context,” to the Three Rivers Chapter in Mountain Home (audience 15).
- **Arkansas River Valley Chapter.** The station supports the ARV Chapter of AAS, serving the Russellville/Morrilton area. Beahm serves as treasurer and filled in as secretary this year; she organized speakers for the meetings and gave a talk to the chapter in August 2019 (audience 5).

#### Volunteer Hours

- Arkansas Tech student Ashton McEntire volunteered 15 hours to station projects during 2019–2020.





## 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** (PhD, 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 US 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.

**Sarah Stuckey** (BS 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 prior. 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.

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In the photo, Julie Morrow examines stratigraphy at the Old Town Ridge site, 3CG41.

## ARAS-ASU Research Station Activities

### Ozarks Paleoindian Database

As reported last year, the Arkansas Paleoindian Database was expanded in 2019 to include the entire Ozark Mountains region, adding data from Missouri, Oklahoma, and Illinois. The database will be used to help explain Paleoindian resource use and settlement in the Missouri and Arkansas Ozarks.

The Ozarks cover approximately 50,000 square miles distinguished by flat-topped summits, steep forested valleys, and numerous karstic features like streams, springs, caves and rockshelters, sinks, cedar glades, and natural bridges. The dominant rocks are limestone and dolomite bedrock that host a wide variety of chert types, occurring as nodules, bedrock exposures, residuum, and as secondary deposits in stream beds. At a continental scale, the Ozarks region is a major lithic supply zone. Data suggest that the reservoir for Paleoindian variation is in the midcontinent, an area that is also the hearth of the earliest plant domestication in North America. At last report there were 700 Paleoindian projectile points in the database. Three hundred additional fluted points (including Clovis, Gainey, and Dalton) have since been added to bring the total to 1,000 as of May 2020. To further increase the sample of points, Arkansas native Jesse Ballenger shared data from his research on key Dalton sites in Oklahoma.

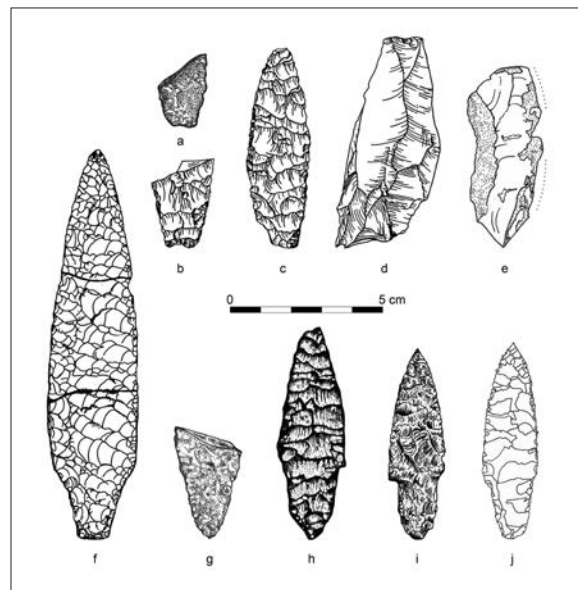
Many of the Dalton points recorded are “fluted.” Flutes are both symbolic—or emblematic—and functional. Fluting points is risky and wasteful until the technique is mastered. The reason Clovis people made fluted points for so long was because the technology worked well until the population increased, climate changed, and people had completely filled the best landscapes in the Americas for the Clovis way of life. Native Americans realized that any hard and pointed object, even a fire-hardened wooden spear like those used by some groups in Central Africa, could efficiently kill an animal if a major organ is struck. When the climate and vegetation began rapidly changing at the end of the Clovis era, about 12,850 years ago, people adopted new tools to construct canoes for traveling the closed canopy forests across the eastern Woodlands. Radiocarbon dates indicate that Dalton technology emerged rather quickly in the Southeast, by at least 12,500 years ago. If the term Paleoindian is used to refer to a time period, rather than an adaptive strategy, Dalton is considered late Paleoindian.

In 2019 Morrow prepared a presentation about colonization of the Ozarks for Sarah Stuckey to present at the annual meeting of the Arkansas Archeological Society. Morrow made a similar presentation at the Southeastern Archaeological Conference in Jackson, Mississippi, and further outlined the construction and research potential of the Ozarks Paleoindian Database.

### Powars II: A Paleoindian Red Ochre Quarry Site in Wyoming

In September 2019 Morrow was invited by George Frison (Emeritus Professor and former State Archeologist of Wyoming) and the Frison Institute of the University of Wyoming to visit what may be the largest red ochre quarry in North America. Paleoindian use of the site includes caching of projectile points/knives and other tools that may be part of hunting rituals, and mining of ochre for other uses that are to most westerners’ interpretations considered “functional.” The Powars II team includes about a dozen professional and avocational archeologists working side by side with the current State Archeologist of Wyoming to research and protect the site. Morrow was invited to help identify some of their “mystery” artifacts, and so she could observe the diversity of fluted points and other Paleoindian artifacts from the site. The team is preparing a volume about the site and the archeological investigations conducted thus far. Morrow’s research interest in the ritual use of red ochre prompted a request that she write a preface to the book.

The Powars II site lies within an historic early twentieth-century mining camp. Morrow’s visit included several stops to record projectile points and flake tools from Arkansas, Oklahoma, Colorado, and Wyoming, using the new point form created last year. These were added to the North



A variety of Western Stemmed points and flake tools from the Pacific NW (the large point on the left is from late Upper Paleolithic Japan). Drawing by Julie Morrow.



American-South America fluted point database started in 1999. A morphometric comparison of a cache of points originally from Powars (recorded at the Loveland Stone Age Fair) and other Clovis points from western US states indicates no significant differences other than outline morphology and the absence of flutes. From Morrow's preface to the report:

For over 13,000 years Native Americans were visiting a place called the Powars II site (48PL330) in Platte County, Wyoming. Its location in a basin above Hartville was selected by Clovis and later Paleoindian occupations (circa 13,500–8,000) as a place to make tools and to deposit points that were still useful. The site seems to have all the right ingredients for Paleoindians to have repeatedly visited: a wide variety of colorful high-quality toolstones in large piece sizes, game, a commanding view from the crest of surrounding hills, and moderate protection from the elements. Currently it is the largest known Native American ochre quarry in North America. Native Americans discovered this special place over 13,000 years ago and began mining chert as well as rocks that "bleed." Amidst the iron deposits there is specular hematite and red ochre which are known to have been used for at least the last 250,000 years. As is often the case in archaeology, the site was not discovered by a professional. And the site may not have been discovered had the Sunrise Iron Ore Mine not been established in 1900. Most importantly, it wouldn't be possible to learn about the Native American use of this incredibly special place if it had not been for Wayne Powars from Colorado who shared artifacts he found at the quarry with Dr. Dennis Stanford of the Smithsonian Institution. When Wyoming archaeologists learned that the site was in imminent danger of destruction they shifted into high gear and not only did they save the site but also conducted excavations on a shoestring budget to understand the occupational history and develop a preservation plan to delay erosion of the south facing wall. All of the pieces of this project came together, including an owner who not only encourages archaeological investigations, but who supports the collaboration of avocational and professional archaeologists equally dedicated to the preservation of ancient knowledge and the science of archaeology.

During her two-day visit to Powars II, Morrow learned that the historic deposits overlying potential Native American deposits adjacent to the mountain of ochre are 10m deep. She interpreted the geological context as some type of contact metamorphism/pegmatite deposit based on the oxides and large masses of chert the genesis of which is not well understood by local geologists. One of the most remarkable artifacts was in the beautiful makeshift museum in an old YMCA building on the mining camp property. It was a simple flake, but probably the largest flake Morrow has ever seen. The public and private financial support for the project to preserve the site is unprecedented. The Wyoming Department of Environmental Quality funded erosion control/stabilization of the south-facing portion of the site. Avocational archaeologists have donated thousands of dollars to produce the report.

### Greenbrier (3IN1), a Late Mississippian Village Site

Greenbrier is a Late Mississippian village site with an occupation during the eighteenth and sixteenth centuries. It is one of numerous Late Mississippi period sites in the Middle White River Basin that are grouped into the Greenbrier phase. According to Dan and Phyllis Morse, Greenbrier phase sites are small to large rectangular villages typically without mounds. Ceramic vessels and lithic tools are similar to those of the nearby Parkin phase. A ceramic human effigy



vessel and three shell masks reportedly came from the Greenbrier site. Shell and copper artifacts are reported from other Greenbrier phase sites. The 1999 and 2000 Training Programs of the Arkansas Archeological Survey and Society took place at Greenbrier, during which a burned domestic structure about 6m square was partially excavated. Attribute analysis of approximately 8,540 ceramic sherds from these excavations is near completion.

#### Preliminary Results of Ceramic Analysis

Approximately 90 percent of the sherds from the 2000 field season are a type called Mississippi Plain. Shell temper in Greenbrier sherds is typically less than 3mm in size. (Temper is something added to the clay to make it stronger.) Occasional fragments of crushed rock occur in the paste of a few sherds. Iron-manganese concretions, probably natural inclusions, are common in the paste. Grog temper has also been identified, with a few cases of shell tempering within the grog. Sand observed in some sherds under magnification may or may not be intentionally added. The majority of vessels used at the site were bowls and strap handle jars. There

Incised sherd from Greenbrier.



were very few bottle fragments, suggesting only 3–12 such vessels. All the sherds analyzed were excavated from non-burial contexts; however, relic digging, modern agriculture, and prehistoric activities probably churned up some broken sherds from graves which were subsequently mixed into the soil that overlies the floor of the semisubterranean house.

About 10 percent of the sherds are decorated. Most are punctated (decorated with small marks punched into the wet clay); both fingernail and tool punctates are recorded. The majority of the tool punctates mimic fingernail punctates. Incised sherds (decorated with lines drawn into the wet or partly hardened clay) in the assemblage are mostly a type called Barton Incised. These Barton Incised rim sherds may belong to vessels with tool or fingernail punctates on the body (Barton Incised *var. Togo*). Red filming is also found at the site, mostly on bowls.

#### Using INAA to Identify the Source of Clay

One goal of the ceramic analysis was to identify locally made versus non-local vessels. It was assumed that the more abundant vessel forms with simple decoration were local vessels because these are easy to replicate; domestic vessels see a lot of use and are more susceptible to breakage, so would need to be replaced more often. Plain (undecorated) vessels were identified as local based on a common temper pattern. Some elaborate vessels were probably also made at the site for ceremonial or burial purposes, while some may have been imported. The latter would be vessels with paste unusual for the area, or those with complex decoration. Sherds, raw clay, and pottery squeezes were sent for Instrumental Neutron Activation Analysis (INAA) as a pilot study in order to identify groups of locally manufactured and exotic vessels. This technique identifies the chemical composition of minerals in the clay, which can be matched to a geographic source. A local clay source was not identified during the first INAA study. To enlarge the INAA sample of sherds, and include some from other Greenbrier phase sites, as well as samples from additional clay sources, Morrow obtained funding from the Archeological Research Fund of the Arkansas Archeological Society to conduct a second INAA study.

For the second INAA study, 44 sherds and six clay samples were sent to the University of Missouri's Research Reactor (MURR). Eight of the 44 sherds were from other local sites and were used to test differences in paste from areas surrounding the Greenbrier site. INAA identified 33 elements measured from these samples. The amount of each element was recorded in parts per million. Using multivariate ratios of elements composing the paste of the sherds, the samples were categorized into groups of similar composition. These groups were compared to the Greenbrier groups created during the first INAA study. They were also compared to the University of Missouri Archaeometry Lab's database for similarities with samples from other sites. The conclusions of the study will be published in *The Arkansas Archeologist*.

#### Sourcing the Clay for Ceramic Production: Thin Section Analysis

Morrow began a project with Daniel Pierce (University of Bordeaux-Montaigne) to source the clays used to produce ceramics at Greenbrier and compare the INAA versus thin section methods for sourcing ceramic artifacts. Thin sectioning involves cutting and polishing a slice of the ceramic vessel to make a very thin tile that can be examined under a microscope. Thus far it appears that the sherds were all made with the same materials and we may not be able to determine provenience of the clay. The raw clays made into tiles look similar but Pierce has not examined them in detail yet. However, there appear to be differences at the production level. The clay is a calcitic clay with plenty of quartz, bits of iron, and occasional minimal bits of the minerals plagioclase, polycrystalline quartz, and muscovite. Production included adding temper of additional calcite (identified as larger bits than the natural calcite found in the clay) and grog (crushed bits of fired clay). The post-depositional environment appears to be oxygen-rich and humid, based on the decomposition and secondary enrichment of calcite. The firing temperature appears to be between 650° and 850° Celsius based on the cleavage and color of the calcite. Differences in ceramic vessel production are visible in the amounts and size of calcite/grog. A standardized ceramic production method was not noted, but the materials appear to be the same. These observations are most consistent with household production and probably multiple potters. Pierce plans to collect data from individual thin sections of the sherd sample as well as tiles made from the local clays in Greenbrier Bottoms for comparative analysis. He notes that some sherds do have different materials (these are presumably the imported sherds). As he looks deeper into the sample he will form petrographic groups and learn more.

#### House Construction Methods at Greenbrier: Lessons Learned from Daub Refitting

Morrow obtained permission to return to Greenbrier to determine the location of the fourth wall of the house, which would allow us to more accurately know the house size. Sadly, the coronavirus prevented this follow up. Meanwhile, Sarah Stuckey worked on sorting and inventorying previously unprocessed daub from 3IN1. Daub is clay wall plaster that has been "fired," usually when the house was burned. Many of the daub pieces from FSN 95 and 96 had defining characteristics that made it possible to refit the fragments into larger sections. These refitted pieces raised Stuckey's curiosity about daub house construction. There are pieces with multiple large flattened areas. One piece has two flat

impressions on either side but at a 45° angle to each other. Stuckey also found some leaf impressions, but the most amazing discovery is a 2.5cm finger impression with a distinct fingerprint. She made a cast for archival purposes. A piece of vitrified daub prompted Stuckey to research the temperature at which that chemical process occurs.

### Locating Graves at the Independence County Poor Farm Cemetery, Batesville AR (3IN1485)

In 2007 the late Anna Parks, a local avocational archeologist and long time member of the Arkansas Archeological Society, recorded the general location of a “cemetery on the county farm” on the east side of Highway 233 in Independence County. The location was designated 3IN1485 by the Arkansas Archeological Survey. According to the site form filed by Anna, local informants believed there were about 200 graves at or near this location. Another indication of the cemetery she noted was when the Arkansas Department of Transportation identified three graves north of the intersection of Hwys 69 and 233. Additional information about burials in this location derived from a local resident who reported that a coffin was struck during an unrelated water department construction project. Although there is archival and oral history about the cemetery, various sources do not agree on the exact location. The best information derives from the deed of the property filed at the Independence County Courthouse, which defines the cemetery area in a “less and except” manner. Based on this, the cemetery is east of Highway 233 and south of the headwaters of an intermittent unnamed tributary stream. According to the deed, the cemetery was triangular in shape with the west boundary along the road right-of-way for a distance of 40 yards. The north boundary generally paralleled the creek eastward for about 80 yards with the third side completing the right triangle back at the road right-of-way.

Linda Hidy asked Independence County Judge Griffin to have the “less and except” area indicated in the Courthouse records surveyed and the ARAS-ASU station was asked for help in locating graves at 3IN1485. Julie Morrow recruited John Riggs (Natural Resources Conservation Service archeologist) to conduct ground-penetrating radar (GPR) to locate graves, with surveyor Keaton Johnson’s aerial map as a guide.

### Fieldwork

On June 4, 2020 several people conducted a walkover of the general area reported as 3IN1485. John Riggs deployed a GPR unit across the area with the expectation of delineating graves. The first area investigated was in the vicinity of the county water department’s pumping station located in the northwest corner of the field where a coffin was encountered in the past, as noted on the ARAS site form. The few anomalies observed in the area immediately south of the water pumping station did not appear to be typical grave signatures. A long, narrow feature flagged as a disturbance in the GPR imagery was discovered through coring to be a pvc drainage pipe less than a meter below the surface. There was no evidence of a grave. Random anomalies detected in the area mostly seemed very shallow and probably were related to brush clearing. Given the report of a “coffin” struck during construction of the water pumping station, it was necessary to check the vicinity for any sign of graves, but no indications were found near the pumping station. Efforts next were focused on the area south of the creek, as indicated by the property deed.

In the early twentieth century, it was customary to orient graves with feet to the east and head to the west. Inside the property edge/fence-line at the edge of the highway right-of-way, transects were spaced 4–5 feet apart and aligned north-south with the expectation of intercepting the long axis of potential grave shafts. Multiple passes were made on each transect to double check all anomalies pin-flagged on the previous pass. For the most part, the imagery observed showed only a few signals recognizable as graves. Most were interpreted as “disturbance smears.” The area is currently used as a cattle pasture and the ground surface of the area is very irregular with an abundance of recent cattle tracks in the wet ground. These conditions caused the GPR unit to bounce more than usual, causing false anomalies to appear. Multiple passes were made to try to verify the presence of anomalies versus false readings.



Sarah Stuckey at 3IN1485.

GPR scanning was conducted between the north-south fence to about 40 yards east of the north-south fence; however, the wider “disturbance smears” were only observed out into the field about 25 yards from the fence. At a distance of more than 25 yards from the fence the “disturbance smears” virtually vanished from the screen and more typical imagery became the norm. To further verify that the abundant anomalies were legitimate disturbances, two transects were scanned parallel to the fence south of the probable cemetery area. That imagery showed nothing below the surface suggestive of grave shafts. The rough ground continued to register narrow “disturbance smears” which are likely due to the bouncing unit. The most valuable visual information validating the cemetery location appears as a circular area on the 2006 aerial photo from Google Earth. The location of this circular anomaly corresponds to the location where the extensive array of anomalies was detected. In addition to GPR, a metal detector was used non-systematically to check for the presence of metal objects (e.g., coffin hardware, etc.) in the same area of the GPR disturbances. None of the metal detector hits were ground-truthed; however, this data indicates there is metal in the suspected location of the poor farm cemetery as indicated on the property deed.

### Analysis and Interpretation

Analysis of a LiDAR image of the creek together with the topographic map and GPR imagery, leads to several observations. The 99.8 ft contour depicts the lowest elevation in the field where the creek exits the field and becomes the highway road ditch. The creek flows from the northeast corner of the project area with overflow accumulating in the suspected burial ground area. LiDAR suggests that the creek may have been rerouted during past road construction activities. The probable location of the human burials, as indicated by the points recorded in the GPR survey, is along the west fence line in an area that was probably one of the lowest elevations in the field outside the creek channel itself. The area of disturbance depicted on the 2006 aerial is the most likely location for the burials listed in the “less and except” property segment within the area formerly known as the Independence County poor farm cemetery.

Cemeteries are typically located in higher elevation landscape positions, but when people died with no means to be buried anywhere other than the “poor farm,” a portion of the farm was selected as a cemetery area. This would likely be an area less favorable for growing crops because of frequent flooding and/or other factors. This would explain the choice of the area indicated by the county recorded deed as a cemetery, the 2006 aerial photo, and the LiDAR map. But it doesn’t explain the lack of a clear GPR signal for graves. Maybe a haphazard manner of burial over many decades, not necessarily in coffins, produced this result.

### Future Work to Preserve 3IN1485

Future work at 3IN1485 could focus on the area within the fence that surrounds the water pumping station. The work described here was outside this fence. Considering that this was the county’s poor farm it is unlikely that residents had enough money to buy a coffin. If a coffin was provided by the county, it may have been a simple pine wood box which would have rotted away very quickly in the moist, clayey soils over the intervening 50–100 years after burial. Individuals who worked for the Independence County water department may be able to provide more specific information about burials encountered during the installation of the water pumping station.

Recommendations were to surround the area shown in the 2006 aerial photo with a fence if feasible. Additionally, the placement of a historical marker to briefly explain the significance of the area as a historic cemetery would be appropriate for the descendants of the interred. Linda Hidy knows the names of about 40 individuals buried at the site and intends to continue archival research to produce a more complete list. Morrow recommended to Mrs. Hidy that the list of individuals be deposited at the Old Independence Regional Museum at Batesville, at the Public Library, and with ARAS. She also recommended that the names of individuals known to be buried at 3IN1485 be added to online resources such as Find-a-Grave (<https://www.findagrave.com/>) and other searchable websites to assist genealogical researchers. The project was made possible by the cooperation of the landowner, Mr. Justin Blankenship, who provided access to the property, the Honorable Judge Griffin, who helped by issuing a survey of the legal description of the burial ground, and Mr. Keaton Johnson, who surveyed the cemetery area.



## ARAS-ASU Awards, Service & Outreach

### Teaching & Higher Ed

- Morrow taught ANTH 3203, Introduction to Archeology (10 students) and ANTH 2302, Introduction to Cultural Anthropology (15 students) during the 2019–2020 academic year at ASU. Stuckey assisted Morrow with class preparations, grading, and exam monitoring, and worked with students in the Archeology class, overseeing volunteer hours in the lab until this was curtailed by Covid-19 restrictions.
- ASU undergraduate Anna Pieri from Environmental Sciences/Biology interviewed Morrow for a class assignment.
- Morrow and Stuckey assisted the ASU Museum with artifact identifications, donation of two chunky stone replicas, and tracking down site numbers.

### Records & Collections

- Morrow cleaned and rearranged the collections to make them more accessible in the lab.
- Morrow prepared site forms, supervised loans and transfers, and accessioned donations; she organized the teaching collection and taught Sarah Stuckey and students how to find provenience.
- Stuckey helped prepare site forms, recorded a cemetery site (3CG1310) and mapped another (3IN1485), took part in the Greenbrier lab work, helped organize the teaching collections, assisted with accessions and donations, digitized photos and slides from the Anzick and Kimmswick sites, and worked on creating or updating graphics for presentations and articles.
- Stuckey gave a presentation at the annual staff meeting on how to fill out the new projectile point recording form developed by the ASU station.

### Professional Service

- **Editorships & Peer Review.** Morrow read and commented on a manuscript for a colleague and wrote a review for the journal *PaleoAmerica*.
- **ARAS Committees.** Morrow served on the Publications Committee.

### Public Service & Outreach

- **Programs & Presentations.** Morrow gave a presentation on Native American Origins to the Newport Rotary club (audience 20), and a talk to the Memphis Archaeological and Geological Society about current research on the King Mastodon.
- **Archeology Month.** Morrow and Stuckey worked to develop an Archeology Day event for the Crowley's Ridge Nature Center as a March 2020 Arkansas Archeology Month event. A local flintknapper, a bowmaker/bowyer, and a hide tanner were recruited to demonstrate their crafts. Morrow and Stuckey planned to have an exhibit of artifact replicas, and stations for activities (flintknapping, stone drilling, atlatl throwing, hideworking, fire-making, bow-and-arrow making). One ASU student and several Society members signed up to help with logistics. The planning involved coordination with the Nature Center director, the CMV Chapter board, ASU faculty,



Bob Perry and Scott Akridge at 3WH76.

and experts in each of these activities from the NE Arkansas community. Stuckey and Morrow even designed an Archeology Day t-shirt, as a fundraiser for the CMV Chapter. Archeology Day was cancelled due to Covid-19 restrictions, but we hope all of those on the team will be available to conduct their respective activities at an appropriate time in the future.

- **K-12.** Morrow served as a Judge at the NEARK District Science Fair.
- **Cemeteries.** Assistance with historic cemeteries included: mapping and metal detecting the Independence County poor farm cemetery, 3IN1485; helping a citizen doing genealogical research with information about a cemetery, 3CG1140; following a lead on a privately owned cemetery containing graves of enslaved people; and helping the FBI at Edmundson Cemetery in Crittenden County, where gardening activity had inadvertently disturbed human remains in a corner of the gravesite.
- **Consultations.** At the request of a Society member Morrow revisited two sites, 3WO351 and 3WH76, both of which are eroding into White River. This investigation resulted in two small surface collections which provide information about the Woodland period occupation at 3WO351 and the Woodland and Mississippian and Historic occupations at 3WH76. Morrow coordinated with Ritter Communications, the Quapaw Nation, and the Poinsett County Sheriff's office to post No Trespassing signs along the roadway adjacent to the Hazel (3PO6) and Hazel North (3PO213) sites to deter surface collecting. With John Riggs of NRCS, Morrow monitored water well and pipe relocation/installation at Buffalo Head Slough, 3GE6. A small surface collection was made.
- **Other Outreach & Public Service.** Morrow and Stuckey assisted with an Artifact ID Day at Parkin Archeological State Park in September. Morrow assisted the Hampson Museum State Park with queries about their collections, and provided back-up to a former student who directed an Artifact ID Day at the museum. Morrow and Stuckey responded to contacts received by phone, email, and in-person, and met with several individuals to give advice about collections and sites on private property.

#### Service to the Arkansas Archeological Society

- **Programs & Presentations.** Morrow gave talks about the Grigsby site to the CMV Chapter, and about the Sloan site to the Three Rivers Chapter in Mountain Home (combined audience about 20).
- **Central Mississippi Valley Chapter.** The ARAS-ASU station assists the CMV Chapter. Morrow organized and promoted monthly meetings, and hosted in-person meetings before pandemic restrictions. Volunteer opportunities are provided in the station lab and field projects whenever possible.

#### Volunteer Hours

- Students, chapter members, and other volunteers contributed 220 hours to station projects during 2019–2020.



## 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 nineteenth 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** (PhD, Northwestern University, 1996) is the Survey’s Research Station Archeologist at HSU, 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.

**Tommie N. Cotton** (MSc, University of Edinburgh, 2016) was hired as the ARAS-HSU research station archeological assistant in late September 2019. She is an Arkansas native with cultural resource management experience in Arkansas, Oklahoma, Texas, and Illinois. She got her start in anthropology with a BA from Lyon College in Batesville, which allowed her to pursue field schools in Bulgaria and Spain. She has been diving into all that Arkansas archeology has to offer.

Tommie Cotton supervises community volunteers as they process artifacts from the Amos (3MN62) site during an archeology lab day at the Caddo Center (photo by Mary Beth Trubitt).



## ARAS-HSU Research Station Activities



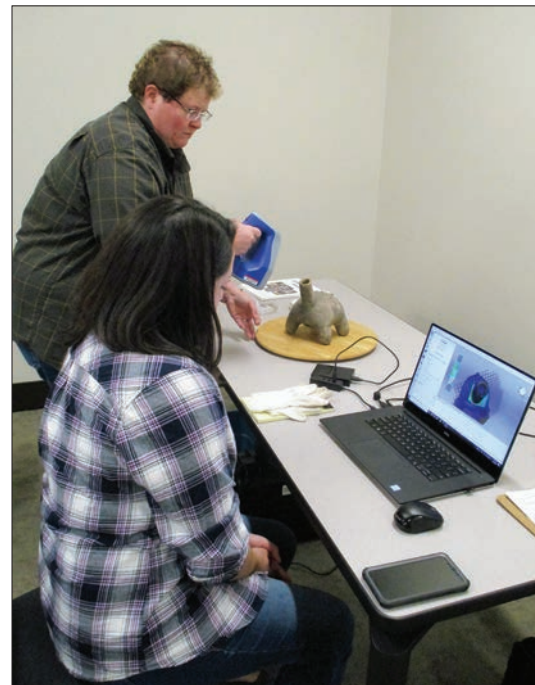
Members of the Tunican Chapter of the AAS toured the Caddo Center on the Henderson State University campus in July (ARASHSUD\_C2163 photo by Mary Beth Trubitt).

### Increasing Access to the Joint Educational Consortium's Hodges Collection

As the Joint Educational Consortium (JEC), Henderson State University (HSU) and Ouachita Baptist University (OBU) own a significant collection of Native American artifacts amassed in the 1930s and 1940s by Thomas and Charlotte Hodges. The Hodges Collection of more than 38,000 objects includes ceramic vessels and stone tools from Caddo sites in the Ouachita River valley in Clark and Hot Spring counties. Since the JEC acquired this historical collection in 1977, it has been curated by the ARAS-HSU research station. With grants from the Arkansas Natural and Cultural Resources Council, HSU is rehabilitating the historic Caddo Center building on campus as a consolidated center for student services, with space for permanently exhibiting Hodges Collection artifacts and interpreting local Caddo Indian history. ARAS-HSU staff, assisted by HSU students and Arkansas Archeological Society (AAS) volunteers, moved the JEC Hodges Collection to open curation in the renovated Caddo Center in 2019.

Mary Beth Trubitt and Tommie Cotton gave tours of the Caddo Center to scores of visitors, from students in HSU courses and members of the Clark County Historical Society to HSU Homecoming guests and the Arkansas Natural and Cultural Resources Council. Trubitt consulted with HSU and Caddo Nation administrations about the Hodges Collection, and developed ideas for its interpretation. With a small grant from the ARAS Hester Davis Fund, Teka McGlothlin and Sarah Shepard (ARAS-CO) came to Arkadelphia for a 3D scanning project. In November 2019, the team documented 36 of the most unique and fragile objects in the collection with high-resolution 3D models. They also demonstrated the scanning procedure to students in HSU Professor David Sesser's museum studies class. Trubitt wrote short summaries of the process for *Field Notes* and for the *Caddo Archeology Journal*.

In the spring of 2020, Trubitt was awarded two small grants from the Arkansas Humanities Council and the AAS Bill Jordan Public Education Fund, and began developing ways to interpret



Teka McGlothlin and Sarah Shepard (ARAS-Registrar) visited the ARAS-HSU station in November to 3D scan some of the more fragile and unique pieces in the JEC Hodges Collection (ARASHSUD\_C2220 photo by Mary Beth Trubitt).

the collection. Trubitt consulted with Deborah Weddle (ARAS-CSP) about website development, and with humanities scholars Judith Stewart-Abernathy and Tamara Francis about drafts of pamphlets. Grant ARAS 20-02 was completed in June. Trubitt and John House (ARAS archeologist emeritus) completed a manuscript describing the vessels and other artifacts in the Hodges Collection attributed to Menard-Hodges (3AR4) and other eastern Arkansas sites, and submitted it to *The Arkansas Archeologist*.

### Station Collections and Records: Archiving Our History

The ARAS-HSU research station continued to document and archive curated collections of artifacts, maps and paper records, photographs, and electronic files. Cotton and Trubitt, assisted by Arkansas Archeological Society (AAS) volunteers and HSU students, inventoried artifact collections and updated databases during weekly lab days. To date, over 526,000 artifacts have been documented, adding content and location information to the station's master inventory. Cotton completed scanning the color slides at the ARAS-HSU research station, archived digital images of slides, and updated the photograph databases. She began scanning and shredding or archiving correspondence and other paper records to better utilize file space at the station.

These inventory and documentation efforts have spurred several new research projects. While completing the Standridge (3MN53) inventory, Trubitt and Cotton used two boxes of typed decorated ceramic sherds from the site to illustrate a discussion of the descriptive system of Caddo ceramics, and submitted a manuscript to *Field Notes*. Cotton's photographs were provided to Ann Early (ARAS-CO) to assist in her publication of the descriptive system "note-books." Cotton provided access to curated collections from site 3CL142 to AAS volunteer and retired US Forest Service archeologist Meeks Etchieson, who is analyzing materials he donated to the station several decades ago. Cotton scanned and digitized lab analysis notes from Chelsea Cinotto's 2019 analysis of artifacts excavated from the J. E. M. Barkman House (3CL450).



Engraved ceramic bowl fragments from Standridge structure F-12 (3MN53, Accession 76-671) photographed during the station's curated collections inventory (ARASHSUD\_N30333 photo by Tommie Cotton).

### Ancient Caddo Lifeways in the Saline and Ouachita River Valleys

A major research focus at the ARAS-HSU research station incorporates analyses of curated collections with new excavations to interpret Caddo Indian lifeways in west-central Arkansas. Trubitt continues to analyze and interpret results of major excavations conducted during the 2013–2014 Training Programs at Dragover (3MN298) in the Ouachita National Forest. With Ann Early, Trubitt finalized a chapter on Caddo ceramics in the Ouachita River drainage for the planned "Ancestral Caddo Ceramics" book edited by Duncan McKinnon, Jeffrey Girard, and Timothy Perttula. Trubitt continued writing and drafting figures for a book manuscript comparing results of past excavations at Hughes (3SA11) and Hedges (3HS60), two contemporaneous Caddo mound sites in the Saline and Ouachita drainages. Trubitt wrote and illustrated a short piece on a Caddo shell gorget for the ARAS website as part of the "Artifact of the Month" series.

The Amos site (3MN62) was excavated during the 1976 Training Program, but only preliminary cataloguing and analysis was completed at the time. Cotton gathered records and artifacts from the field and lab work, scanned and digitized lab records, sent large format field maps to ARAS-CO for scanning, and began a new project to analyze the artifacts and interpret results of the excavations. She identified animal bone, stone tools, and ceramics for more detailed analyses, and identified and transferred fragmentary human remains to ARAS-CO for NAGPRA inventory and repatriation. Cotton and Trubitt created a presentation on the project for the 2020 Caddo Conference, and submitted a short manuscript to *Field Notes*.

### 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 over thousands of years. 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. She also added information on typed novaculite points from recorded sites in the region based on the ARAS-HSU curated collections inventory.

Trubitt prepared a paper for the AAS annual meeting on the significance of novaculite quarries in Hot Springs National Park that included LiDAR imagery of 3GA22. Trubitt continued interpreting and reporting results of the 2007–2008 Training Program excavations at Jones Mill (3HS28). Her *Ouachita Mountains Archeology* book, which includes results from the Jones Mill excavations and from the 2013–2014 Training Program excavations at Dragover, was published in December as No. 6 of the ARAS Popular Series.

### Mississippian Societies in the Midwest and Southeast

Trubitt made final revisions to a chapter on Spiro arrow points for the planned National Cowboy & Western Heritage Museum exhibit volume (“Recovering Ancient Spiro: Native American Art, Ritual, and Cosmic Renewal”). Trubitt, George Sabo, and Teka McGlothlin made a presentation on Caddo effigy pottery to the annual Caddo Conference in 2020. A planned presentation on the same topic, invited for a Mississippian iconography symposium at the Society for American Archaeology 2020 annual meeting, was cancelled due to the coronavirus pandemic.

## ARAS-HSU Awards, Service & Outreach

### Grants, Honors & Awards

- In 2019, Trubitt was awarded a small grant (\$1472.16) from the ARAS Hester Davis Fund for “New 3D Scanning of Hodges Collection Effigies.”
- In 2020, Trubitt was awarded two small grants from the AAS Bill Jordan Public Education Fund (\$1000) and the Arkansas Humanities Council (\$2000) for “Interpreting the Hodges Collection and Caddo History for the Public.”

### Teaching & Higher Ed

- Trubitt teaches in the Department of Sociology, Human Services/Social Work, and Criminal Justice at HSU. She taught ANT4083 “Readings and Research in Anthropology” (1 student) during the Summer 1 session of 2019; ANT2023 “Introduction to Physical Anthropology and Archeology” (16 students), and ANT4053/SOC4063 “World Cultures” (39 students) during Spring 2020.
- Trubitt and Cotton worked with HSU student Emma Adams, who completed her museum studies internship at the Caddo Center during Spring 2020. Cotton and Adams inventoried Hodges Collection artifacts currently on display in the Clark County Historical Association Museum, in the Ross Foundation headquarters, in the HSU library, and in the OBU library in Arkadelphia. Trubitt and Adams developed examples of web pages featuring 3D models and videos of selected artifacts for viewing in the Caddo Center and on the Hodges Collection interpretation website under development.
- Cotton gave a guest lecture “Excavation of Human Remains” to Trubitt’s Introduction to Physical Anthropology and Archeology class (16 students). Trubitt gave a remote guest lecture “Hot Spring County Archeology: The Jones Mill Site,” to Ronna Pennington’s history class at College of the Ouachitas (Arkansas State University-Three Rivers) (12 students).

### Service to Host Institution

- **Caddo Center.** Trubitt and Cotton oversee the JEC’s Hodges Collection of Native American Artifacts, now in open curation in the HSU Caddo Center. Trubitt researched and drafted three grant proposals to fund interpretation for visitors, and corresponded with the Caddo Nation chair and the acting president of HSU about the collection, the NAGPRA inventory completion, and grant proposals. Trubitt coordinated with HSU Professor Peraza-Rugeley about using Hodges Collection exhibit text for a translation project for her upper-level Spanish class. Cotton gave a tour of the Caddo Center to the class (21 students) and introduced them to the comparative collections so they could feel and experience the textures of the items they were seeing on display. Some students made follow-up contact for more information. Trubitt (Tunican Chapter, audience 7; Clark County Historical Society and the Ouachita Chapter, audience 28) and Cotton (HSU Homecoming guests, audience 8; Arkansas



Natural and Cultural Resources Council, audience 23) gave tours to visitors of the Caddo Center as requested. The Caddo Center has been open three days a week (Monday, Wednesday, and Thursday) to allow more access for those on campus and in the general public. There were over 150 visitors this fiscal year before the campus closed down due to the coronavirus pandemic.

- Trubitt attended in-person and virtual departmental and campus-wide meetings and participated in the HSU Women Authors program for Women's History Month in March. She provided job references for former students, and re-posted job and internship opportunities on the station's Facebook page. Trubitt attended several remote workshops on online teaching and managing remote museum internships, as well as university anti-racism conversations.
- Cotton and Trubitt created new "Pieces of the Past" exhibits in HSU's Huie Library ("Trade and Travel on the Mediterranean Sea" for July 2019, "Bow and Arrow Technology" for August, "Body Ornamentation" for September, "Caddo Artifacts from the Patrick Donation" for October, "The Henderson State University Museum" for November, "Grinding Stones from the Sargent Collection" for December and January 2020, "Archaic Axe from Northwest Arkansas" for February, and "Arkansas Archeology Month" for March). Rotating the exhibit each month ensures fresh content for students and passersby. Trubitt and Cotton revamped two permanent exhibits in Huie Library: "Caddo Bottles from the Hodges Collection" and "Caddo Indians in the 21st Century." Trubitt programmed and affixed NFC (near field communications) tags to the exhibit cases so visitors can link to relevant websites for information. Cotton enlarged and revamped the "Henderson State University Museum" exhibit in Huie Library, featuring the old wooden museum sign and objects from museum collections such as glass bottles from local bottling plants, jewelry, confederate script, and Camark pottery from Camden, Arkansas.



### Professional Service

- **ARAS Committees.** Trubitt served on the Personnel Committee.
- **Professional Organizations.** Trubitt is a member of the Southeastern Archaeological Conference board of officers, and served on the nominations committee for the Caddo Conference Organization
- **Editorships & Peer Review.** Trubitt served as the editor for *Southeastern Archaeology* through fall 2020, began a term as editor for the *Caddo Archeology Journal* in spring 2020, and serves on the editorial board of the *Journal of Texas Archeology and History*. Trubitt provided peer review for *Plains Anthropologist* and for the National Science Foundation.

### Public Service & Outreach

- **Programs & Presentations.** Trubitt presented "Archeology & Caddo Indian History in the Ouachita Mountains" to the John Percifull Chapter of the National Society Daughters of the American Revolution (audience 25); "Caddo Indian History in the Lake Ouachita Region" to the Lake Ouachita Vista Trail Traildogs at the Lake Ouachita COE office (audience about 100); "An Indigenous Native Americans' History in Garland County" to the Garland County Historical Society (audience about 90); and a remote lecture, "Native American History in the Ouachita Mountains," to a Ouachita National Forest HRT Training session (audience about 12).
- **K-12.** Trubitt and Cotton gave school talks on "Caddo Indians and Caddo Archeology" at Lakeside Middle School in Hot Springs (6 groups of 5th graders over 2 days in November 2019, total audience 300). Cotton worked with a parent to bring a group of flex-homeschoolers to the ARAS-HSU research station to learn about archeology (audience 15).

- **Historic Cemetery Preservation Initiative.** Cotton and Trubitt visited cemeteries in Dallas and Garland counties this year, and filed revisit forms with the ARAS registrar's office.
- **Archeology Month.** For Arkansas Archeology Month in March 2020, Trubitt, Cotton, and Ouachita Chapter members created an Archeology Month exhibit ("Celebrate Archeology") that was installed in the Garland County Library. Cotton distributed Archeology Month posters and brochures. Cotton and Trubitt and several Ouachita Chapter volunteers participated in a Hot Springs National Park Archeology Day event (about 300 visitors) and a Garvin Gardens Archeology Day event (audience about 25). After the coronavirus shutdown, Trubitt created a video book reading of the Ouachita Chapter's *What's for Supper?* for Facebook and the ARAS website, and did a remote book reading for the Archaeology in the Community organization (audience 4).
- **Media Outreach.** Trubitt and Cotton administer the ARAS-HSU research station's Facebook page, making regular posts about station projects and research results, volunteer opportunities for AAS and Ouachita Chapter members, and jobs and internships of interest to HSU students. As of the end of June, the page had 960 "likes." Trubitt updated the research station's web pages on the ARAS and HSU websites. Trubitt and Cotton were interviewed for stories that appeared in the Sentinel Record's *HER* magazine and HSU's *Oracle* newspaper.
- **Other Public Service.** Trubitt and Cotton advised local residents, state and federal agencies, and staff from archeological consulting companies about sites and site preservation, artifacts, and collections via telephone, email, and in-person meetings, with over 550 contacts during the fiscal year. Trubitt and Cotton recorded four new archeological sites in Clark, Garland, and Hot Spring counties this year, and submitted additional site revisit forms. They accepted and completed paperwork and documentation on three donations to the ARAS-HSU research station.

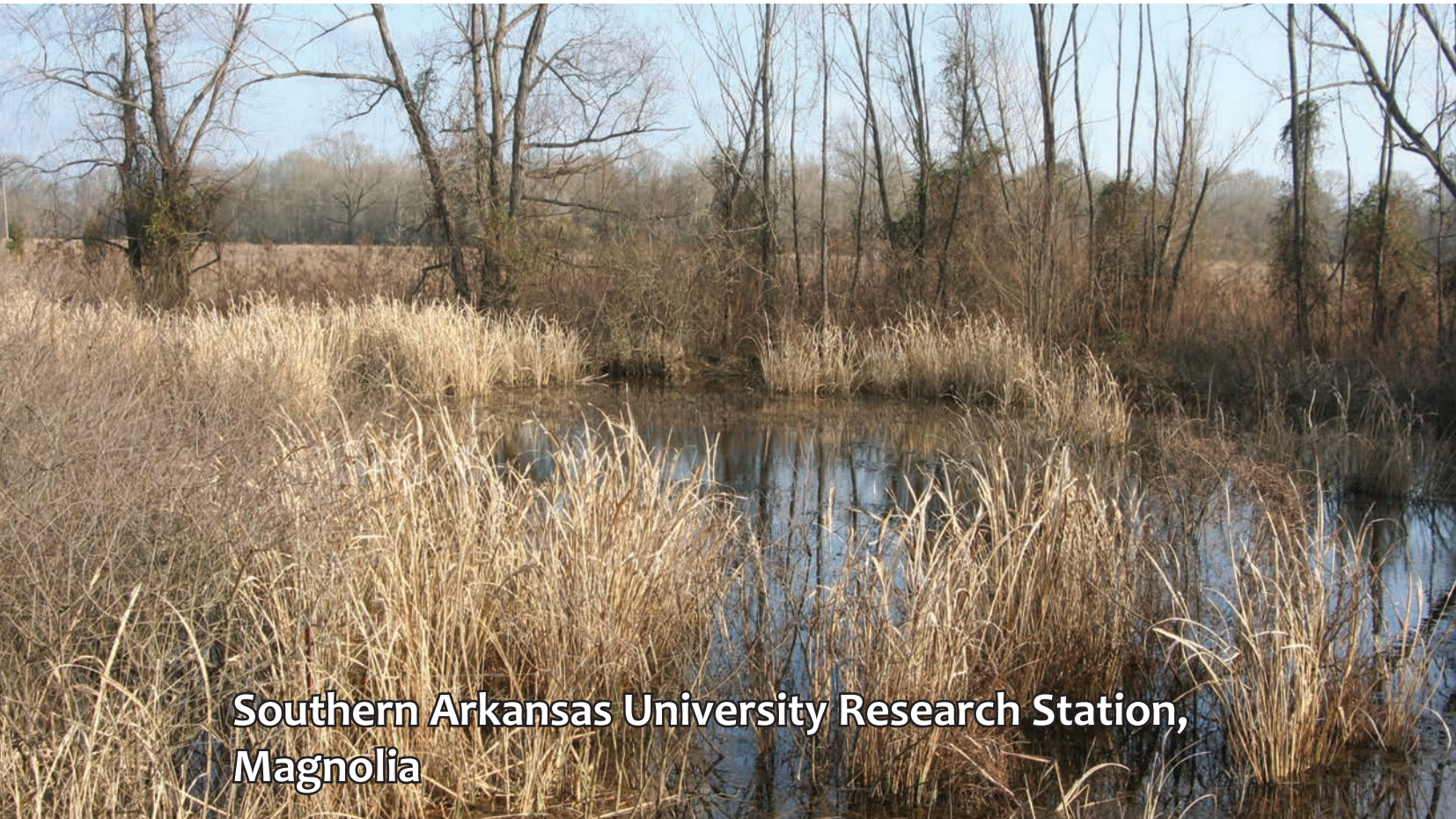
#### Service to the Arkansas Archeological Society

- **Programs & Presentations.** Cotton presented "Tell Yunatsite: A Chalcolithic Excavation in the Balkans" to the Ouachita Chapter (audience 17).
- **Ouachita Chapter.** Trubitt and Cotton attended monthly meetings of the Ouachita Chapter in Hot Springs. Trubitt served as President and Newsletter Editor in 2019 and Vice-President in 2020; Cotton served as Secretary in 2019 and Secretary and Newsletter Editor in 2020. Cotton distributed information about monthly meetings to local newspapers. Cotton and Trubitt administered the chapter's Facebook page; as of the end of June, the Ouachita Chapter page has 479 "likes." Cotton and Trubitt worked with Ouachita Chapter volunteers during weekly archeology lab days at the ARAS-HSU research station. Trubitt wrote a short discussion of current Ouachita Chapter activities that was published in *Field Notes* in November 2019.

#### Volunteer Hours

- Volunteers (Ouachita Chapter and AAS members as well as HSU students and community members) contributed 263 hours of lab and field time to station projects during 2019–2020.





## Southern Arkansas University Research Station, Magnolia

**T**he ARAS-SAU research station is located on the Southern Arkansas University campus in Magnolia, where the station archeologist teaches classes 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** (PhD, 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 US 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** (BA, Texas A&M University, 2015) was hired as the Research Station Assistant at ARAS-SAU in January 2017. Following college 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. Taylor left the Survey in March 2020 to attend graduate school in Scotland.

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The photo shows a view of Holman Springs in Sevier County.



## ARAS-SAU Research Station Activities

### Challenges and Change

This year was sharply divided between 2019 and 2020. In the first six months, ARAS-SAU collaborated with colleagues in the ARAS Computer Services Program and the ARAS-UAF research station to complete the four-year project at Pea Ridge National Military Park, detailed below. In 2020, focus shifted to prepare for the planned 2020 Arkansas Archeological Society and Survey Training Program, but the still-unfolding crisis of the Covid-19 pandemic changed everything about how fieldwork, research, and teaching could be accomplished. This report of activities, particularly through the final three months of the fiscal year, reflects adaptations to the pandemic challenges. Our efforts to find a way through these challenges were supported by many volunteers from the Arkansas Archeological Society, Southern Arkansas University, the University of Arkansas, and others throughout the station territory and around the state. All of these people, and the ARAS administrative staff at the coordinating office, have our deepest thanks.

The station also marks the retirement of Dr. Ann Early, Arkansas's long-serving state archeologist. Early has been a colleague and a mentor, and a tireless and forceful voice for Arkansas archeology and heritage since the 1970s. Her efforts as state archeologist made the Survey, and the practice of archeology in all of its forms, better. Her understanding of southwest Arkansas archeology, particularly Caddo archeology, was of unique benefit to ARAS-SAU, and her guidance on the work at Lockesburg Mounds, Holman Springs, and many other sites has been invaluable. Her insight, advice, and expertise will be missed, and we wish her the best of joy and health in her retirement. Thank you, Ann.

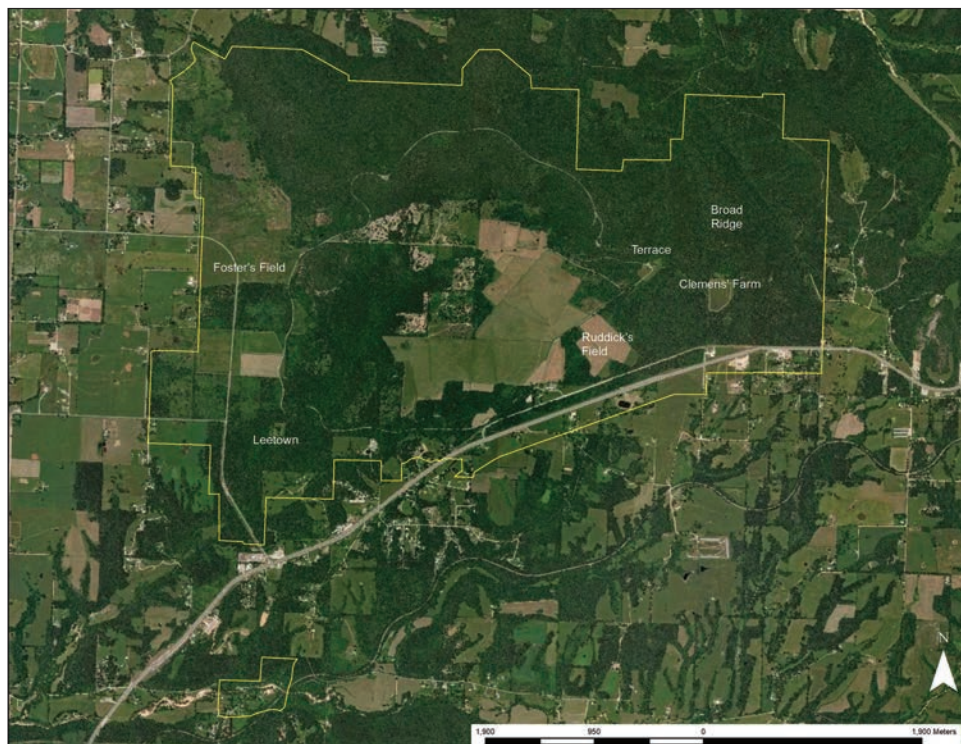
At the end of March, station assistant Fiona Taylor left the Survey to attend graduate school at the University of Glasgow. We thank her for her years of outstanding work and camaraderie.

The year focused on the Pea Ridge research and the run-up to the Training Program at Lockesburg Mounds, originally planned for June 2020 and subsequently postponed. Several smaller projects took place around these larger efforts, and when social distancing began as a response to the pandemic, figuring out how to do research remotely became an important part of our activities.

### The Civil War Battle at Pea Ridge, Benton County

The Survey concluded a Cooperative Ecosystems Studies Units (CESU) agreement with the National Park Service to study portions of the Pea Ridge battlefield, located in Benton County. The March 1862 encounter was the largest and most strategically significant battle of the Civil War fought in Arkansas. From an archeological standpoint, it is one of the most thoroughly surveyed battlefields in North America, largely thanks to the park leadership and archeologists at the NPS's Midwest Archeological Center (MWAC). Yet, significant portions of the battlefield remained unstudied, leading to the 2015–2019 CESU partnership. This work filled in many gaps, aiding in our understanding of the battle and refining the way the park presents the battle to the public.

Over four years, ARAS conducted research on the Ruddick's Field, Leetown, Broad Ridge, Foster's Field, Clemens' Farm, and Terrace areas within the



Aerial photo showing the study areas at the Pea Ridge CESU project.

SAU student intern Lauren Marty photographing finds from Pea Ridge for the CESU report.

park. Geophysical surveys covered dozens of acres, and excavations uncovered, recorded, and collected thousands of artifacts related to the battle and the use of the landscape before and since. These were processed in the laboratories of the ARAS-UAF and SAU stations, with the final analysis being concluded in the fall of 2019.

With the data in hand, project principal investigators were able to author the main portion of a report on the work, which was submitted to the NPS to conclude the project. ARAS-SAU worked closely with Jami Lockhart (ARAS-CSP) who directs the Survey's program of geophysical research, and ARAS Director George Sabo to assemble the text. Deborah Sabo, ARAS editor, did wonderful work to improve the document on a very short deadline. Jessica Kowalski, Jared Pebworth, and Michael Evans, of the ARAS-UAF research station, helped with some last-minute checks on artifact collections in their station.



A panoramic view from the top of Mound A at Lockesburg Mounds, showing its commanding sweep of the surrounding river valley.

### The Caddo Mound Center at Lockesburg 3SV48

Summer began with organizing the field data from the 2019 Training Program and getting the artifacts ready to be stored until the end of the year, when the Pea Ridge research would be complete. During the winter and spring, Drexler and others returned to the site to collect further gradiometer data on the top of Mound A, the large platform mound in the center of the site. Provisionally, the data appear to show a rectilinear structure, probably a temple. This is consistent with platform mounds found at other major Caddo sites. In the case of Lockesburg, identification of a potential structure reveals that heavy looting at the site in the 1980s may not have completely destroyed all traces of a possible building, which hopefully can be studied through future excavations.

Drexler and Taylor worked with staff from the University of Arkansas Museum to study an effigy that came from a wooden bowl attributed to the site. Several such bowls were recovered by non-professional digging in the 1980s. The bowls are very delicate and fragile finds, so work with them proceeds slowly. They offer an opportunity to study a kind of artifact that is extremely rare. Using the Survey's 3D scanning and printing technology to make copies of the finds allowed initial study and handling, sparing the very friable artifacts from possible damage.



In the fall of 2019, Drexler submitted a plan to the Arkansas Archeological Society for a second year of the Training Program at Lockesburg Mounds. The Society's leadership reviewed the proposal and met with Drexler to discuss it during the annual meeting in Hot Springs. After conversations about the research and how it could help both the Survey and the Society, the proposal was approved. ARAS contacted the leadership of the Caddo Nation of Oklahoma, and Drexler traveled to the tribal headquarters in Binger, Oklahoma, in November to give an update on the previous summer's research and plans for the 2020 excavations. We are grateful to chairman Tamara Francis and her associate Derek Hill for their time, input, and partnership in preparing for that project.

Unfortunately, the Covid-19 pandemic forced the postponement of the Training Program. Though unable to hold the session, ARAS-SAU would like to thank Dr. Steve Cole and Tommi Cobb, from UA-Cossatot, who were eager to provide laboratory and meeting space for the project. As always, Marilyn Knapp (ARAS-CO) deserves thanks for her work to coordinate the project and to facilitate communications between the Society and Survey. It was particularly challenging this year as everyone worked together to reach a consensus on the best course of action.

### **Caddo Saltmaking at Bayou Sel 3CL27 and Holman Springs 3SV29**

Thousands of ceramic sherds from 1970s excavations at the Holman Springs site were sorted and analyzed during the 2019 Training Program. Afterward, the artifacts were brought back into the research station, and Mary Beth Trubitt (ARAS-HSU), who directed the lab work, compiled final data sheets from the analysis. The vast majority of that collection has now been processed, allowing a better understanding of the site—which is one of the largest excavations of a Caddo saltmaking site ever completed. Participants at future Training Programs will complete this analysis.

Work on Caddo saltmaking sites involved reviving another long-dormant project, the excavations at Bayou Sel (3CL27) in Clark County. Retired station archeologist Frank Schambach's work there in the late 1960s was an expansion of Philip Phillips's 1930s investigations. Schambach never completed his excavations, but it is clearly another Caddo saltmaking site. Completion of this analysis addresses an ongoing problem within ARAS of older excavations that were never brought to fruition in a final report. As with other dormant projects, digitizing old records and building databases are important beginning steps.

One additional wrinkle of this work involved a field visit, one of the first to the site in many years. It was found in good condition. Investigators were able to relocate the mapping reference stations used in the 1960s and again in the 1980s. Supplemented by GPS data, this allows Drexler and colleagues to place all the earlier excavations into a modern mapping regime.



The 1969 survey marker at Bayou Sel 3CL27, relocated by ARAS-SAU in 2020.

### **Martin Site 3HE92 Collections**

The 1981 Arkansas Archeological Society Training Program took place at two sites, Historic Washington State Park, for the historical archeological crowd, and the Martin site (3HE92), for those interested in precontact studies. The Martin site is an important early Caddo farmstead, and one of the few such sites not associated with a mound. The collection was sorted, but the data need to be assembled and processed so the excavations at the site can be written up. In preparation for the now-delayed 2020 Training Program, this project was restarted. Project records were scanned and databases built to aid in the final analysis.



### LiDAR Mapping of Sites Around Southwest Arkansas

With the need to restrict movement of staff to safeguard their health and the health of others, in addition to the above-mentioned archival and collections-based projects, ARAS-SAU undertook remote revisiting of several prominent mound sites that needed updated and accurate site maps. Using LiDAR, a laser-based, high-precision kind of data, updated site maps were developed for Boone's Mounds (Calhoun County), Bayou Sel (Clark County), and other sites. Comparing the new maps with older ones affords an opportunity to study changes at the sites in the intervening time (up to 50 years in some cases) and to reassess the layout and structure of these places.

## ARAS-SAU Awards, Service & Outreach

### Grants, Honors & Awards

- A grant from the Arkansas Archeological Society's Archeological Research Fund paid for radiocarbon dates from the Holman Springs 3SV29 (\$2,380) and Lockesburg Mounds 3SV48 (\$370) sites.
- Drexler is a principal investigator on the \$300,000 National Science Foundation multiyear grant "Evidence-based Transformation of Undergraduate Field Schools to Promote Safety and Inclusivity among Southeastern Archaeology; co-PIs are Carol Colaninno (SIUE), Shawn Lambert (Mississippi State), Carl Drexler (ARAS-SAU), and Emily Beahm (ARAS-WRI).

### Teaching & Higher Ed

- **Department of History, Political Science, and Geography, SAU.** Drexler taught ANTH/SOC 1013, Introduction to Cultural Anthropology (9 students) and ANTH/HIST 3143, North American Indians (24 students).
- **Student Committees.** Drexler worked with SAU undergraduate history major Ethan Beard on a senior capstone research project about the convict lease system in Arkansas. He is chair of Jacob Shidner's (University of Arkansas Department of Anthropology) dissertation committee, and serves on the master's thesis committee (University of Oklahoma Department of Anthropology) for Rachel Jones. He wrote letters of recommendation for five students.
- **Other Service at SAU.** Both Drexler and Taylor served on the planning committee for Southern Arkansas University's new Rural Studies Institute.

### Professional Service

- **ARAS Committees.** Drexler participates in the Digital Data Collection Initiative (DDCI) working group.
- **Professional Organizations.** Drexler was elected Arkansas's representative to the Caddo Conference Organization. He is on the planning committee for the Southeastern Archaeological Conference (SEAC) annual meeting to be held in Little Rock (originally planned for 2021, the Little Rock meeting was shifted to 2022 due to the Covid-19 pandemic). He also served on a planning committee for the 2024 Society for Historical Archaeology conference. Drexler is on the Board of Trustees of the Arkansas Historical Association, and chaired the Foster Award committee.

### Public Service & Outreach

- **Media Outreach.** Station staff use a variety of social media accounts for outreach. On Facebook, 85 posts generated 47,763 impressions, 6,930 engagements, and 163 new followers; on Twitter, 23 tweets earned 2,701 impressions and 29 new followers; on Instagram, 23 posts garnered 246 likes.
- **Advice & Assistance.** The station fielded 56 requests for information about Arkansas archeology, provided information for four emergency efforts in station territory or pertaining to conflict archeology, and assisted with one emergency project.

### Service to the Arkansas Archeological Society

- **Red River Chapter.** Drexler and Taylor helped the Red River Chapter. Before the pandemic restrictions, this involved hosting monthly meetings, arranging programs, and providing opportunities for volunteers.
- **Programs & Presentations.** Drexler and/or Taylor presented “Digging into the Little Red River Region: The 2019 Arkansas Archeological Society Training Program” to the Tunican Chapter (audience 10); the Three Rivers Chapter (audience 20); the Central Arkansas Chapter (audience 15); the Central Mississippi Valley Archeological Society Chapter (audience 5); and the Ark-Homa Chapter (audience 30).
- **Training Program.** Drexler made plans for the June 2020 Training Program to return to the Lockesburg Mounds site and to continue laboratory analysis of Holman Springs and Bayou Sel site collections from past excavations. The Training Program was canceled this year due to the pandemic, so these preparations were put on hold to the following year.

### Volunteer Hours

- No volunteer hours were reported for 2019–2020.



## Parkin Archeological State Park Research Station

**T**he 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** (PhD, 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.

**Michelle Rathgaber** (PhD, University of Arkansas, 2019) is the Station Assistant for the Parkin Archeological State Park research station. Her research focuses on vulnerability and resilience of the Late Mississippian people of northeast Arkansas and southeast Missouri to large-scale earthquakes. She studies this using various methods from ceramic and faunal analysis to settlement pattern analysis and landscape use. Her master's degree (MSc, 2011) is from Bournemouth University in the UK where she studied osteoarcheology and bone tools in southwestern Britain. She has worked in various regions of the southeastern US for 13 years at CRM firms, as well as working for the Survey at the Blytheville station for four years before leaving to earn her doctorate. She also spent two summers excavating and doing lab analysis in Tiwanaku, Bolivia in 2005 and 2006.

A view of Parkin Mound. Photo by Chuck Haralson, courtesy Arkansas Department of Parks & Tourism



## ARAS-Parkin Research Station Activities

### Research & Innovations

Michelle Rathgaber has been working on the processing and analysis of materials from the 2015 and 2016 excavations at Richard's Bridge (3CT11). The general levels and regularly excavated features from Area 5 are now complete. Flotation samples are currently being processed, as well as artifacts from the general excavation levels of Area 4. Rathgaber wrote a short article about a piece of daub with a fingerprint on it from the Richard's Bridge excavation for the ARAS "Artifact of the Month" web series. Daub is made from silt, clay, grasses, twigs, and water mixed together to form a thick, sticky substance. It was used to cover a woven framework of cane or branches forming the walls of houses at Mississippian sites in northeast Arkansas and elsewhere. It is often preserved in sites where the house or other building burned down, thus "firing" the fragments of clay mixture from the walls. This small piece of daub with a well-preserved fingerprint is a great reminder that archeology is not just about the objects we recover from excavations, it helps us to learn about the people who made and used those things.

An article for *Field Notes* newsletter, coauthored with Madelyn Rose (ARAS-CO), explained the development and testing of an artifact database as part of the Survey's Digital Data Collection Initiative. Rathgaber and Rose used the new tool to record 146,462 artifacts from two site collections into the database. Along the way they studied the ease and amount of training that users would need, showing the new process to be efficient and quick.



Rathgaber organized Open Lab days for volunteers as one of her first projects at the Parkin research station. Open Lab creates a new outreach activity, where local residents can participate and contribute to the archeology of their area through hands-on learning. This is particularly important in a part of the state where a nearby chapter of the Arkansas Archeological Society does not exist. Unfortunately, the Covid-19 shutdown meant that Open Labs had to be suspended just as they were getting started. But Rathgaber came up with an innovative solution, albeit foregoing the actual help of volunteers.

This was a series of "virtual lab" presentations on social media. Rathgaber had been filming the short videos about lab work and archeological concepts and posting them to the Parkin Archeological Site Facebook page as a way to generate interest in volunteering and to educate about archeology. From there the videos have been shared by ARAS media outreach to an even wider audience. The videos are about 5 minutes each and cover different aspects of what an archeologist does in an archeology lab, and how and why we study different artifact types. They are organized in a play list called "Lab Work!" Through the end of June 2020 Rathgaber had posted 12 videos. Following the Covid-19 shut down, the videos provided a more valuable resource for outreach and for the public. Response varies, with the highest "reach" (6300) on a video about lithic analysis. The others range from the high hundreds to 6100 each. These numbers are impressive and show the ongoing interest of Arkansas citizens in archeology, even though hands-on participation in our many volunteer activities has been temporarily curtailed.

For the park, Rathgaber put together a small display of historic artifacts with descriptions in the open storage area. Topics were Black History Month and the school programs that the park puts on. She is also working on an article about her dissertation for the journal *Geoarchaeology*.

## ARAS-Parkin Awards, Service & Outreach

### Teaching & Higher Ed

- Rathgaber worked with Chris Nance, an undergraduate student at UALR, who learned basic archeology lab skills by processing the Richard's Bridge collections. Nance received his BA in December 2019, continued as a volunteer until the Covid-19 shutdown, and collaborated with Rathgaber on a presentation for the AAS virtual annual meeting in fall of 2020.

### Service to Host Institution

- Rathgaber monitored soil sampling and conducted some shovel testing near the school house in advance of siting for new restroom facilities at the park.

### Records & Collections

- Rathgaber worked on processing collections from the Richard's Bridge site (3CT11) throughout the year. All excavation records were gathered and an Access database for artifacts created. At the end of FY20 there were 2,936 database entries containing 43,601 artifacts.
- Rathgaber reorganized the station lab, returning other collections to their correct locations in the storage area and bringing them up to current ARAS standards. She also worked on station photo records.

### Professional Service

- **Professional Organizations.** Mitchem is on the Board of Directors of The Archaeological Conservancy, serving as well on the Conservancy's Finance, and Archaeological Affairs Committees. Mitchem serves on the Editorial Board of *The Florida Anthropologist*; on the Publications Committee of the Society of Bead Researchers; as Director at Large (out-of-state) of the Board of Directors of the Florida Public Archaeology Network (FPAN); and on the Advisory Board of the Alliance for Weedon Island Archaeological Research and Education (AWIARE) in St. Petersburg, Florida. Rathgaber is a member of the planning committee for SEAC 2022, to be hosted by ARAS in Little Rock.
- **ARAS Committees.** Mitchem is a member of the Personnel Committee.

### Public Service & Outreach

- **Programs & Presentations.** Rathgaber prepared and taught an introductory lab class for the Arkansas Master Naturalists (attendance 12); she gave a talk on "The Parkin Phase in Northeast Arkansas" to the Rotary Club in Fairfield Bay (audience about 25) and attended Artifact ID Day at Parkin State Park (attendance 15). An Artifact ID Day planned for spring was cancelled but Rathgaber helped some people with their artifacts via email. She established and hosted Open Lab meetings for volunteers, with two sessions held before the Covid shutdown.

Master Naturalists class at the Parkin research station.



- **K–12.** Rathgaber worked on lesson plans about zooarcheology to be incorporated into ARAS websites. She completed her year of participation in the “Letters to a Prescientist” program.
- **Community.** Rathgaber serves on the Governor’s Earthquake Advisory Committee and attended the July 2019 and January 2020 meetings. She joined the Community Catalyst Program in Wynne, Arkansas, but a planned event had to be cancelled due to Covid-19.
- **Media Outreach.** Rathgaber administers the station’s Facebook page with several posts a week and the new “Lab Work!” video series.

#### **Service to the Arkansas Archeological Society**

- **Executive Committee.** Rathgaber served on the Executive Committee as one of four Vice Presidents.
- **Training Program.** Rathgaber hosted “Camp Dinners” via Zoom during the weeks when the cancelled Training Program would have been held.
- **Programs & Presentations.** Rathgaber presented “Mississippian Vulnerability and Resilience to Earthquakes in the Central Mississippi Valley” to the Red River Chapter in Magnolia (audience 12).

#### **Volunteer Hours**

- Volunteers contributed 199 hours to station projects during 2019–2020.





## Toltec Mounds Archeological State Park Research Station

**T**he Toltec Mounds research station is located at Toltec Mounds Archeological State Park near Scott, Arkansas. The Toltec Mounds site is a National Historic Landmark. Survey staff carry out research at the site, providing information for development of interpretive programs at the park. The Toltec Mounds site, built and occupied between AD 650 and 1050, was the religious, social, and political center for people of the Plum Bayou culture of central Arkansas. It is one of the largest and most complex American Indian sites in the Mississippi Valley. A hundred years ago archeologists 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, including the two largest (today 39 and 49 feet high), along with remnants of the embankment. Most of the mounds were square, flat-topped earthen structures built by carrying basket-loads of dirt. Several were arranged around an open plaza and aligned according to astronomical observations. Most Plum Bayou people lived in scattered villages and hamlets in the surrounding countryside, where they grew native domesticated crops, harvested nuts, hunted, and fished. They gathered at the Toltec Mounds site for religious and community activities.

**Elizabeth Horton** (PhD, Washington University in St. Louis, 2011) was the Research Station Archeologist for Toltec Mounds Archeological State Park, and Research Assistant Professor of Anthropology for the Department of Anthropology, University of Arkansas Fayetteville from July 2011 through June 2020. Horton's specialization in paleoethnobotany brought needed skills to the Survey. She established a paleoethnobotany lab at the Toltec research station that served the entire organization. Horton resigned to form her own ethnobotanical research company.

**Katherine Gregory** (MA, Florida Atlantic University, 2006) joined the Survey as Research Station Assistant at ARAS-UAM in October 2014. In October 2016 she transferred to the Toltec Mounds research station. She earned her BA in Anthropology from Marquette University and previously worked for the Seminole Tribe of Florida Tribal Historic Preservation Office. Gregory has served as Interim Research Station Archeologist during FY2019–2020 while Horton held an off-campus work assignment.

Threatening storm clouds over Mounds A and B.

## ARAS-Toltec Research Station Activities

### Seeds of Change

The end of the 2019–2020 Fiscal year has seen new and unexpected challenges for the Arkansas Archeological Survey. For the Toltec Mounds research station this has included not only the challenges of carrying out our duties and responsibilities in a new Covid-19 era, but also a staff change. Elizabeth Horton stepped down to relocate to Virginia and begin her own business, and station assistant Katy Gregory (shown at right excavating on the Woolsey site, 3FR48, in 2017) was appointed Interim Station Archeologist. Despite the challenges of physical distancing, Gregory and Horton worked closely throughout the final six months to ensure a smooth transition. Horton remained in contact with both Gregory and the Toltec Mounds Archeological State Park staff to assist in advising on specific issues—particularly the ongoing work to stabilize erosion of Mounds A and P caused by years of artificially high lake levels. While in-person public archeology programs and volunteer work were put on hold in March of this year, Gregory and Horton continued to provide public programming via video, and arranged distance on-line volunteer work aimed at improving the digital database of field and lab records.



### Paleoethnobotanical Work at ARAS-Toltec

#### Macrobotanical Analyses

Horton completed the macrobotanical analysis of selected samples from the Holman Springs site (3SV29) in southwest Arkansas and from Woolsey (3FR46) in the Mulberry River valley. The Holman Springs site samples proved to be of critical interest due to the presence of large, robust grass seeds comparable to the Late Woodland, potentially domesticated grass known as Type X. Type X was first identified by Gayle Fritz in the late 1980s based on greater than 4mm long grass seeds that are a frequent component of the macrobotanical assemblage at Toltec Mounds. These seeds do not so far match any known modern native grass species in Arkansas or the broader Southeast. They are understood to be a locally (Central Arkansas River Valley) domesticated grain strongly associated with Plum Bayou occupations in the Central Arkansas River Valley. Fritz also noted their presence in coeval deposits at the Spiro Mounds site in eastern Oklahoma, which dates to about AD 900. In addition, since 2017, researchers in Mississippi have also recovered seeds that are a strong match to Type X from Late Woodland sites. However, ceramic typology and radiocarbon data indicate that Holman Springs is a late Caddo site, dating to the 1400–1500s. Type X has been noted at one other late site in Arkansas—Hardman (3CL418)—also a late Caddo saltmaking site. The presence of Type X at Holman Springs confirms that this local, potentially domesticated grain was being cultivated by Caddo farmers in Arkansas well into the late prehistoric, and perhaps protohistoric period.



Type X grass seeds from a Toltec Mounds excavation sample.

#### *Iva annua* Study

2018–2019 was originally meant to be the final phase of a multiyear project, the *Iva annua* Study; however, circumstances have changed this deadline to 2020–2021. While the RNA samples were sent off in the fall of 2019, Covid-19 work stoppages in spring 2020 at both the Smithsonian and UC Berkeley have meant that final dates of completion of the entire *Iva* work packet has been pushed into 2021. Working with Natalie Mueller (Cornell University), Horton trained on



Elizabeth Horton collecting data on *Iva annua* in the Plum Bayou Garden.

the use of ImageJ this spring (an NIH open access microscope imaging and analysis software). Using ImageJ has meant being able to add area measurements to the standard (length x width) measurements in the dataset for the *Iva* study, and to develop quantifiable means of capturing data on potential seed coat color changes in the Plum Bayou Garden cultivated *Iva annua* plants. This has allowed for additional metric data collection on seeds, including the fall 2020 harvest from the Plum Bayou Garden. An additional small test patch of *Iva* was sown in Virginia, to measure any location-induced changes in seed phenotype, and will be included with the seed metric dataset. This study, and the complementary work being done by colleagues within the Lost Crops network ([www.lostcrops.org](http://www.lostcrops.org)), adds a substantive body of knowledge to improve our understanding of the processes and pathways to domestication for a local, but now extinct, species in eastern North America.



### Records & Collections Management

The Toltec Mounds research station continued the work of bringing records and collections up to date. Gregory has led this effort, with assistance from Horton. Tasks included: creating digital folders of field records, inventorying and re-housing of past donations and projects, as well as sorting and inventorying new donations. The past donations and projects include the extensive Chowning Donation, John Miller Donation, and the 2010 Survey and Society Training Program. In February, before we understood the extent of Covid-19, Horton traveled to Washington University in St. Louis to retrieve flotation samples from multiple ARAS stations, including Toltec Mounds, that had been on loan to Gayle Fritz, who recently retired. Horton and Gregory did some basic re-curation work for collections to be returned to ARAS-SAU and ARAS-UAF, as well as full re-curation of the macrobotanical samples from Toltec. New donations to the Toltec Mounds station include an extensive donation by Anita Gray Major (over 2,000 artifacts). In the early portion of the fiscal year, volunteers assisted with inventorying and re-housing of the Chowning Donation, sorting light fraction samples, and creating a searchable copy of the Chowning Donation DELOS records. After Covid-19 restrictions on in-person volunteer work began in the spring, Gregory and Horton developed a fully online system for volunteers, in particular Bev Watkins, to continue providing assistance with data entry to improve and expand the searchable records archived on the ARAS server.

### Working with Our State Park Host Institution

#### Plum Bayou Garden

Horton and Gregory maintained the Plum Bayou Garden, with tasks such as weeding, rebuilding the fence that was lost in a tornado, preparation for winter, and seed collecting. Horton reevaluated the presence of some species due to overgrowth as the garden matures, and started a complete removal of *Apocynum cannabinum*, along with zealous repression of *Sambus sp.* (the latter may have to be completely removed and relocated outside of garden boundaries).

#### Site Monitoring

Horton and Gregory throughout the year monitored the impact of lake levels on the park's cultural resources. This included periodic on-site checks at Mounds R, A, P, and F, with some surface collections behind Mounds A and P, consultations with Arkansas State Parks, the Corps of Engineers, and relevant Tribal Historic Preservation Officers (THPO), and a meeting and site visit with State Parks Planning and Development staff to discuss options for the boardwalk and erosion control at Mound A. Location data for survey points were provided for State Parks contracted surveyors. Gregory walked the park to make sure there were no artifacts exposed on the Plum Bayou Trail and completed an artifact count for those artifacts collected along the lakeshore from 2008–2018. Project reviews and approvals for small infrastructure projects by State Parks (with on-site monitoring performed by Gregory) included digging for the expansion of the con-



crete dumpster pad; digging of post holes for the sewer plant fence; and removal of old posts and placement of new ones along the Plum Bayou Trail. Horton attended and provided information for Arkansas State Parks, the EPA, ARAS, the Corps of Engineers, the Quapaw THPO, and Arkansas Historic Preservation Program at a multi-agency meeting regarding recent alterations to the Mound Lake culvert and hand-off of enforcement from USACE to EPA.

Katy Gregory played a large role in day to day maintenance of the station (which is important due to our high visibility to park visitors) and willing assistance with on-the-ground monitoring for the Park's small infrastructure work following a major storm which damaged fencing.

## ARAS-Toltec Awards, Service & Outreach

### Teaching & Higher Ed

- Horton served on the MA committee for UAF graduate student Lydia Rees (Rees passed her defense in November 2019).

### Records & Collections

- Horton assisted Gregory and provided oversight and troubleshooting for inventory of records and collections. Horton and Gregory accessioned, sorted, and inventoried the Anita Gray Major collection.

### Professional Service

- **Professional Organizations.** Horton finished a two-year term on the Southeastern Archaeological Conference (SEAC) Executive Board, and served on the planning committee for SEAC 2022, to be held in Little Rock.
- **ARAS Committees.** Horton served on the Digital Data Collection Initiative working group. Gregory participated in the Hester Davis Fund Committee.

### Public Service & Outreach

- **Programs & Presentations.** Gregory managed the atlatl competition for ArcheOlympics; responded to one site visit, and gave a tour of the Park and Plum Bayou Garden to Emily Beahm's (ARAS-WRI) class. Horton gave an interview and presentation on Toltec Mounds to the Great Bend Chapter of the Texas Archeological Society for their online speaker series. Horton conducted an online fiber processing workshop for the Choctaw Traditional Weavers group, hosted by the Choctaw Cultural Center.
- **K-12.** Gregory assisted Emily Beahm (ARAS-WRI) at the Old State House Museum's Homeschool event.
- **Other Outreach.** Gregory and Horton provided artifact identifications for park visitors and others. Gregory led a tour of the Toltec lab and site for Andrew Beaupré's (ARAS-UAPB) virtual Boy Scout archeology merit badge program and communicated with a Master Naturalist in training regarding a tour of the site. Horton assisted a Kentucky artist creating depictions of Archaic peoples for an exhibit. Horton responded to multiple public inquiries about "Lost Crops" and seed acquisition; one high school and one university were placed on the wait list for late winter/spring seed packet mailings. Gregory assisted park interpreter Amy Griffin with a blog post for the Summer Solstice event.
- **Media Outreach.** Horton provided interviews for *Atlas Obscura*, *The Atlantic*, BYU Radio, and a University of Massachusetts student.

### Service to the Arkansas Archeological Society

- **Central Arkansas Chapter.** Horton and Gregory met with the station's AAS Board of Advisors; Gregory attended meetings of the Central Arkansas Chapter and the annual meeting in Hot Springs. Gregory provided a tour of the lab to an AAS member and his group. Horton assisted chapter officers with portable materials for events.

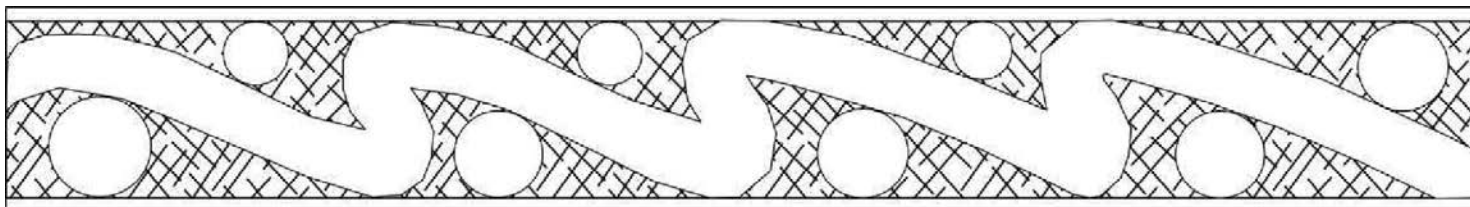
### Volunteer Hours

- Volunteers contributed 281.5 hours to station projects, including at scheduled Lab Days, during 2019–2020.

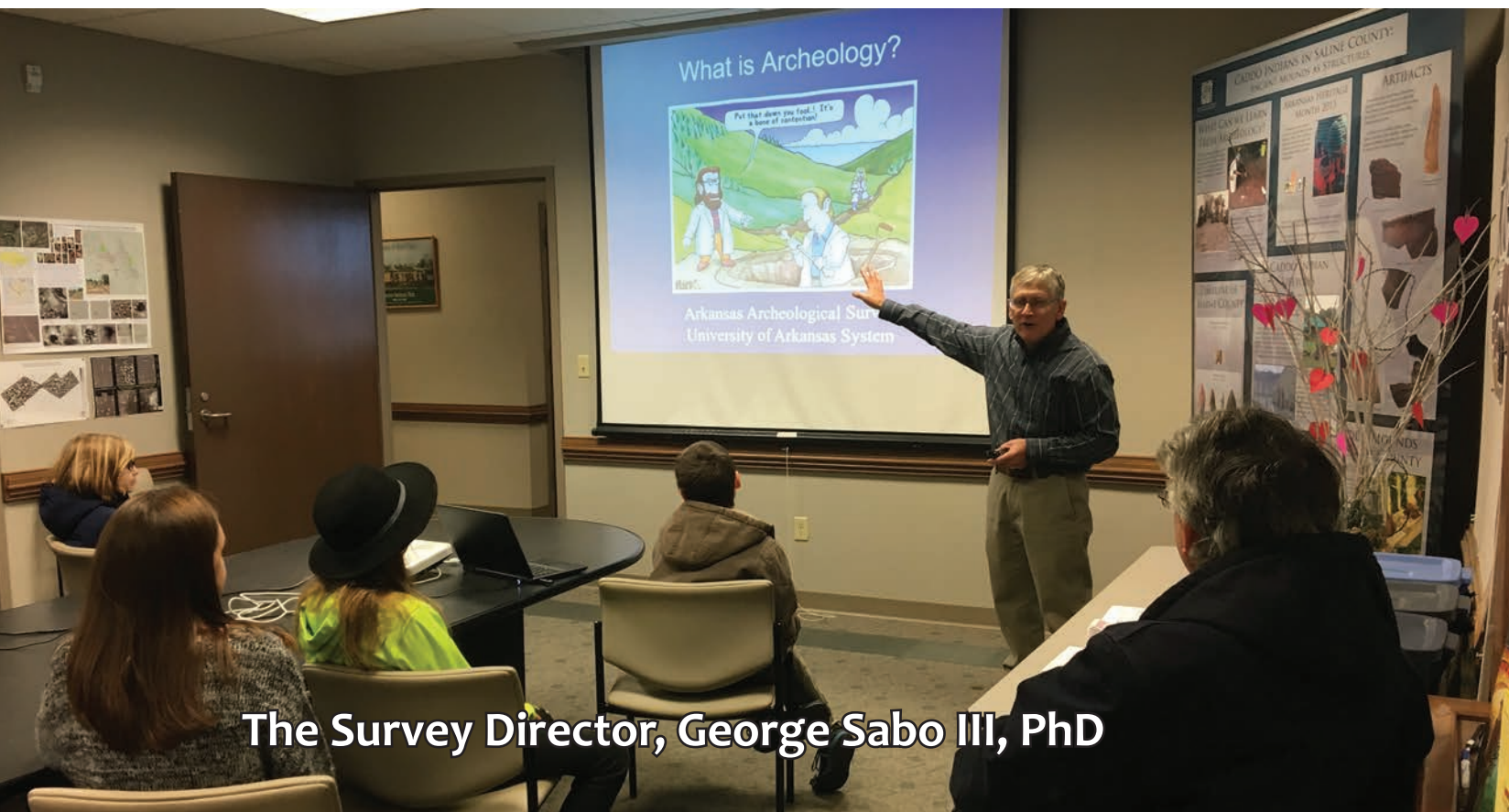




# Coordinating Office







## The Survey Director, George Sabo III, PhD

**G**eorge Sabo III (PhD, 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 PhD 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.

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.

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Sabo gives a pre-pandemic talk to visiting students at the coordinating office.

## Office of the ARAS Director Activities for 2019–2020

### Grants & Scholarly Activities

- Sabo is a co-Principal Investigator (with Claire Terhune, Wenchao Zhou, Paul M. Gignac, and Haley D. O'Brien) on "MRI: Acquisition of 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).
- Sabo is co-Principal Investigator (with Kathryn Sloan, Michael Pierce, Kim Sexton, Robert Cochran, David Fredrick, Sean Teuton, Eric Funkhouser, and Joshua Youngblood) on "Arkansas Stories of Place and Belonging" (University of Arkansas Chancellor's Discovery, Creativity, Innovation, and Collaboration Fund Grant for 2018–2020; \$88,735).
  - Program activities this year included further development and adaptation for Oculus Quest technology of a 3D virtual reality interactive software application on an early 15th century World Renewal Ceremony performed at the Spiro archeological site in eastern Oklahoma.

### Teaching & Higher Ed

George Sabo III, Survey Director since 2013 and Professor of Anthropology, serves as Co-Director of the Environmental Dynamics Interdisciplinary PhD program in The Graduate School and International Education at the University of Arkansas. He served on six Anthropology (ANTH) and Environmental Dynamics (ENDY) MA and PhD student committees during 2019–2020. Two of his students, Michelle Rathgaber (ENDY) and John Samuelsen (ANTH) earned their PhD degrees during the year. Sabo was a subject matter expert in the University of Arkansas System's Project One Workday ERP system implementation.

- **Teaching.** Sabo presented a guest lecture, "The Agency of Language in Osage and Quapaw Cultures" to a University of Arkansas Department of World Languages, Literatures, and Cultures class (18 students); spoke on Spiro Mounds site research to Tim Mulvihill's (ARAS-UAFS) Introduction to Archaeology class at UA - Fort Smith (12 students). He participated in tours of the ARAS-CO and University Museum for Professor Marvin Kay's (UAF) Introduction to Archeology class (25 students), for Anthropology Department Stigler Lecturers Todd Surovell (November 2019) and Madonna Moss (February 2020), and for the UAF Anthropology graduate student organization (12 students).
- **UAF Campus Service.** Sabo continued to serve on the UAF Anthropology Department Personnel Committee, the University of Arkansas MicroCT Imaging Consortium for Research and Outreach Scientific Advisory Board, and the University of Arkansas System eVersity Academic Governance Council.
- **UAF Outreach.** Sabo participated in the UAF Anthropology Department's annual spring semester Open House in February 2020 (100+ visitors).

### Professional Service

- Sabo delivered the keynote presentation, "The Archeology of Caddo Storytelling," at the 62nd Annual Caddo Conference, held at the University of Texas at Tyler.
- Sabo participated in a tour of the ARAS-CO and University Museum for heritage resource preservation staff of the US Army Corps of Engineers.
- Sabo served as a peer-reviewer for a book manuscript submitted to the Louisiana State University Press.

### Public Service & Outreach

- Sabo participated in the 2019 Summer Teacher's Workshop sponsored by the Caddo Mounds State Historic Site and held July 12–14 in Alto, Texas. This year's workshop was organized around The Story of Snake Woman Who Distributes the Seeds; Sabo's presentation was titled "Observations on Time: Linear versus Cyclical Understanding" (audience 50).



**Please join us for the  
27th East Texas  
Archeological Conference  
and 62nd Caddo Conference**



**Friday and Saturday, February 28–29, 2020  
University of Texas at Tyler, University Center**

**Keynote Speaker: Dr. George Sabo**

For program details visit <https://sites.google.com/view/easttexasarchaeologyconference/home>

**Admission \$20 (Proceeds benefit Caddo Mounds State Historic Site)**

For more information call 903-566-7434





Screenshot of “virtual reality” experience of the Spiro Mounds site created at the University of Arkansas Tesseract Center for Immersive Environments and Gaming; Amanda Regnier (Oklahoma Archeological Survey) tries it out during a demonstration at the Gilcrease Museum in Tulsa, OK.

- Sabo participated (with Emily Beahm of ARAS-WRI) in conducting a tour of rock art sites in Petit Jean State Park for members of the Osage Nation of Oklahoma (audience 35); a Quapaw Heritage Tour visit to the ARAS-CO (audience 25); and a tour of the UA Museum for the Washington County Historical Society (audience 12).
- Sabo presented a talk on rock art to a group from Fairfield Bay, Arkansas (audience, 12); a talk on Caddo Ceramics to an Osher Lifelong Learning Institute class (audience 10); and a talk on the ARAS investigations at the Crescent Hotel to the University of Arkansas Pryor Center for Oral History (audience 50).
- Sabo joined members of the University of Arkansas Tesseract Center for Immersive Environments and Gaming for live demonstrations of the Spiro World Renewal Ceremony virtual reality application, provided for members of the Oklahoma Professional Archeology Network and Oklahoma Archeological Society at the 2020 Annual Meeting at the Gilcrease Museum in Tulsa, OK (audience 24).
- Sabo participates in most meetings of the Arkansas Archeological Society Executive Committee to provide information on ARAS activities, University System policies, and archeological matters. This year the AAS and ARAS together discussed and implemented some major program changes to comply with Covid-19 pandemic precautions.
- On February 20, 2020 Sabo joined Arkansas Archeological Society President Jim Rees and Arkansas Archeological Society Vice President Deanna Holdcraft at the State Capitol for Governor Asa Hutchinson’s proclamation of Arkansas Archeology Month and to present the Governor with this years’ Archeology Month poster.





George Sabo helped conduct a tour of rock art sites in Petit Jean State Park for members of the Osage Nation.



Deanna Holdcraft, Governor Asa Hutchinson, George Sabo, and Jim Rees at the State Capitol for the Governor's proclamation of Arkansas Archeology Month.





**The State Archeologist, Ann M. Early, PhD**

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** (PhD, University of Massachusetts – Amherst, 1973) is a Research Associate Professor of Anthropology for the University of Arkansas Fayetteville Department of Anthropology. She 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.

In the photo, Ann Early (on the left) works with volunteer Pat Corbin, who has contributed hundreds of hours to ARAS projects in the lab. Photo Rachel Tebbetts (ARAS).

## Office of the State Archeologist Activities for 2019–2020

Ann M. Early retired from her position as State Archeologist at the end of June, 2020. She joined the Survey in 1972 as research station archeologist at Henderson State University in Arkadelphia. She served in that position until 1999, when she was appointed State Archeologist following the retirement of Hester A. Davis. A brief summary of Dr. Early's career with the Survey is available at <https://archeology.uark.edu/staff-news/ann-early-career/>.

In addition to attending to the myriad responsibilities of her official role, Ann Early continued to devote considerable energy to her studies of legacy collections in support of the Survey's larger effort to inventory, upgrade to modern archival standards, and complete analysis and interpretation of collections generated by earlier projects. Following completion last year of an analysis of materials from excavations conducted in 1970 at the Johnny Ford site (3LA5), she began writing a final report on this important early Fourche Maline culture manifestation. Early also continued to reassess collections and update and revise a preliminary report on the Hays Mound site (3CL6) that was produced by Cynthia Weber in 1972. Continued assistance provided by volunteer students and Society members supported this project.



Other writing projects begun last year include a chapter on pre-contact Caddo saltmaking in Arkansas for an edited volume, *The Archaeology of Salt in Eastern North America and the Caribbean* (University of Alabama Press), and another chapter on Ouachita River Basin ceramic traditions, coauthored with Mary Beth Trubitt, for another edited volume, *Ancestral Caddo Ceramic Traditions* (Louisiana State University Press). Both are currently in press. Early also continued study of ceramic assemblages from ARAS excavations conducted at the Carden Bottoms site, supported by a large grant from the National Endowment for the Humanities. She was coauthor, with several other project participants, of a chapter summarizing the project published in *Contact, Colonialism, and Native Communities in the Southeastern United States* (University of Florida Press).

Early's largest research project remains her effort to bring into print the "Caddo Pottery Design Pattern Book," a compendium of 2000 pottery designs drawn from whole pottery vessels curated in numerous archival collections. This is intended to serve as a major reference work in support of scholarly researchers as well as others concerned with the history and maintenance of Caddo art and craft traditions. This year, Early concentrated on refining design motif descriptions and working with ARAS Photographic and Graphic Arts specialist Rachel Tebbetts on production of accompanying illustrations.

## Academic and Service Activities

### Teaching & Higher Ed

- Early continued to advise graduate students at the University of Arkansas and at out-of-state institutions on recommendations and procedures for accessing ARAS documentary and collections resources for thesis and dissertation projects. This year she provided guidance to six students, and participated in tours of the ARAS coordinating office and UA Museum Collections for several UAF Anthropology Department visiting scholars, classes, and student groups.



### Professional Service

- **Professional Organizations.** National Association of State Archaeologists (past Vice President).
- **ARAS Committees.** Early served on the Web Steering Committee.
- **Service.** Early responded to requests for assistance from professional colleagues (including archeologists, land managers, tribal officials, and CRM firm representatives) regarding preservation issues (n=32), public outreach and resource management issues (n=20), and research questions (n=15). She also responded to seven queries from law enforcement individuals.
- **Editorships and Peer Review.** Early continued to review contributions submitted to the CALS online *Encyclopedia of Arkansas*, and for *The Arkansas Archeologist* journal. She served as a referee for three external professional reviews.

### Public Service & Outreach

- **Boards and Commissions.** Arkansas State Review Board for Historic Preservation; Arkansas Genealogical Society (board member and historian); Arkansas Women's History Institute (board member).
- **Public Outreach.** Early responded to 58 public inquiries concerning artifacts, archeological sites, and cemeteries, and six inquiries concerning preservation issues. She also participated in tours of the ARAS coordinating office and UA Museum Collections for members of the Quapaw Tribe of Oklahoma.
- **Arkansas Archeological Society.** Early participated in Arkansas Archeological Society Executive Board discussions on bylaw changes and adoption of new articles of incorporation. She also responded to 17 AAS member requests for general advice, information inquiries, and visits.

### Records & Collections Management

- Supervision of collection inventory updates and analysis of materials from the Hays Mound 3CL6 and Johnny Ford 3LAS sites.
- Responded to three artifact donation queries and one request for museum display information.
- Advised the ARAS registrar's office staff on requests for information and AMASDA database access issues.
- Reviewed all Section 106 letters, Corps of Engineers permit applications, Forest Service project notices, and contract reports pertaining to Arkansas.
- Reviewed and granted requests for use of ARAS photographs, publication references, and other information for scholars, publishers, and exhibit preparators.

### Volunteer Hours

- Citizen scientists including student volunteers and AAS members contributed approximately 75 hours to collection management and research projects under Early's supervision during the first half of FY 2019–2020.



Ann Early working with student volunteers in the archeology lab at ARAS.



Ann Early (third from left in the front) with ARAS, UA Museum, and Anthropology Department colleagues on the steps of Old Main, 1970s.



Ann Early (center front) with ARAS colleagues at a staff meeting on the WRI campus in 2006.





The Survey Registrar, Teka McGlothlin

## ARAS Registrar's Office Activities 2019–2020

### 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) and records archive. Maintaining the daily influx of data is vital to keeping this resource current. This year **412 new sites** were recorded, bringing the total for the state of Arkansas to **50,162**. Additionally, **253** previously recorded sites (revisited by various persons during the year) were reviewed and encoded. New archeological projects numbered **172** this year, bringing the total projects listed in AMASDA to **7,540**. Finally, **8** archeological collections were submitted, reviewed, and accepted for curation.

### Arkansas Archeological Survey Site File Activity, 2019–2020

<b>New Sites Recorded</b>	<b>412</b>	<b>Total no. of sites in Arkansas site files: 50,162</b>
<b>New Data for Known Sites</b>	<b>253</b>	
<b>Access to Records</b>	<b>396 online access</b> <b>132 AMASDA subscribers</b> <b>20 students &amp; researchers</b> <b>10 Agency &amp; 39 Contractor</b> <b>10 on site contractor visits</b>	
<b>Total Information Requests</b>	<b>2500</b>	
<b>Collections Accessioned</b>	<b>8</b>	
<b>New Projects in AMASDA</b>	<b>172</b>	<b>Total no. of projects in AMASDA: 7540</b>



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.

**Teka McGlothlin** (MA, University of Arkansas, 2014) was promoted to Registrar in January 2019 after serving ably as Assistant Registrar since July 2014. She had worked in the office since 2008, beginning as an undergraduate student, and continuing while she completed her master's degree. McGlothlin's studies focused on antebellum historical archeology, cultural interaction and settlement, and the use of ArcGIS as a way to represent patterns in archeology. McGlothlin serves on the ARAS Digital Data Collection Initiative (DDCI) working group.

**Sarah Hunt Shepard** (MA, University of Arkansas, 2016) became Assistant Registrar in 2019 after two years as Research Assistant. She had served in the office since 2014 on various projects including scanning technical reports and mapping projects. In addition to working on AMASDA and collections management, she continues to maintain the Survey's compliance with the Native American Graves Protection and Repatriation Act. Shepard served as Vice President of the Arkansas Archeological Society through January 2020, and is a member of the ARAS Hester A. Davis Fund Proposal Review Committee.

#### Hourly Staff (supported by ANCRC grant 20-003):

**Madelyn Rose** (BA in Anthropology and Art History, University of Arkansas, 2018) has worked with the registrar's office since 2015. Prior to that she worked with the University of Arkansas Museum Collections. Madelyn assisted in developing procedures to implement a digital artifact inventory. Her current project is helping with the ANCRC grant and inventorying collections.

**Melody Astle** (BA in Spanish and Latin American Studies, University of Arkansas, 2017) has worked for a year as a Lab Assistant. She has focused on processing and repackaging artifacts according to modern curation standards, inventorying collections into a digital database, and implementing 3D scanning technology. In addition, she has assisted in various projects for the registrar's office, including scanning reports and maintaining site forms.

In the photo, facing page: ARAS Registrar Teka McGlothlin (right) and Assistant Registrar Sarah Shepard (center) show 3D scanner technology to visitors at a previous Celebrate Archeology Day.

#### 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 **1,500 requests for site information** during FY 2019–20 (most by email, but also by telephone, and in-person visits). These inquiries included requests from American Indian Tribes, and federal and state agencies, including the Arkansas Department of Transportation, the State Historic Preservation Office, the US Army Corps of Engineers (Memphis, Vicksburg, and Little Rock districts), the Natural Resources Conservation Service, FEMA, the National Park Service, the Ozark-St. Francis and Ouachita National Forests, and others. In the course of the year, the registrar's office also assisted **39 private firms** doing research in Arkansas. A list is provided on page 85.

As of July 2015, contractors may 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 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 2019–2020 fiscal year, we had **396** single project requests with **125 paid per-project** and **7 annual subscriptions**. There were **10 in-office** contractor research visits.

The office assisted **20 students and guest researchers** on various projects: Brian Cockrell (Fort Worth District, Corps of Engineers) for photos to accompany surface collection from Lake Wright Patman, formerly known as Lake Texarkana; Laura Spencer (University of Arkansas) for her undergraduate Honors thesis on the Biography of a Stone Tool; Duncan McKinnon (University of Central Arkansas) for research on CCC Archeology at State Parks, and for research on the Bowman site; Nathanael Fosaaen (University of Tennessee) for Saltpeter Cave faunal analysis; Joey Wallace (Domtar, Four States Timberland Owners Association) for archeological sites research; Kayden Dennis (University of Arkansas) for his master's thesis on 3D morphometrics of Archaic PPK; Don Higgins, for rock art research; John House (ARAS Emeritus) for research on Contact Era European trade goods on the Lower Arkansas River; Seth Price (University of Arkansas) for bluff shelter 3D modeling; Samuel Martin (University of Arkansas) for a project on flooding and resilience; Mary Suter (University of Arkansas Museum) for NAGPRA database; William M. Balco (University of North Georgia) for University of North Georgia excavations at 9DW276 (Rice Farm); Erik Otarola-Castillo and Melissa Torquato (Purdue University) for a study of climate change effects on North American farmers and foragers; Vin Steponaitis and Madelaine Azar (University of North Carolina – Chapel Hill) for “Developing Digital Approaches to Artifact Rollout Production”; Patrick Livingood and Paige Ford (University of Oklahoma) for a dissertation on the Neosho phase; David Jeane (AAS), for Ralph McKinney collection processing for the Louisiana State Exhibit; and Natalie Mueller (Washington University in St. Louis) for NSF grant research experiences for undergraduates, Tyson Research Center.

### Teaching Service

In addition to helping students with research projects, the registrar's office regularly conducts tours of its facilities for students enrolled in classes at UAF during the academic year, and for visiting groups of university and K–12 students from around the state. This year, such activity was curtailed due to the Covid-19 pandemic. No students were employed in the office this year.

### NAGPRA Functions

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

- Lake Dumond site material was received from John House to be added to inventory
- publication of Notices of Inventory Completion for the JEC Hodges Collection
- Transfer of Control of collections for the Quapaw Tribe was facilitated
- the office worked with Mel Zabecki (ARAS Educational Outreach Coordinator) and bioarcheology graduate students to document remains and file all SOD paperwork relating to burials

Registrar staff assisted several outside agencies with NAGPRA compliance and information: Arkansas Department of Transportation, Arkansas State Parks, University of Arkansas Department of Anthropology, US Army Corps of Engineers, University of Arkansas Museum, and the US Forest Service.

### Current Projects

The ARAS registrar's office manages the Survey's 3D scanning lab, which includes an Artec Space Spider handheld scanner, a Breuckmann structured light scanner, and a Creaform 3D printer. These items have been used for many projects, including the replication of artifacts for display and public outreach. The digital scans can be used as teaching aids, as digital curation, and for their research potential. This year, McGlothlin and Shepard assisted Kayden Dennis with his master's thesis research on morphometrics of Archaic stone tools.

McGlothlin and Shepard were also part of a grant initiative spearheaded by Mary Beth Trubitt (ARAS-HSU) to scan artifacts from the JEC Hodges Collection. These scans will be used for interpretive elements of an interactive public display on the Henderson State University campus.

Partnering with CAST and the University Museum, the registrar's office is also using scanned images to create a virtual museum for research and teaching purposes.

### Records & Collections Management

The office continued to work on scanning records from the University of Arkansas at Pine Bluff, and continued maintenance of an inventory control database to provide the location of artifacts in the curation room. This database is classified by row, bay, and shelf of container. Users will have the ability to search or sort the Inventory database by location, accession number, project name, and/or site number.

The registrar's office also manages the rehabilitation of older collections. This year, two main projects were pursued: material from the Forest Service, and the Tom Jones (3HE40) site collection from Hempstead County. Madelyn Rose

and Sarah Shepard began working with Forest Service collections in 2017. This is a continuing effort to bring those artifacts up to current curation standards. Melody Astle and Madelyn Rose are heading the Tom Jones site collection project, inventorying and preparing the items for proper curation. This project is funded by a grant from the Arkansas Natural and Cultural Resources Council.

### The registrar's office provided assistance to the following firms, groups & agencies during 2019–2020

#### Federal

US Army Corps of Engineers – Memphis, Little Rock, Vicksburg, and St. Louis Districts  
Federal Emergency Management Agency (FEMA)  
Natural Resources Conservation Service, Little Rock  
Bureau of Land Management, Department of the Interior  
US Forest Service

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

National Park Service

- The Buffalo National River
- Hot Springs National Park

- Civil and Environmental, Inc.
- Enercon
- Environmental Corporation of America
- Environmental Research Group
- ERM
- Flat Earth Archaeology, LLC
- Garver
- GRA Vitae, LLC
- HDR, Inc.
- Historic Preservation Associates
- Merjent
- MRS Consultants, LLC
- New South Associates, Inc.
- Open Range Archeology
- Paleowest/WSA, Inc.
- Panamerican Consultants, Inc.
- Percheron, LLC
- POWER Engineers
- Quality Services, Inc.
- R. Christopher Goodwin & Associates, Inc.
- SEARCH, Inc.
- SCI Engineering, Inc.
- SWCA Environmental Consultants
- Stantec Consulting Services
- Stone Point Services, LLC
- Subterranean Consultants
- Tennessee Valley Archaeological Research
- Terracon
- TerraXplorations, Inc.
- Tetra Tech, Inc.
- TER, LLC
- TRC Environmental Corp.
- TriLeaf Corporation
- Westwood Professional Services

#### State

The Governor's Office  
Arkansas Department of Transportation  
Arkansas Historic Preservation Program/Department of Arkansas Heritage  
Arkansas Army National Guard

#### American Indian Tribes

The Cherokee Nation  
The Osage Nation

#### Out of State Museums & Universities

Missouri State University

#### Private Firms

- Afendras Archaeology, LLC
- Algonquin Consultants, Inc.
- American Resources Group
- Burns & McDonnell, Inc.
- C Dimensions





## Educational Outreach, Mel Zabecki, PhD

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.

**Melissa (Mel) Zabecki** (PhD, University of Arkansas, 2009) joined the Survey as the Educational Outreach Coordinator in January 2018. Before that, she was a Park Interpreter at Parkin Archeological State Park for six years, after teaching various anthropology courses as an adjunct instructor at the University of Arkansas Fayetteville and Fort Smith campuses. She earned her PhD and MA in Anthropology from the University of Arkansas, and BA in Anthropology from Mount Holyoke College.

Mel Zabecki (right) with former Senior Librarian Natalie Marlin and Circulation Librarian Win Gates, in front of an Archeology Month exhibit Zabecki installed at the Arkansas State Library in Little Rock.

## Educational Outreach Coordinator Activities for 2019–2020

### Collaboration with Educators

Teacher workshops are a way for Zabecki to reach teachers outside of the ARAS home base area. Workshops are offered in different places in different years. This year, 67 teachers earned professional development credit during six workshops at Educational Cooperatives in Branch (2019 and 2020), Farmington, Monticello, Blytheville, and Valley Springs. At these workshops, Zabecki demonstrates various archeology lessons that the teachers can take back to their classrooms. ARAS station archeologists often come to meet the teachers and a representative from the Arkansas Humanities Council usually speaks on grant and funding opportunities available to teachers. Printed materials such as informational fliers and lesson plans are distributed to the teachers and some files and photos are shared with them on a Google Drive after the workshops.

As a result of the Farmington workshop in 2019, one teacher decided to do an entire semester of archeology with one of her GT classes for Spring 2020. Zabecki worked closely with this teacher and the students for all the lessons. This included attending a field trip with them to Ozark Natural Science Center, where the kids got to see some archeological sites—two historic houses and a bluffshelter. When the pandemic happened, class meetings continued via Zoom and the class was able to finish the lessons.



Participants at a teacher workshop in southeast Arkansas learn some hands-on archeology activities for the classroom.

Zabecki collaborated with Amy Warren (University of Arkansas Engineering Department) on a pilot day-camp project for 7th and 8th grade girls that incorporates archeology and engineering. The project led to Warren winning a \$14,700 grant from the University of Arkansas Women's Giving Circle to develop and offer summer day camps in Blytheville and Morrilton. Zabecki will assist with the camps, which were postponed to 2021 due to pandemic restrictions.

### Collaboration with ARAS Research Stations

In addition to collaborating with ARAS colleagues at teacher workshops, Zabecki supplies the research stations with program props, for example, contents for the “trash box archeology” activity and other portable learning activities that can be taken to schools or public events. Zabecki works closely on special projects with some ARAS station archeologists. This year she continued assisting Emily Beahm (ARAS-WRI) with a 6-session series for homeschoolers focused on plant use in history. Zabecki also helped Emily Beahm and Andrew Beaupré (ARAS-UAPB) with ArcheOlympics and program ideas for archeology-related lessons at Arkansas School for the Deaf, and spent a day each at the Arkansas School for the Deaf and Prairie Grove State Park helping with fieldwork. (Read more about those two field projects in the UAPB and UAF research station sections of this report.)



### Public Collaboration

Zabecki works daily to increase awareness of Arkansas archeology. Her overarching themes are to teach people that (1) there is an abundance of interesting history right here in Arkansas that Arkansans can be proud of, and (2) archeology is not a treasure hunt, but a systematic science. During FY 2020, she contacted over 1,991 people at 70 different events.

### Websites/Social Media

Zabecki administers 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 with other entities around Arkansas. All activities are also posted on an online calendar that is accessible to the public on the ARAS website. She continues to organize the Artifact of the Month web series project, 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. She is also a member of the Web Steering Committee, which meets quarterly to discuss additions and improvements to the website.

### NAGPRA Documentation

While her main job focuses on public archeology and education, Zabecki's archeological specialty is human remains analysis. All of the skeletal material that is subject to NAGPRA documentation is analyzed by Zabecki and a short report on findings is written up for each collection and kept with the NAGPRA publication records in the ARAS registrar's office. This year materials from Toltec Mounds (3LN42), the Old Town Ridge (3CG41) site, a Buffalo National River site, and an ARPA case were evaluated. She also consults weekly with the station archeologists, the University Museum, law enforcement, and other entities to determine human from faunal remains.



Mel Zabecki attended History Day at Northwest Arkansas Community College with information about the Arkansas Archeological Survey, the Arkansas Archeological Society, and careers in Anthropology.





Jared Pebwoth (ARAS-UAF) helped at the “Engineering & Archeology” day-camp. Here, the students learn that engineering principles explain why the atlatl (an ancient hunting weapon) extends the distance the human arm can throw a spear.

## Awards, Service & Outreach

### Grants, Honors & Awards

- \$1000 from the Insitute for Heritage Education for the purchase of books from Project Archeology to furnish to teachers at the summer workshops.
- \$1242.39 from the Arkansas Archeological Society’s Bill Jordan Public Education Fund for purchasing items for each of the stations for raw materials lesson props.

### Teaching & Higher Ed

- University of Arkansas, online course, Introduction to Biological Anthropology, Fall 2019 (40 students) & Spring 2020 (40 students).
- Arkansas State University – Midsouth, online course, Cultural Anthropology, Fall 2019 (6 students) & Spring 2020 (6 students).
- Guest Lectures for Emily Beahm’s Archeology class at ATU (10 students) and for Krista Lewis’ Public Archeology class at UALR (20 students).

### Professional Service

- **Society for American Archaeology.** Representative for Arkansas in the SAA Public Education Committee Network of State Coordinators.
- **Southeastern Archaeological Conference.** 2022 Planning Committee (the meeting will be hosted by ARAS in Little Rock).
- **Arkansas Humanities Council.** Board Member, R.E.A.C.H. Committee, and Programs Committee (3-year term began July 2019).
- **Project Archaeology.** State Coordinator for Arkansas. (Project Archaeology is an organization headquartered in Montana that offers educational resources to bring archeology into the classroom nationwide.)
- **ARAS Committees.** Hester Davis Fund Committee (1 year term 2019).

### Public Service & Outreach

- **Special Interest Groups:** Searcy County Historical Society, Native foods talk (audience 22); Centerton nursing home, Native foods talk (audience 15); Washington County Master Gardeners, corn talk via Zoom (audience 80); Archaeology in the Community, kids book reading via Zoom (audience 15).



Zabecki brings an artifact identification activity to Hobbs State Park.

- **State Parks.** Created and offered a two-day Artifact Identification program at Hobbs State Park and Conservation Area (134 visitors).
- **Forest Service:** Table with Emily Beahm at the Annual Pollinator Event in Russellville (20 visitors).
- **Community Events.** Table at the Fayetteville Farmers Market (75 visitors).
- **Libraries.** Lincoln Library, four programs on artifacts, pottery, and storytime (audiences 66); Pope County Library, local archeology with Emily Beahm (audience 8); Fayetteville Public Library, artifacts (audience 20); Bella Vista Public Library, Native foods and Egypt talks (audience 20). Zabecki also planned and installed an Archeology Month exhibit at the Arkansas State Library in Little Rock.
- **Museums.** Old State House Museum, Native foods talk (audience 13); University of Arkansas Museum guided tour (audience 15). Zabecki also participated in a Collections Collaborators meeting with the UA Museum, and began working with Museum staff on lesson plans for their new website. Various assistance to Shiloh Museum of Ozark History in Springdale included working with staff to plan a Native American Day in conjunction with the opening of the Game and Fish Nature Center in Springdale, helping a museum intern with a presentation, and recording a “shout out” informational video for the museum.
- **Tribal Nations.** Quapaw elders visit to the coordinating office (43 participants).
- **Private citizens.** Correspondence about three times a month from web queries.
- **K-12.** Three school field trips (from Gravette School and Camp War Eagle, Rogers and Springdale) brought 73 students to the Survey coordinating office; one job shadow student; class visits to Camp War Eagle Rogers, Camp War Eagle Springdale, Gravette School, Lavaca Schools, Don Tyson School of Innovation, Greenland Junior High, Randall G. Lynch Middle School in Farmington (14 archeology lessons for 12 students and their teacher over a semester), Bright Middle School in Bentonville, Arkansas School for the Deaf in Little Rock (585 students and teachers); Table at NWACC National History Day (70 visitors); Homeschool program at WRI (4 lessons with between 12 and 36 people); 5-day Engineering and Archeology camp for 7th and 8th grade girls (13 students); annual STEM day-camp for the UA’s Center for Math and Science Education (25 students).

- **Skype-a-Scientist/Letters to a Pre-Scientist.** 3 class ‘visits’ with 130 students in Virginia and Florida and a penpal in California.
- **Teacher Workshops.** Zabecki offered 5 workshops (60 teachers).
- **Scouts.** Classes at STEM GirlFest in Fayetteville (100 students).
- **4H.** 4H O’rama visit to the Survey coordinating office (13 students).

#### 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 online calendar maintenance, public television and morning news appearances, and radio interviews.
- **Annual Meeting.** Helped with registration, set up, and clean up for the 2019 meeting at Hot Springs, and assisted with the ARF (Archeological Research Fund) silent auction.
- **Ko-ko-ci Chapter.** Zabecki serves as Secretary. In addition to keeping minutes at meetings, she compiles and sends out the monthly newsletter. Before the pandemic she attended and helped with logistics at monthly meetings, and helped with lab nights once a month for volunteers who washed, sorted, and analyzed artifacts in the ARAS coordinating office lab. The lab nights were handed over to Jessica Kowalski (ARAS-UAF) during the second half of the year.
- **Programs & Presentations.** Zabecki gave a public talk on bioarcheology to the Ark-Homa Chapter in Fort Smith (audience 15).

#### Volunteer Hours

- Volunteers contributed 106.5 hours at lab nights during Fall 2019.





### 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.

**Kathleen H. Cande** (MA, 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.

## Sponsored Research Program Activities 2019–2020

SRP staff continue to provide assistance to state and federal agencies, local municipalities, cemetery groups, and private citizens requesting information or assistance with site evaluation and artifact identification. Staff also provide support for several ARAS research projects. External funds supporting ARAS projects and activities are administered by Fiscal Administration staff at the coordinating office.

Kathleen Cande focused on cemetery research including a major reorganization of files relating to cemetery safety, preservation techniques, appropriate materials for repairs, and analytical methods.

Cande also works with the ARAS registrar's office and staff at the ARAS research stations on collection inventory and document archiving activities. Cande serves as the ARAS cemetery research coordinator, providing assistance to individuals and preservation groups across the state. She supervises the main archeology laboratory at the coordinating office, typically supporting a wide variety of concurrent artifact collection inventory and analysis projects.

### Historic Cemetery Preservation Initiative

During 2019–2020 the Survey had 39 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. The number of contacts is much lower than in previous years, undoubtedly due to the Covid-19 pandemic. Closure of Mullins Library at the University of Arkansas, Fayetteville in 2020 precluded research on several cemeteries that we received questions about.

Cande contributed research and documentation on Poor Farm cemeteries in Arkansas, Oak Cemetery in Fayetteville, and the cemetery at Arkansas School for the Deaf in Little Rock. A possible article on the Poor Farm cemeteries is in the works. Eleven such cemeteries are recorded as sites, and Cande will work on site forms for those not yet recorded. There is considerable public interest in these cemeteries. In December Cande did a rough calculation of the number of cemeteries recorded in each Arkansas county. The total figure for the state was 2,332. White County had the most at 165. Cande believes more statistical research can be done to help determine how many cemeteries are expected to exist, and perhaps where more documentation effort is warranted.

### ARAS Records Inventory Project

Kathleen Cande completed work on organizing and numbering black & white prints and color slides created by archeologist Daniel Wolfman at the former ARAS-ATU research station in the early 1970s. These are related to Wolfman's work with archeomagnetic dating and alpha recoil track dating of samples from sites in Arkansas. Photo records were created for 930 color slides and 212 black & white prints. All of the slides and prints were also numbered. Cande created a list of published references on the application of each technique to samples from Arkansas. She created two Excel spreadsheets, one containing a list of all archeomagnetic dates for sites in Arkansas from samples collected by Daniel Wolfman and George Sabo III. The second spreadsheet lists other archeomagnetic dates from sites in Arkansas from samples collected by researchers from other institutions. This table includes dating information from a 2004 University of Arizona doctoral dissertation by Stacey Lengyel on archeomagnetic research from the US midcontinent. All of these materials, including the two spreadsheets have been submitted to the ARAS Registrar.

### Historic Davidsonville

Cande supervised graduate student Jessica Cogburn on a project to color code early nineteenth-century historic sites in Clay, Lawrence, Randolph, and Sharp counties on 15' USGS quad maps. This was to facilitate large-scale examination of settlement patterns around the town of Davidsonville. Plots were color coded for ten site types: town/community, farmstead/plantation, dwelling, agricultural fields, ferry/ford, road/trail, cemetery, church, mill, Civil War fortifications/encampment, and schoolhouse. There are over 200 sites in this database.

### Central Lab Supervision

Cande supervises the main archeology lab 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.

Photo, facing page: Madelyn Rose and Michelle Rathgaber used the Survey's new tablet-based digital cataloging system to record inventory information under a grant from ANCR (ARAS Project 19-03). Photo Rachel Tebbetts (ARAS).

## Selected SRP Project Descriptions

### ***Preserving and Presenting Arkansas History through Artifacts (ARAS Project 20-03)***

With support from the Arkansas Natural and Cultural Resources Council (ANCRC), ARAS registrar's office staff completed a detailed, computer-based inventory of more than 150,000 artifacts excavated between 2001 and 2004 at the Tom Jones site (3HE40), a large, multi-mound Caddo ceremonial center located in the Grandview Prairie Wildlife Management Area in Hempstead County. Completing the work ahead of schedule, ARAS received a project extension to add processing of collections (of roughly equal size) from the Georgia Lake site (3OU112), a Caddo farmstead along the Ouachita River. Study of both sites will expand our knowledge of Caddo lifeways in southwest Arkansas. 3D scanning of diagnostic artifacts will contribute to educational outreach materials being developed for the Rick Evans Grandview Prairie Conservation Education Center.

### ***Interpreting the Hodges Collection (ARAS Project 20-04)***

The Hodges Collection consists of more than 38,000 artifacts acquired during the 1930s and 1940s by Thomas and Charlotte Hodges from Caddo sites along the Ouachita River in Clark and Hot Spring Counties. It is owned by the Joint Educational Consortium (Henderson State University and Ouachita Baptist University) and curated by the ARAS-HSU research station. Mary Beth Trubitt (ARAS-HSU) acquired grants from the ARAS Hester Davis Fund to support 3D scanning of 36 whole vessels by Teka McGlothlin and Sarah Shepard, for development of digital educational outreach material to accompany the collection exhibit in the Caddo Center building on the HSU campus, and development of an interactive website by Deborah Weddle (ARAS-CSP).

### ***Safe Field Schools (ARAS Project 20-05)***

Funded by a major National Science Foundation grant, Emily Beahm (ARAS-WRI) and Carl Drexler (ARAS-SAU) join Carol Colaninno (Southern Illinois University, Edwardsville) and Shawn Lambert (Mississippi State University) on a project to develop "Evidence-based Transformation of Undergraduate Field Schools to Promote Safety and Inclusivity among Southeastern Archaeology." The project seeks to develop best practices for hosting safe and inclusive field schools free of harassment, assault, and violence.

## Grants, Contracts & Cost-Share Agreements in FY 2019–2020

ARAS Project No. & Name	Source	Budget
<b>Extensions</b>		
18-04 Prairie Grove	State Parks	\$31,452.81
18-05 Wolf House (extended 3rd year)	DAH	\$12,371.04
18-06 Doctoral Dissertation Improvement Grant	NSF	\$14,750.00
<b>Total (project extensions)</b>		<b>\$58,573.85</b>
<b>New</b>		
19-03 Ozark St. Francis	Forest Service	\$5,000.00
20-01 Teaching Workshop	AHC	\$1,783.84
20-02 Bill Jordan	AAS	\$1,000.00
20-03 Preserving & Presenting Arkansas History	ANCRC	\$32,891.00
20-04 Interpreting the Hodges Collection	AHC	\$2,000.00
20-05 Safe Field Schools	NSF subaward	\$100,493.42
20-06 Institute for Heritage Education	IHE	\$1,000.00
20-07 Teaching Lithics	UAF Anthropology	\$1,500.00
<b>Total (2019–2020 new funds only)</b>		<b>\$145,668.26</b>

AAS = Arkansas Archeological Society  
AHC = Arkansas Humanities Council  
ANCRC = Arkansas Natural and Cultural Resources Commission  
DAH = Department of Arkansas Heritage  
NSF = National Science Foundation



## Sponsored Research Program Awards, Service & Outreach

### Professional Service

- **Organizations.** Cande serves as Gulf States current research editor for the Society for Historical Archaeology *Newsletter*. She is on the Board of Directors of the Washington County Historical Society and serves as Recording Secretary and Chair of the Museum Management Committee. She recently began a three-year term on the Arkansas Historical Association's Board of Trustees.
- **ARAS Committees.** Kathleen Cande is a member of the Web Steering Committee and the Publications Committee.
- **Peer Review.** Kathleen Cande reviewed a submission for the *Arkansas Historical Quarterly*.

### Public Service & Outreach

- **Organizations.** Kathleen Cande is a member of the Arkansas Genealogical Society, Friends of the Arkansas State Archives, and the Missouri Historical Society.
- **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 responded to phone calls and email inquiries.
- **Website.** Cande coauthored a web article on the career of retired State Archeologist Ann M. Early for the ARAS website with George Sabo III and Mary Beth Trubitt, and contributed to the ARAS "Artifact of the Month" web series (see Appendix 1).
- **Events and Presentations.** Jared Pebworth assisted with the 5-day Engineering & Archeology day camp co-organized by Mel Zabecki. Kathleen Cande assisted with the Quapaw Tribe Heritage Tour (43 participants).
- **Consultations & Assistance.** Kathleen Cande assisted Erik Ditzler (Arkansas Post National Memorial) with the site's annual inventory of collections stored in the University of Arkansas Collections Facility.

### Service to the Arkansas Archeological Society

- **Programs & Presentations.** Kathleen Cande gave a talk, "Davidsonville, Arkansas, Frontier Settlement or Mercantile Powerhouse?" to the Ouachita Chapter in Hot Springs (audience 12) and to the Ark-Homa Chapter in Fort Smith (audience 12).



## Computer Services Program

The Survey's Computer Services Program is responsible for all electronic information management, including systems administration, computer operations, equipment, 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. We have worked to integrate the different data structures and digital tools being used in archeological research and cultural resource management today. This approach includes geographic information systems (GIS), relational database management systems, and exploratory data analysis. CSP provides online access to AMASDA for qualified subscribers and works to provide web-enabled database access (password-protected where appropriate) for agencies and firms that manage cultural resources in Arkansas. Our educational websites respond to public interest and to agency and research needs. Our archaeogeophysical program maintains a full complement of remote sensing technologies for near-surface prospection on prehistoric and historic sites.

**Jami J. Lockhart** (PhD, Environmental Dynamics, University of Arkansas, 2007) holds the title of Archeologist and serves as Coordinator of the Computer Services Program and Director of Archaeogeophysical Research within ARAS. He is Research Associate Professor in the University of Arkansas Department of Anthropology, and a Cooperating Faculty member in the Fulbright College Environmental Dynamics PhD Program. His research specializations include integrated data management, GIS, archaeogeophysics, and human-environmental interrelationships through time. He joined the Survey in 1988.

**Deborah Weddle** (BA, 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.

**John Samuelsen** (PhD, University of Arkansas, 2020) 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 all the websites and development of online resources.

Above, some geophysics equipment in the CSP Lab during a previous open house.

## Computer Services Program Activities

### Basic Services

Deborah Weddle's time is dedicated to Information Technology support and Front-End Web Development for the organization. She oversees IT life cycle management and assists with personal computer operations. She is responsible for computer procurement, inventory, and administration; computer repairs and upgrades; software license management and deployment; and end-user support for all ARAS staff. She also manages the CSP Computer Lab which houses several PC and Mac workstations, a batch slide scanner, tabloid flatbed scanner, networked color laser printer, and microfilm scanner.

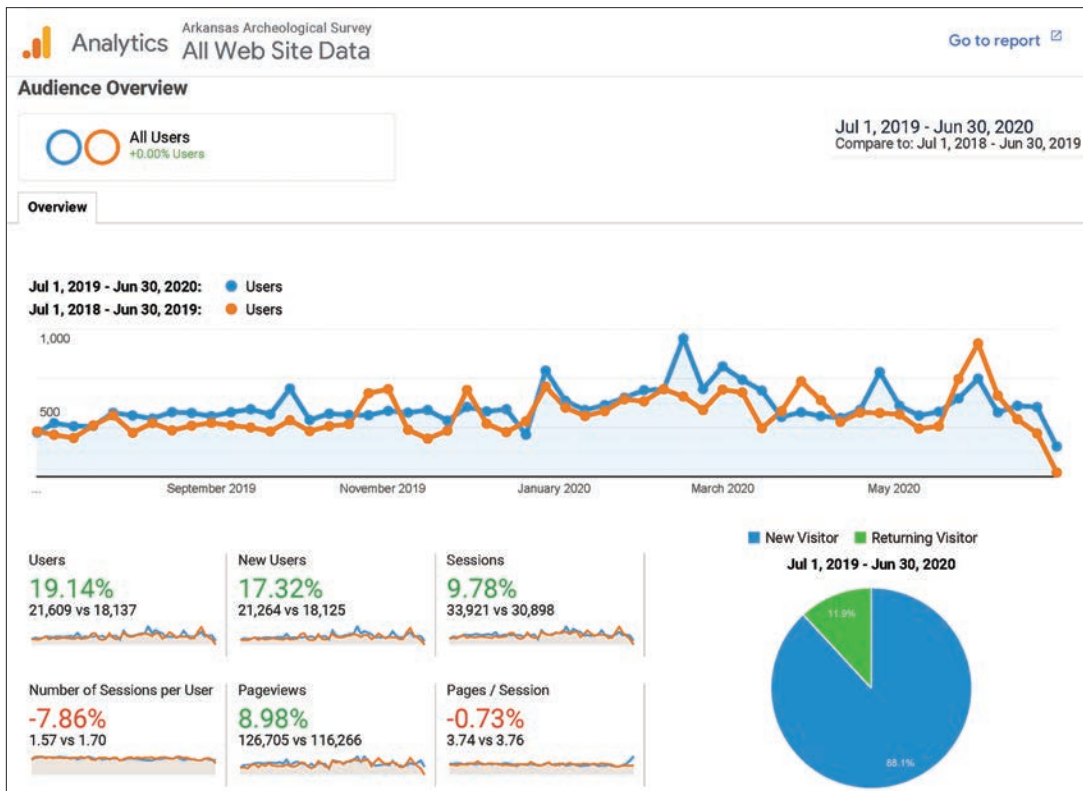
Weddle designs and maintains the ARAS central website along with more focused resources like the Sloan site web-based artifact image catalog and the Gathering, Gardening, and Agriculture 5th Grade Curriculum site, and she is continuously engaged in a variety of other web development projects. She heads the Survey's quarterly Web Steering Committee meetings, and is the initial point-of-contact for public inquiries via the 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. Samuelsen works with the ARAS registrar's office on a long-term project to create a database that can retrieve information through an online interface associated with AMASDA Online. He helped purchase, install, and maintain a new large format printer and scanner.

The CSP team works 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

Our expansive flagship website (archeology.uark.edu or arkansasarcheology.org) promotes the huge variety of work our archeologists and staff perform in support of our core missions of education, research, and preservation. Information about educational outreach activities, publications, new discoveries and research projects, and teacher resources are updated regularly, and guidelines and forms required by developers, public officials, and professional archeologists are readily accessible from the home page. Media coverage of the Survey's activities are highlighted, and a statewide calendar of archeology events is maintained to encourage Arkansas's citizens to join in activities and learn more about our state's rich heritage.



ARAS website analytics compare traffic over the past two years.



Web articles this year examined issues of diversity and inclusiveness in archeological field schools, profiled grant-funded projects and the ARAS digital data collection initiative, and explored the use of 3D scanning and printing technology to produce interactive models and artifact reproductions, giving us the ability to bring rare cultural materials to life through hands-on learning. Books published in the ARAS publications series are announced and linked for purchase directly through our website. A new Popular Series volume, *Ouachita Mountains Archeology*, by Mary Beth Trubitt (ARAS-HSU) was featured this year. Visitor traffic to the ARAS website increased around 9 percent in FY20, with 126,705 pageviews made by 21,609 users over 33,921 sessions. Our most visited pages included Forms & Records, Publications, Research Station information, and the wonderful Artifact of the Month series.

### **Artifact of the Month Web Series**

This web series highlights historic and prehistoric artifacts that contribute important information about Arkansas history and culture. Going on its third year, this series remains hugely popular, with each new entry landing in our top ten most visited pages. This year's artifacts included some extraordinarily preserved basketry from an Ozark bluff shelter, a presidential tobacco pipe, decoration from a civil war uniform, and a daub fragment containing the fingerprint of its maker.



Artifact of the Month portal page.

### **Focus Websites**

ARAS hosts six focus-topic websites, accessible from our main homepage. Indians of Arkansas (<http://archeology.uark.edu/indiansofarkansas/index.html>) remains popular with online visitors and useful to educators; it is slated for a redesign in the near future. Indians of Arkansas had over 70,000 pageviews and 32,000 sessions in 2019–2020. Arkansas Novaculite (<http://archeology.uark.edu/novaculite/index.html>), written and continually updated by Mary Beth Trubitt (ARAS-HSU), appeals to researchers and to anyone interested in the chipped stone artifacts found in Arkansas and adjacent areas. It had over 10,000 pageviews and 6,200 sessions this year. Bluff Shelters of the Arkansas Ozarks (<https://archeology.uark.edu/ozarkbluffshelters/>), written by Lydia Rees, gives a thorough introduction to one of the state's most well known site types. Deborah Weddle and John Samuelsen provide any needed maintenance to all the websites throughout the year. Sloan: A Paleoindian Dalton Cemetery ([archeology.uark.edu/sloan](http://archeology.uark.edu/sloan)) was developed in 2017 to serve

as an online companion to the reprint of *Sloan: A Paleoindian Dalton Cemetery in Arkansas* by Dan F. Morse (University of Arkansas Press, January 2018). Visitor traffic to the Sloan website increased 6.88% over last year, with 6,232 pageviews from 1,014 users over 1,217 sessions. *Gathering, Gardening, and Agriculture: A 5th Grade Social Studies Curriculum* ([archeology.uark.edu/gga/](http://archeology.uark.edu/gga/)) is a grant-funded website with teaching materials developed by ARAS archeologists Jodi Barnes, Emily Beahm, and Elizabeth Horton in 2017. Teachers all over Arkansas may utilize this free resource to help meet state educational requirements. Visitor traffic to the *Gathering, Gardening, and Agriculture* website this year totaled 544 pageviews from 295 users over 342 sessions. New developments in 2019–2020 are outlined below.

#### *Interpreting the Hodges Collection at Henderson State University's Caddo Center*

In the spring of 2020 under HSU Station Archeologist Mary Beth Trubitt's direction, Weddle began developing a website featuring narrative videos and manipulatable 3D scans of the Hodges Collection artifacts. The site's design will also allow it to run as an interactive touchscreen kiosk in the Caddo Center at Henderson State University. This project was funded by grants from the National Endowment for the Humanities, the Arkansas Humanities Council, and the Arkansas Archeological Society's Bill Jordan Public Education Fund, and should be completed in Fall, 2020.

#### *Rock Art in Arkansas redesign* ([archeology.uark.edu/rockart/index.html](http://archeology.uark.edu/rockart/index.html))

In spring 2020, Weddle implemented a redesign of the long-lived and popular Rock Art in Arkansas website, based on input from Emily Beahm (ARAS-WRI). Weddle created the design elements and structure in Wordpress, then handed the site over to Beahm for further content development and completion. Samuelsen helped with the beginning stages of the website's relaunch. Rock Art in Arkansas had 21,000 pageviews and 7,400 sessions in 2019–2020.

### **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, and the new arasbackup server, are backed up nightly. The File Share folder, backed up nightly, now has 17.1 TB of data, 4,070,243 files, and 160,855 folders currently backed up. In addition, 9.2 TB of data is currently in use for system backups. This is an 11 percent 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.

### **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 7,261 times this year (a 2 percent increase) to retrieve 175,615 records related to archeological sites and projects in Arkansas. The web traffic on AMASDA Online was 98,712 pageviews (15 percent increase). 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.

### **Collections Database**

Samuelsen worked with ARAS registrar's office staff to create and implement a Collections database system in FileMaker that is connected to the digital field data database. It provides basic information about archeological collections at the Survey. The initial version was tested at the CO, but was designed so that all research stations could use it. It provides the first centralized database for the Survey's archeological collections. Successful testing projects last year allowed the entry of data on hundreds of thousands of artifacts by only a few individuals working part time.

Samuelsen worked to migrate the FileMaker database into MySQL. This allows the use of FileMaker interface software with a more robust MySQL database storing the data, and solves other technical problems. The system needs a more advanced user permission structure so that data can be entered statewide without different users creating conflicting records or accidentally modifying or deleting records. This permission system was slated for testing in July and August of 2020. Finally, the system needs to be integrated with the rest of the Survey's collections databases, which should take place next year.

## 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.

**Jami Lockhart** coordinates and directs GIS and archaeogeophysical data development and research across the state, both for 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.

### Prairie Grove Civil War Battlefield

- Lockhart collaborated with ARAS-UAF staff Jessica Kowalski, Jared Pebworth, and Michael Evans, ARAS Director George Sabo, and Arkansas State Parks to recover, map, and analyze artifacts associated with the most intensive fighting of the battle, which centered on the heavily wooded slope north of the historic Borden House. Remarkable artifact densities, preservation, and differential distributions are enhancing the accuracy of battle interpretations at the park. The work will also include specific recommendations for additional collaborative archeology in adjacent areas to discover hitherto elusive battle-related features.

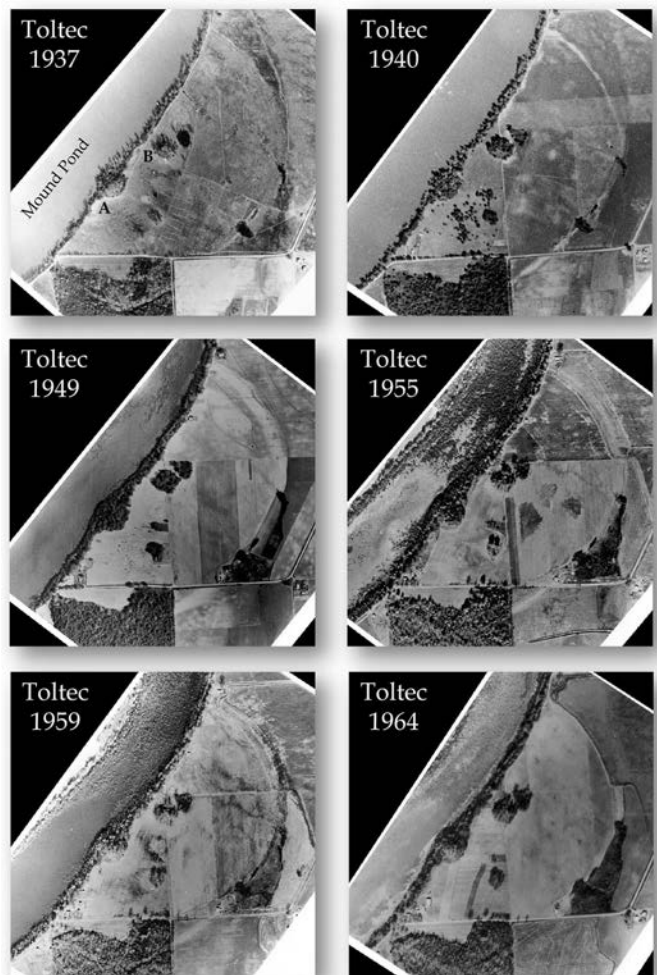
### Toltec Mounds Archeological State Park

- Lockhart has developed bare-earth LiDAR imagery for Toltec Mounds Archeological State Park that provides highly accurate topography, shaded relief, and perspective views of known features and newly discovered information. He also provided multiple GIS-enabled aerial photo sequences of the site spanning the years from the 1930s to the present. Working with former research station archeologist Elizabeth Horton and former State Archeologist Ann Early, Lockhart is currently contributing to analysis of changing lake levels, erosion, and other impacts associated with the largest ceremonial mounds in the State of Arkansas.

### Pea Ridge National Military Park

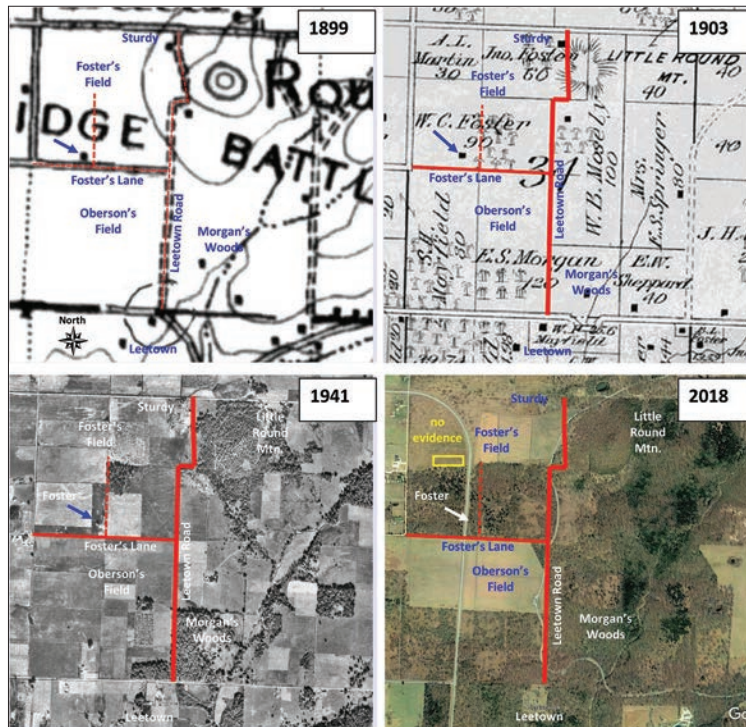
- Lockhart (with Carl Drexler, ARAS-SAU, George Sabo III, and the late Jamie C. Brandon) has served as co-PI for a four-year collaboration between the Midwest Archeological Center of the National Park Service, Pea Ridge National Military Park, and the Arkansas Archeological Survey

Historic aerial series for Toltec Mounds georeferenced as GIS data layers for archeological feature discovery, site change comparisons, and monitoring Mound Pond water levels through time.





organized under the federal Cooperative Ecosystem Studies Units (CESU) program. A convergent/transdisciplinary methodology was used to compile, georeference, integrate, overlay, and interpret multiple information themes and formats. The data include archival sources, historic maps, historic and modern aerial photographs, conventional photos, geophysical remote sensing, and LiDAR imagery. The resulting integrated information was fundamental to locating specific archeological features and interpreting the battle. Lockhart—working with Drexler, Sabo, Michael Evans, Jared Pebworth, and Deborah Sabo (ARAS publications editor)—contributed to a comprehensive report as the final element of this successfully completed cooperative project.



Historic and modern maps and aerial photos georeferenced as GIS data layers to interpret civilian and military locations associated with the Civil War Battle of Pea Ridge.

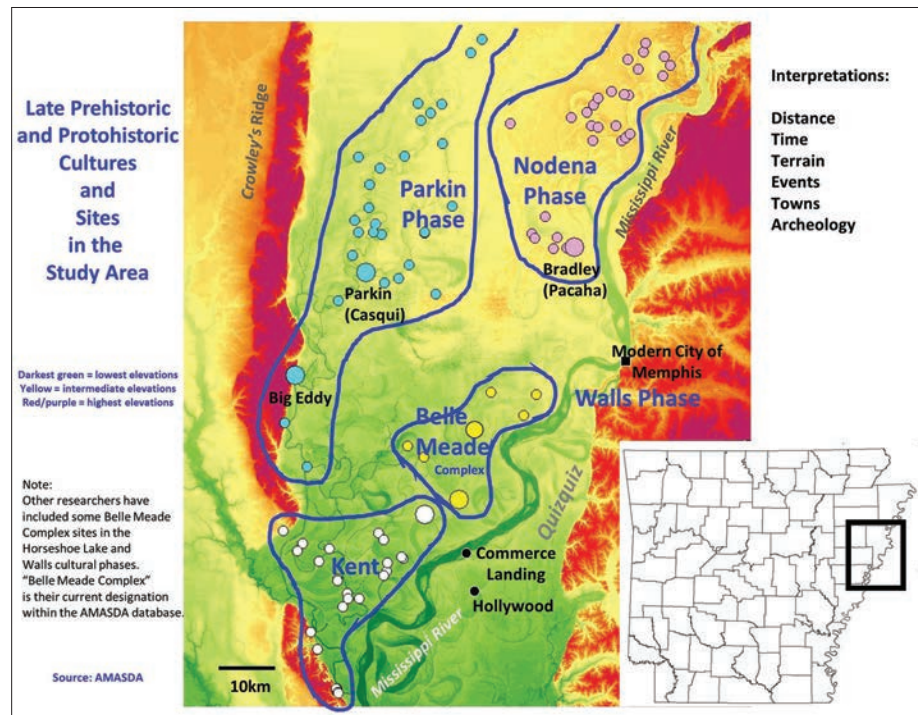


LiDAR elevation data indicating 19th century roads, field boundaries, and other landscape features associated with the Civil War Battle of Pea Ridge.

## Protohistoric Landscape of Northeast Arkansas

- Lockhart and Tim Mulvihill (ARAS-UAFS) continued research on 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 American Indian-European contact west of the Mississippi River.

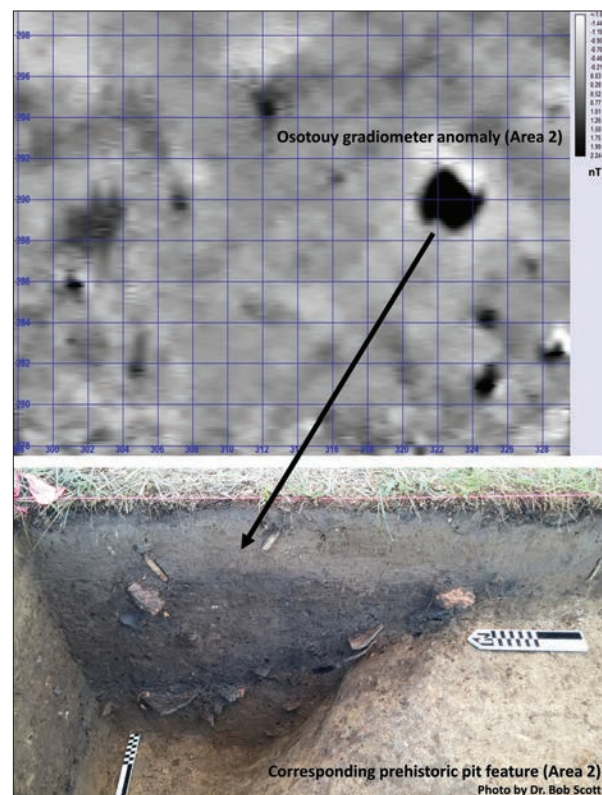
Cultural and natural landscape features being considered in interpretations of the Protohistoric period in eastern Arkansas and the 1541–1542 trans-Mississippi de Soto expedition.



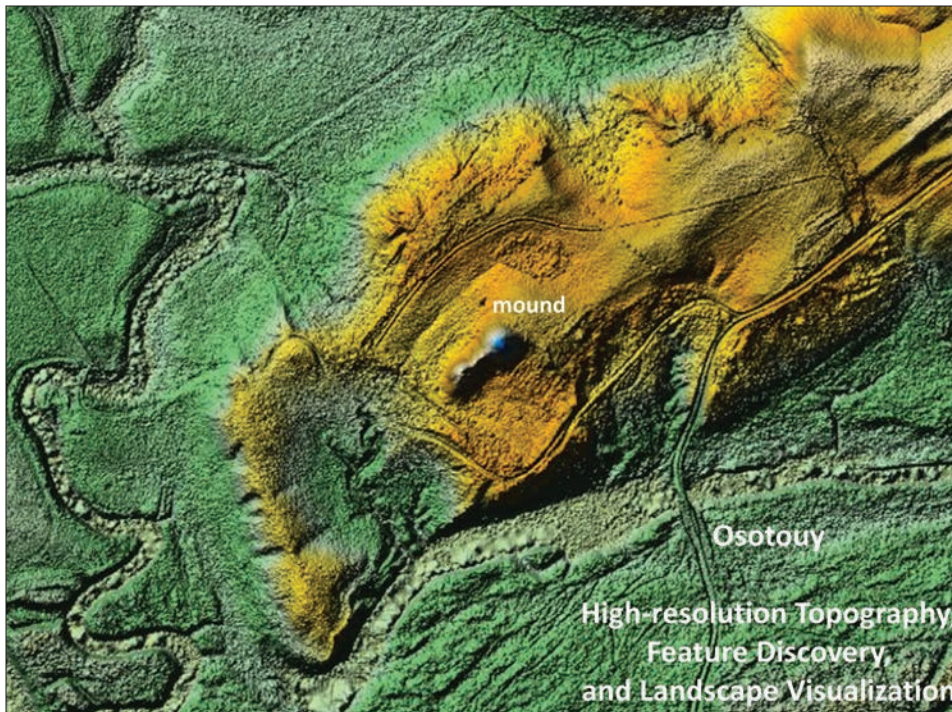
## Osotouy and Wallace Bottoms (first Arkansas Post)

- Lockhart—building on a multiyear project with Dawn Bringelson (NPS), John House (ARAS-UA-PB), Tim Mulvihill (ARAS-UAFS), and Robert Scott (ARAS-UAPB)—continues research associated with a cooperative, comprehensive archeological investigation of the Osotouy Unit of Arkansas Post National Memorial, which includes the first Arkansas Post locale. Lockhart has directed multisensor remote sensing, as well as development and interpretation of "bare-earth" high-resolution topography from LiDAR. Lockhart has also developed a comprehensive GIS database he is using for landscape-scale analysis.

Geophysical remote sensing at Osotouy was used to locate archeological features, such as this late prehistoric pit feature containing stone, bone, ceramic, and burned plant artifacts.







Detailed hypsography for the prehistoric/protohistoric Osotouy site associated with the first Arkansas Post.

#### Carden Bottoms and the Arkansas River Valley during the Protohistoric

- Lockhart (with George Sabo, Jerry Hilliard, Jared Pebworth, Michael Evans, Larry Porter, and others) continued research associated with the protohistoric Carden Bottoms site in the Central Arkansas River Valley, which thrived for little more than a single generation. Thousands of museum-quality artifacts collected from the site over the past century indicate stylistic similarities to several distinct, yet distant, contemporaneous Native cultures. This research comprises a landscape-scale, GIS-driven analysis informed by a site-wide, multisensor geophysical survey used to direct the complete excavation of multiple sturdily built and nearly identical houses and other archeological features that elucidate this enigmatic and seemingly culturally coalescent locale at the moment of impending colonization. Feature and artifact distributions are being interpreted against the backdrop of the geophysical remote sensing data that led to their targeted discovery.

#### Statewide Archeological Site Map Updates Using LiDAR Data

- Lockhart continues to develop high-resolution 3D maps and imagery for archeological sites using aerial photos and LiDAR-derived hypsography and topography. He is interpreting these datasets, even in densely forested areas, to complement hand-drawn site sketches currently included within the AMASDA database. These data are especially important in mapping and monitoring sites that are otherwise inaccessible. The new data provide incomparable analytical information for discovering, measuring, and mapping prehistoric mounds, earthworks, and bluff shelters, as well as historic roads, Civil War-related features, former land use, and more. To date, Lockhart has processed and analyzed bare-earth LiDAR data for more than 300 archeological sites and study areas statewide.

#### Spiro Mounds, Oklahoma

- Lockhart continued his research at the Spiro Mounds, where he and colleagues from Arkansas (Sabo, Mulvihill, and Samuelsen) and Oklahoma (Scott Hammerstedt, Amanda Regnier, and Patrick Livingood) have collected multisensor geophysical data used to precisely locate archeological features at one of the most important prehistoric sites in North America. More recently, Lockhart processed “bare-earth” LiDAR data as part of a comprehensive GIS database. All of these data are being used to pinpoint excavation units and provide insights into Mississippian period intrasite organization and ceremonialism at Spiro.



## Computer Services Program Awards, Service & Outreach

### Grants, Honors & Awards

- Lockhart was promoted from Associate Archeologist to Archeologist, effective July 1, 2019.
- Samuelsen obtained his PhD in Anthropology from the University of Arkansas in May 2020.

### Teaching & Higher Ed

- Lockhart serves as Research Faculty in the UA Department of Anthropology and as Cooperating Faculty in the UA Environmental Dynamics PhD Program.
- Lockhart served on graduate committees for John Samuelsen (PhD, Anthropology), and Jeremy Menzer (PhD, Environmental Dynamics).
- Lockhart (with George Sabo) helped provide access and support to UA experimental magnetic susceptibility data at the University of Arkansas Agricultural Experimental Station.
- 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.

### Records & Collections Management

- As the Survey's Director of Geographic Information Systems (GIS) research, Lockhart has developed and maintained a statewide GIS, as well as hundreds of high-resolution, site-specific GIS databases over 31 years.
- As the Survey's Director of Archaeogeophysical Remote Sensing, Lockhart has developed and manages data that precisely locate archeological features associated with more than 200 projects statewide over a period of 20 years.
- Samuelsen maintained existing servers, including a Mac server for ARAS iPads in Apple DEP program; conducted database searches and retrieved digital information for the ARAS registrar's office; helped the ARAS registrar's office with any problems that occurred with AMASDA; helped staff with web issues or data restoration; purchased, installed, trained users, and maintained a new large format printer/scanner and helped print posters or scan materials as needed; contributed to the development of a statewide Collections Database at the Survey by updating the FileMaker database to use MySQL in the background; and fixed issues related to the VPN and connection to the FileMaker databases that were preventing data entry and access.
- As part of his dissertation research, Samuelsen finished processing over 200 teeth from the Caddo area for strontium and lead isotopes and trace element analysis. This is part of a study to investigate prehistoric warfare in the southcentral US and properly identify the cultural affiliation of human remains in the collections.
- Samuelsen managed loans of archeological material related to a NSF grant.
- Samuelsen served as a representative for the Survey in our University of Arkansas System IT Audit.

### Professional Service

- **Professional Organizations.** Samuelsen completed his role as the Caddo Conference Student Representative.
- **ARAS Committees.** Lockhart serves on the Personnel Committee. Samuelsen serves on the Web Steering Committee, the Digital Data Collection Initiative, and as temporary member of the Hester Davis Fund Committee.
- **Peer Review.** Samuelsen served as a reviewer for the *Journal of Archaeological Science*.
- **Consultations & Research.** Lockhart provided information based on LiDAR and historic aerial photos for Nolan Moore, Section 106 Coordinator, concerning the precise location of former buildings near the historic Elkhorn Tavern in the Pea Ridge National Military Park. Lockhart is working with Pea Ridge Park Superintendent Kevin Eads to develop a methodology for processing/interpreting LiDAR data for analyses detailing additional key vicinities associated with the Civil War landscape. Lockhart consulted with Scott Hammerstedt and Amanda Regnier (Oklahoma Archeological Survey) regarding gradiometry and resistivity surveys in Tulsa, OK. Lockhart (with Ozark National Forest Heritage Program Manager, Lexie Rue-Harris) produced experimental analysis to discover and quantify stands of river cane, and to detail an historic Cherokee homestead.

### Public Service & Outreach

- Lockhart worked with Andrew Beaupré (ARAS-UAPB), Robert Scott (ARAS-UAPB), and Melissa Zabecki (ARAS-CO) to conduct ground-penetrating radar and resistance survey and mapping at Arkansas School for the Deaf to locate potential unmarked graves on the property. The work also served as a field demonstration for Arkansas School for the Deaf students, and provided other publicized outreach opportunities.

- **Preservation Outreach.** Lockhart serves on the Northwest Arkansas Open Space Plan (NWAOSP) Steering Committee. As a 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. He contributed information to several efforts of the Northwest Arkansas Land Trust: successful protection of a 720-acre wilderness encompassing the scenic I-49 Bobby Hopper Tunnel; successful conservation of historic and prehistoric components near Springtown, AR; and conservation of Wilson Springs Preserve. Working with Fayetteville Natural Heritage Association and UA Herbarium Collections Manager Jennifer Ogle, Lockhart contributed information for the City of Fayetteville's historic Woolsey Farmstead and Wet Prairie Sanctuary. He is also collaborating with the Conservation Fund, Northwest Arkansas Land Trust, Northwest Arkansas Open Space, and Pea Ridge National Military Park Foundation to protect 140 acres in Williams Hollow, which was part of the Battle of Pea Ridge. With the Natural Heritage Commission Land Steward Joe Woolbright, Lockhart contributed to preservation of the historic Chesney Prairie Natural Area. He also contributed information for the protection of Cross Hollow, a location on the historic Old Wire Road occupied by both Union and Confederate armies during the Civil War. In discussions with Greg Mayfield of the Pea Ridge Military State Park Foundation, Lockhart provided information for a documentary film highlighting civilian life at the time of the Civil War battle.
- **Programs & Presentations.** Lockhart gave invited presentations to management and staff of Pea Ridge National Military Park, and the Pea Ridge National Military Park Foundation.
- **Other Outreach.** Samuelsen consulted with the Caddo Tribal Historic Preservation Officer about cultural affiliation and other issues, and helped landowners with requests about sites using GIS software. Weddle provided identification, condition assessment, and curation advice for a collection of hand fans at the Rogers Historical Museum, and continues to consult with their collections manager on future projects and exhibits.
- **FANA.** Deborah Weddle serves on the Board of Directors for FANA (the Fan Association of North America), a nonprofit organization that promotes research, education, conservation, and exhibition of hand fans. She provides assistance with identification and conservation to area museums and historical societies, and manages FANA's website and social media. She also served on the Grants Committee.

#### Service to Arkansas Archeological Society (AAS)

- **Programs & Presentations.** Lockhart gave a presentation (LiDAR for Discovery and Mapping at Historic and Prehistoric Sites in Arkansas) to the Ark-Homa Chapter in Fort Smith; Samuelsen presented a talk to the Ko-koci Chapter in Fayetteville.
- **Projects.** Lockhart worked with Tim Mulvihill (ARAS-UAPB) to conduct a ground-penetrating radar survey for AAS Arkansas River Valley Chapter member Joel Dyer at Dyer Cemetery (this was also a field demonstration and training session for Tim Mulvihill's UAFS archeology class).
- **Annual Meeting.** Samuelsen assisted with presentation technology at the 2019 annual meeting in Hot Springs, and presented a paper.

#### University Service

- With ARAS Director George Sabo, the University Community Design Center, the Watershed Conservation Resource Center, and City of Fayetteville, Lockhart contributed to a Chancellor's Innovation and Collaboration Fund grant proposal. The fund is aimed at further developing the university's signature research areas and its impact as a major research institution. Contributed research would examine local cultural landscapes through time, developing a GIS-informed synthesis of historic and prehistoric archeological site distributions, settlement patterns, and related ecologies in the Beaver Lake Reservoir catchment area. This element of the study would culminate with increased focus on the immediate area encompassing a proposed River Commons education facility, which includes the region-defining confluence of the West Fork, Middle Fork, and primary channel of the White River.



## Publications Program

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 2019–2020:** Juliet Morrow (Chair), Emily Beahm, Kathleen Cande, and Deborah Sabo (ex officio). The three-person committee has a rotating membership, with the senior member each year serving as Chair.

**Deborah Sabo** (MA, Michigan State University, 1978) is **Publications Editor**. She has been at ARAS since 1999. Prior to that she was a part-time Instructor in the University of Arkansas Department of Anthropology and worked with several UA faculty as Assistant Editor of the journals *Arctic Anthropology* (18 years) and *The Plains Anthropologist* (six years). As ARAS Editor, she carries out all aspects of production in the ARAS publication series: editing, design, layout, file preparation, and production management in consultation with the print shop. Sabo oversees the archive of publication masters and assists with queries about our catalog. She is (*ex officio*) a permanent member of the ARAS Publications Committee. Since 2008 she has served the Arkansas Archeological Society as newsletter editor and as a member of the Executive Committee.

**Rachel Whitman, Shavawn Smith** (ARAS Assistant Director for Financial Affairs), and **Nancy Smith** (Fiscal Support Specialist) handled all the financial aspects of the Publications Program, including inventory management, sales invoicing, and accounting. Whitman was instrumental in developing the new online ordering system with the UA CashNet Team. Shavawn Smith helped us merge our activities into Workday.



## Publications Program Activities

The reorganized publications program continued on course with Juliet Morrow (ARAS-ASU) as committee chair. The ARAS Publications 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 interacts with Library of Congress and with the print shop to see all books through the entire publication process. Deborah performs other editorial tasks for ARAS at the coordinating office and for all ARAS colleagues as needed.

For the Popular Series this year, Deborah completed editing, design, layout, and file preparation for *Ouachita Mountains Archeology* (PS06) by Mary Beth Trubitt, published in December 2019, and oversaw required distributions. She also completed editing, design, layout, and file preparation for *Wooden Boats and Curving Blue Lines* (PS07) by Leslie C. Stewart-Abernathy, which was ready for the printer at the end of June 2020 and published in August 2020. She continued editorial and layout work on *Ways of the Ancestors* (PS08, forthcoming) by George Sabo, and worked with graphics artist Rachel Tebbetts to organize illustrations for this book.

Deborah's additional major yearly commitment is to compile, edit, design, and distribute the Survey's Annual Report. This project is comparable to production of a volume of collected papers. The Annual Report for 2018–2019 was printed and distributed in January and February 2020.

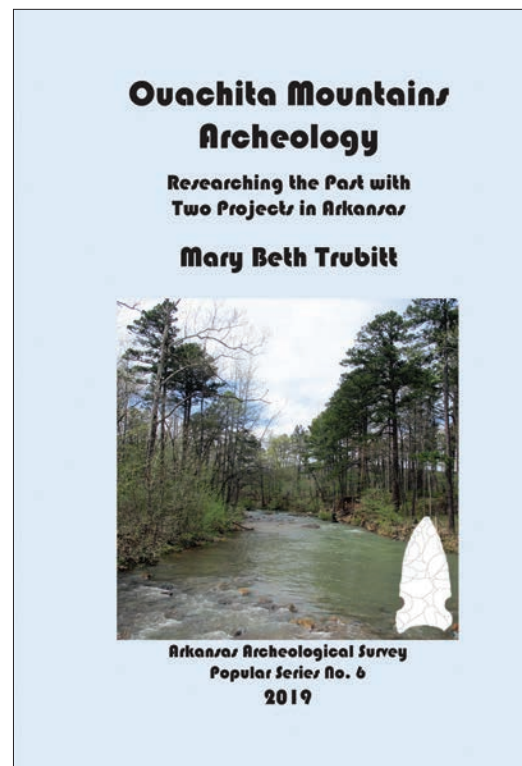
For the Sponsored Research Program, Deborah edited and completed layout on the final report of the four-year CESU project with the National Park Service at Pea Ridge National Military Park. She also provides editorial service and advice to ARAS colleagues as needed. This year she assisted Jodi Barnes (ARAS-UAM) with an article that was accepted to *The American Anthropologist* journal.

As a member of the ARAS Web Steering Committee, Deborah Sabo participated in meetings to discuss improvements to the Survey's website, contributed content, and copy-edited articles submitted to the website by other ARAS staff. This included all entries submitted for the Artifact of the Month series, as well as Current Research or Dispatches from the Field sections. Sabo also coauthored one entry for the Artifact of the Month. In 2018 Sabo proposed and helped organize the Survey's first ever recognitions of Black History Month and Women's History Month.

For outreach, Deborah edits and updates educational and informational flyers, and helps to create new ones as needed. This year she worked with graduate assistant Lydia Rees, who revised all the flyers in the "Classroom Materials" section of our website and completed other projects, including a Publications Catalog. Deborah helped Rees learn to navigate the Creative Cloud software used for publications. She also designs and produces the Program for the Arkansas Archeological Society's Annual Meeting. There was no print program for the 2020 annual meeting, which was transformed to a virtual event on YouTube due to Covid-19.

### Latest Publications

*Ouachita Mountains Archeology: Researching the Past with Two Projects in Arkansas* by Mary Beth Trubitt (station archeologist at ARAS-HSU), was published in late 2019 as Popular Series No. 6. *Ouachita Mountains Archeology* is a concise overview of the past 10,000 years of American Indian history in the Ouachita Mountains region. Intended for a general audience, this book shows how archeologists ask and answer questions about past ways of life. What plants and animals did people collect, grow, and prepare into food in the past? How can archeologists use stone tools or pottery to track community movements and social interactions across the region? Why is it important to preserve archeological sites? Trubitt draws primarily from two long-term research projects: excavations at the Jones Mill site (3HS28) in Hot Spring County, and at the Dragover site (3MN298) in Montgomery County. This Popular Series book communicates research results and highlights new archeological techniques for learning about Arkansas's past.

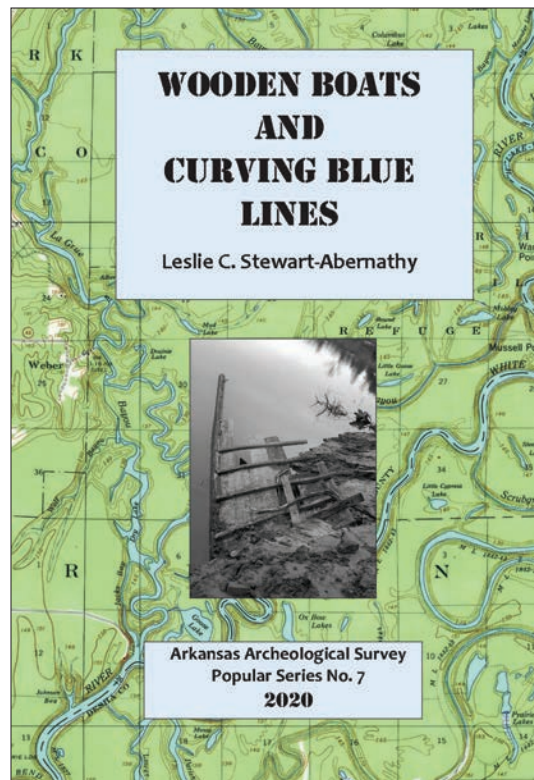


### More New Volumes in the Popular Series

Two additional Popular Series books for general audiences continued in development during 2019–2020. Throughout much of the year, Deborah Sabo worked on preparing *Ways of the Ancestors: Ancient Indians of Arkansas*, written by ARAS Director George Sabo III, and *Wooden Boats and Curving Blue Lines*, written by retired station archeologist for ARAS-WRI, Leslie Stewart-Abernathy.

*Ways of the Ancestors* is a summary of cultural development in Arkansas from about 13,000 years ago until the arrival of Europeans. Deborah Sabo, working with the author, completed final revisions to the text, and ARAS graphic artist Rachel Tebbetts finished original illustrations. The book was essentially complete by the end of the fiscal year, and a request for CIP data was submitted to Library of Congress in the fall of 2020.

*Wooden Boats* is a discussion of riverine boat wreck sites in Arkansas. This slim book, developed from popular public lectures given by the author over a number of years, presents a brief history of watercraft and water transport in Arkansas from earliest days to the end of the era of wooden-hulled vessels, and a quick overview of the archeological remains of dugout canoes, barges, flatboats, keelboats, and steamboats that represent this history. Always interested in boats and underwater archeology, Stewart-Abernathy had his first chance to excavate boat wrecks at the West Memphis Ghost Boats site (3CT243) in 1988, when the Mississippi River fell to record low levels and exposed an array of wooden wreckage on dry land. Following that extraordinary fieldwork, he continued to visit and investigate wreckage sites exposed along the riverbanks, and to collaborate with other regional experts, particularly including cultural resource firms. As a result, he was able to compile for the public this short introduction to the kinds of underwater cultural resources that reveal and record our transportation history on the watercourse “highways” that were so important for trade and travel before the advent of railroads and the modern interstate. Emily Beahm (ARAS-WRI) was instrumental in bringing this project to fruition. Work on the book was completed by the end of FY2020 and it was published as Popular Series No. 7 in August.



### Program Development & Online Sales Option

We have been hopeful that the new online storefront will help improve sales to individual customers, and indeed the process is now simple and convenient. However, it remains for our Program to continue development of new titles. We have done well in the past five years for a small publishing program, with steady production. At the end of the fiscal year, several new submissions for Research Series and two more Popular Series were in consideration or under review. We announce our new books on our website and social media, but the Publications Program needs to advertise in a few major and regional journals, and this will (at long last) be accomplished in the coming year.

ARAS-CSP and financial staff worked with the University of Arkansas CashNet team in 2018 to establish a secure method for processing credit card payments. The resulting product implementation, launched in September 2018, includes an online Publications storefront (<https://commerce.cashnet.com/UARKARAS>) for individuals wishing to purchase our books. Although this new system has made the process much simpler and more efficient for individual customers and for ARAS staff fulfilling orders, all sales were suspended while the University implemented “work-from-home” to fight the Covid-19 pandemic. This was necessary because ARAS staff were unable to prepare shipments during this period. Sales via the website resumed in the fall of 2020.

### Sales & Distribution

Publication sales and distribution numbered 605 volumes in all series. This slight decline from last year’s totals is notable as sales were discontinued entirely for several months due to the university’s Covid-19 restrictions and “work-from-home.” The number also incorporates volumes that were given away as complimentary copies—books distributed to colleagues, teachers, reviewers, libraries and archives, and students. Our usual contribution the Southeastern Archaeological Conference Student Paper Prize was suspended this year when the Conference had to be canceled. Most of the compli-

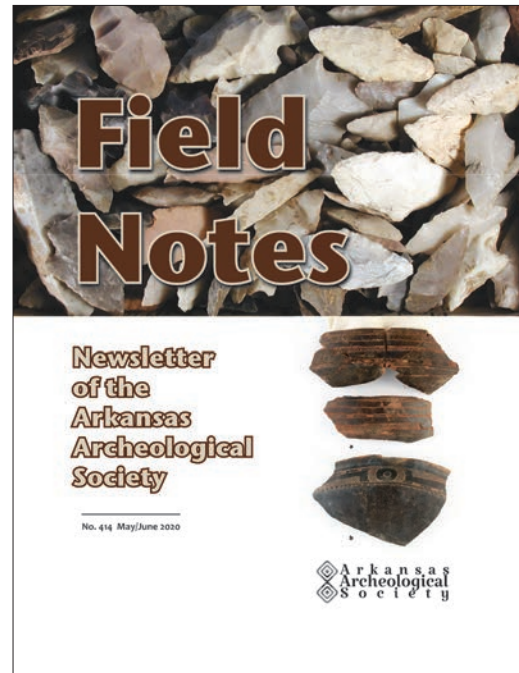
mentary copies represented obligatory distribution of our newly published PS6.

Our bestselling book continues to be RS44 (*Standards for Data Collection from Human Skeletal Remains*) with 283 units distributed this year. Sales of this textbook fluctuate from year to year according to when courses are taught, but it is still the mainstay of our program. Our Popular Series books remained stable, and though costs necessitated a higher price for the new PS6, we are hopeful that this volume will find its audience. In addition, several printed 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, and at the Caddo Conference (\$279 in total sales). We distributed approximately 40 complimentary copies of the new Popular Series No. 6 to Library of Congress, 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 US 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. Two additional volumes in the series were added to the download page this year. We continue to offer for sale hard copies of several volumes in these series that are still available.



### Service Activities

As newsletter editor for the Arkansas Archeological Society, Deborah Sabo edits and designs layout for *Field Notes*, published six times per year, and serves on the Society's Executive Committee, attending all meetings of Committee. Sabo also serves on the ARAS Web Steering Committee, and the ARAS Publications Committee.

### Publication Sales and Free Distribution for 2019–2020

No. of Titles	Research Series <sup>1</sup> (69)	Special Publications (1)	Popular Series <sup>2</sup> (4)	Technical Papers <sup>2</sup> (2)	Total (106)
Sold/Distributed	388	4	178	39	609
Gross Sales (\$)	\$14,365	\$80	\$2,207	\$179	\$16,831
% of Sales	104.4%	0.6%	16.0%	1.3%	
Complimentary (\$)					– \$2,151
Other Discounts					– \$1,095
Net					\$13,585

<sup>1</sup> reflects the total number of titles, but not all are currently available

<sup>2</sup> reflects the number of titles currently in print



## Photographic and Graphic Arts

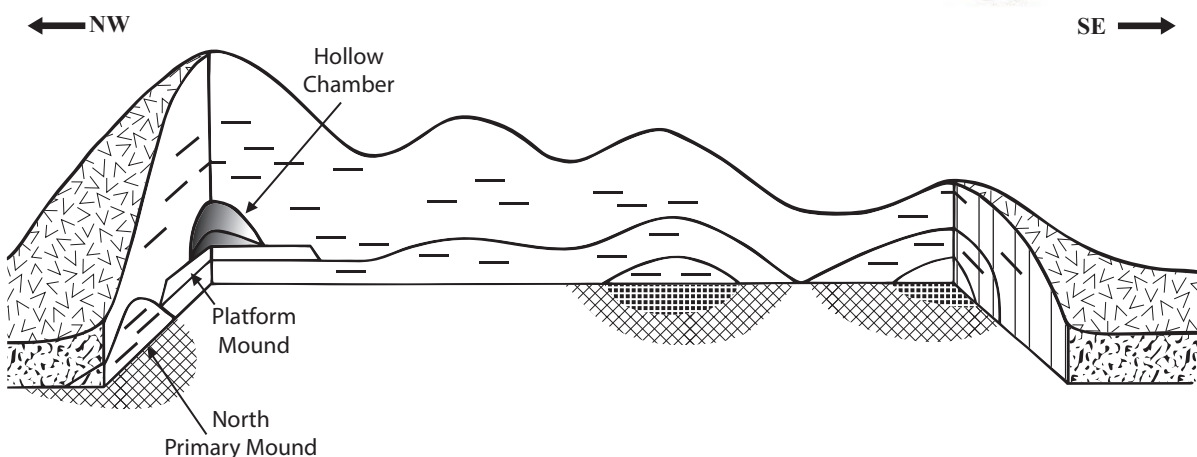
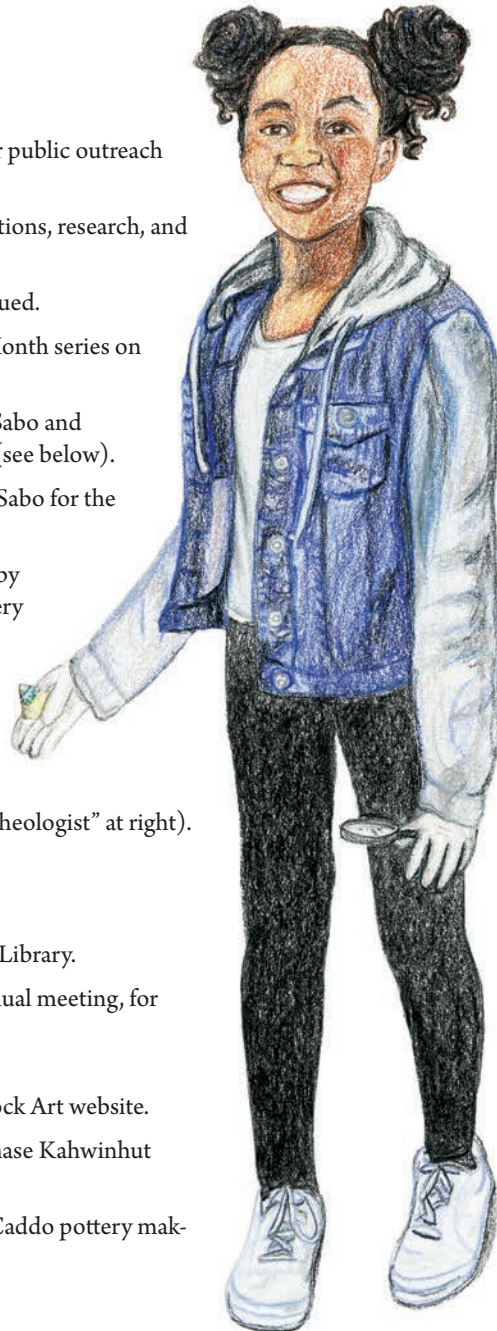


Photographic and graphic arts support at the Survey includes a darkroom and desktop computer graphic arts facilities. Visual documentation is an essential part of archeology for research, publication, archives, and records management. The research stations, the registrar's office, SRP, the publications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

**Rachel Tebbetts** (BFA, University of Arkansas) has been in the role of Commercial Graphic Artist for the Survey for two years now. Her understanding of the world of archeology has grown, and she enjoys the work she creates and produces for Survey staff and the public. Tebbetts maintains an archive of 35mm black-and-white negatives and digital camera images. She prepares maps, diagrams, illustrations, photographic plates, and graphics for Survey publications, research, staff publications, presentations, and the Survey website. She photographs artifacts and (until the Covid-19 restriction on gatherings) various Survey and Society activities and events, and catalogs the records of the photographs taken. Ms. Tebbetts performs services for the AAS including designing and preparing posters for the Annual Meeting and Archeology month, t-shirt designs and edits, and other graphics as needed. Tebbetts completed illustrations for an upcoming Survey publication for the Popular Series. She is currently designing black-and-white illustrations of the children's stories on the Rock Art website and compiling illustrations for other upcoming publications that are in development. She has also created banners, coloring sheets, and sample pottery for Public Outreach. Tebbetts regularly sharpens her skills as a professional artist, photographer, and graphic designer through practicing various professional development techniques. She is excited about continuing her work for the Survey in the upcoming year.

## 2019–2020 Graphic Artist Activities

- 104 negatives scanned for Survey staff and colleagues to be used for public outreach and publications.
- 219 digital photos produced and edited to be used for staff, publications, research, and for recorded documentation of site 3HE40 at Grandview.
- 762 digital photographs of the 2019 Annual Dig edited and catalogued.
- 3 artifact photographs taken and/or edited for the Artifact of the Month series on the website.
- 1 digital diagram of Spiro mound created for an article for George Sabo and displayed at the National Cowboy and Western Heritage Museum (see below).
- 4 illustrative maps created for an upcoming publication by George Sabo for the Popular Series.
- 10 photos composited and/or edited for an upcoming publication by George Sabo for the Popular Series (see an example of Caddo pottery vessels on page 110).
- 13 illustrations created using the methods of drawing/painting/graphic design for the upcoming publication by George Sabo for the Popular Series.
- 3 illustrations of “Ayah the Archeologist” for Jodi Barnes for a publication on the Hollywood Plantation (see “Ayah Detective-Archeologist” at right).
- 3 logos edited for UAPB, Society, and Survey.
- 5 coloring sheets created for Public Outreach.
- 3 banners created for Public Outreach on display at Arkansas State Library.
- 2 posters and 1 t-shirt design made for the Society for the 2019 annual meeting, for 2020 Archeology Month month, and volunteer commemoration.
- 5 illustrations created for the kids’ story “Raven’s Dream” on the Rock Art website.
- 1 Caddo pottery-making workshop attended with Caddo potter Chase Kahwinhut Earles.
- 1 set of pottery produced for Public Outreach to demonstrate the Caddo pottery making technique.







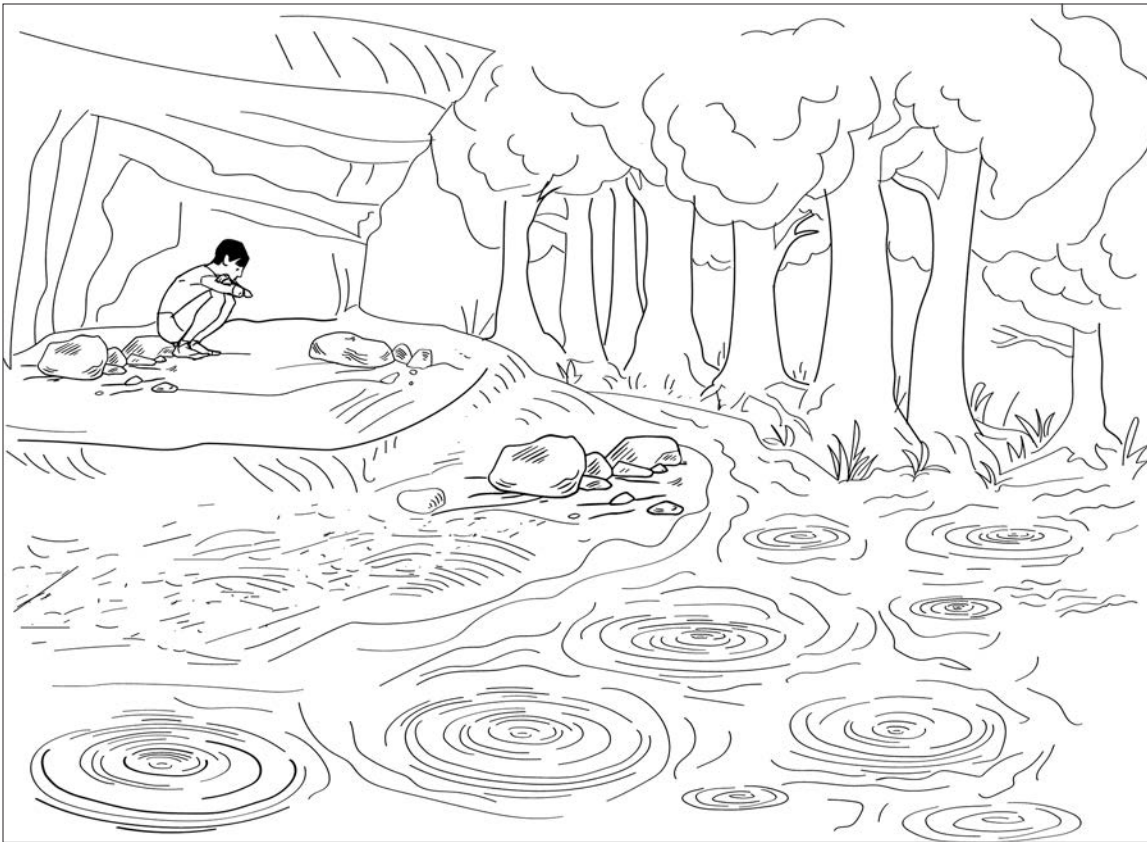
## ARKANSAS ARCHEOLOGY MONTH MARCH 2020

For info on these artifacts and more, visit: <http://archeology.uark.edu/artifacts/>

 **Arkansas  
Archeological  
Society**  
<https://arkarch.org>

 UNIVERSITY OF ARKANSAS SYSTEM  
**ARKANSAS  
ARCHEOLOGICAL  
SURVEY**  
<http://archeology.uark.edu>





Above: Drawing by Rachel Tebbetts to illustrate the “Raven’s Dream” kids’ story on the ARAS Rock Art in Arkansas website.



Left: Painting by Rachel Tebbetts depicting ancestral Caddo people building a grass-covered house; illustration for a forthcoming Popular Series book by George Sabo.

### Partners in Preservation: Survey & Society

Many ARAS activities are in cooperation with the Arkansas Archeological Society (AAS), an 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 AAS elects a Board of Advisors who conduct yearly reviews of ARAS goals, accomplishments, and needs. AAS members provide proactive support for the ARAS 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, ARAS and AAS 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. ARAS employs a full-time staff member as liaison with the AAS to facilitate the many aspects of this long-standing relationship and its benefits to Arkansas's citizens and to knowledge of the past.

#### 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, 2020

President: James Rees, Fayetteville  
 Vice Presidents: Deanna Holdcraft, Little Rock; Steve Longacre, Rogers; Michelle Rathgaber, Wynne; Jessica Howe Cogburn, Prairie Grove  
 Recording Secretary: Anthony Clay Newton, Magnolia  
 Chair, Board of Advisors: Gary Knudsen, Russellville  
 Editors: Glen Akridge, Fayetteville (Bulletin) & Deborah Sabo, Fayetteville (Newsletter)



**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 BA 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 with 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, and "Celebrate Archeology."
- Ko-ko-ci Chapter's special meeting for Archeology Month was at the Washington County Extension Office, with over 30 in attendance. Graduate student Kayden Dennis presented "Stone Tools in 3D: In Search of Cultural Transmission." Knapp also arranged for Mayor Lioneld Jordan to attend and to present a proclamation declaring March as Archeology Month in Fayetteville.
- Unfortunately, our popular Celebrate Archeology Day, scheduled at the end of the month—which usually features booths and demonstrations about archeological methods, artifacts, and interpretations, along with a UA Museum Collections Open House—was cancelled due to the Covid-19 pandemic.
- Knapp arranged an interview with Melissa Zabecki, Education Outreach Coordinator, and Jessica Kowalski, Station Archeologist at ARAS-UAF, at the local NPR station (KUAF) and appearances on local morning news and afternoon talk shows on television. Each of the local events had their own Facebook event pages and professional radio advertising through the locally owned KXNA station, which aired 30 spots through the first half of March until the pandemic.



Marilyn Knapp at Training Program headquarters (UA-Cossatot) during summer 2019. Photo by Rachel Tebbetts (ARAS).



### 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, Survey staff, and the general public.
- **Chapters.** Knapp conducted annual Chapter compliance updates and facilitated Ko-ko-ci Chapter meetings and provided assistance to all Chapters as needed.
- **Executive Committee.** Knapp attends all meetings of the Society's Executive Committee as Liaison, assists the President in developing agenda items, maintains contact information, and helps disseminate information to committee members.
- **Training Program.** Knapp did much of the logistical planning of the Training Program, including writing up the information for *Field Notes*, registration of participants, working with the University of Arkansas – Cossatot staff, making arrangements for seminars, labs, and campground needs. She also worked to promote the program via social media, including a Facebook event page. Unfortunately, the June 2020 Training Program was cancelled due to Covid-19. Cancellation notices were posted on Facebook pages and sent to all Society members. Registrants were refunded their money.



Left to right: Society Vice President Deanna Holdcraft, Governor Asa Hutchinson, ARAS Director George Sabo III, and Society President Jim Rees at the State Capitol. The group of archeologists met briefly with the Governor to present him with a framed copy of this year's Archeology Month poster, and to receive the Governor's Proclamation of Arkansas Archeology Month. Photo supplied by the Governor's Office.

### 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 400. 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 their laboratories, and Society members participate in Survey field and lab projects throughout the year.

### AAS Volunteers

Many ARAS research projects in the field and laboratory depend on volunteers, mostly Society members, plus students and others. Altogether, volunteers contributed 1,384 hours to archeological projects across Arkansas in 2019–2020.

### AAS Archeological Research Fund

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

This year's grant requests totaled \$5,150 and ARF had \$7,126 available. Grant recipients, announced at the 2019 annual meeting in Hot Springs, were Marvin Jeter (ARAS-UAM, Retired), \$2,380 for Taylor Mounds (3DR2) AMS dates; Carl Drexler (ARAS-SAU) and Elizabeth Horton (ARAS-Toltec), \$2,380 for Holman Springs (3SV29) AMS dates; and Carl Drexler (ARAS-SAU), \$390 for a Lockesburg Mounds (3SV48) radiometric date.

### AAS Annual Meeting

The 2019 meeting was held September 27–29 in Hot Springs. There were 80 registrants. Marilyn Knapp was the Program and Arrangements Chair. Of the 14 scheduled papers, 8 were presented or co-presented by ARAS staff. The keynote speaker, Judge Morris S. “Buzz” Arnold (noted scholar and author, US District Judge and US Court of Appeals/Eighth Circuit, Retired), spoke on “The Quapaw’s Diplomatic Efforts in the Late Eighteenth Century.” Deborah Sabo (ARAS) designed and managed printing of the meeting program.



Noted historian, Judge Morris S. Arnold, was the keynote speaker at the 2019 Annual Meeting in Hot Springs.

### 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*, which 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 2020

Archeology Month is a multifaceted public education concept to promote awareness and appreciation of Arkansas archeology. The theme each year is Celebrate Archeology, which allows for flexibility in programing. Marilyn Knapp sends out a Call for Programs, creates a printed events brochure, and works with the poster designer(s) on designing and

printing. One FPTV Open Mic segment aired for the first local event in 2020 and there was an extended interview about Archeology Month on a local NPR radio station. 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 Rachel Tebbets, Graphic Design Artist (ARAS) and contained a variety of images from “Artifact of the Month,” a feature on the ARAS website. The website URL and a QR Code were added to the poster for more information on the artifacts.

There were 57 scheduled programs at 34 venues across the state, including museums, state and national parks, libraries, campuses, ARAS Research Stations, and other locations such as restaurants, churches, and nature centers. Chapters of the Arkansas Archeological Society participated as well. Events submitted included illustrated talks, exhibits, tours, artifact identification programs, and many hands-on activities. These planned programs covered a variety of archeological topics but the event-filled month was cut short by Covid-19.

### “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 2020 Training Program was cancelled due to Covid-19.

### Plans for 2020: Going Further Into the Native History of the Caddo in Western Arkansas

#### *Fieldwork and Lab Work*

The 2020 Training Program, if carried out, would have built upon the work that was done in 2019. The program was cancelled due to the pandemic. Plans for the 2020 Training Program included returning to the UA-Cossatot campus where the field lab, headquarters, seminars, and evening talks would have been held. Besides finishing the remaining artifacts from Holman Springs (3SV29) and new artifacts from 2020 excavations at Lockesburg Mounds (3SV48), lab workers would have processed artifacts from Bayou Sel (3CL27), another major Caddo salt-making site. The 2020 field-work would have returned to Lockesburg Mounds, expanding on the work done in 2019. Seminars were to have included Basic Excavation (2), Basic Lab (2), Advanced Lab/Caddo Ceramics, Lithics, and Site Survey. The hope is to return to De Queen, UA-Cossatot, and Lockesburg Mounds in 2021 to continue what was planned this year.

Fiona Taylor instructs Society volunteers in the field lab during the 2019 Training Program. Photo, Rachel Tebbets (ARAS).







Participants in the 2019 Training Program (second week), which was headquartered at Cossatot Community College of the University of Arkansas in De Queen.

### Fiscal & Administrative 2019–2020

#### Assistant Director for Fiscal Affairs

Rachel Whitman | Shavawn Smith

The Assistant Director for Fiscal Affairs works with the ARAS 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, and provides fiscal affairs training to the employees of the Survey at the annual staff meeting. She also serves as the Arkansas Archeological Survey building executive.

**Rachel Whitman** (MA in Business Administration, Southern Arkansas University, 2016) was Assistant Director for Fiscal Affairs from 2015 through January 2020, when she left us for a new position in Facilities Management at the University of Arkansas. Among her accomplishments at ARAS, Rachel Whitman helped to stabilize the Publications Program and worked with the team that created our online “storefront” for books and AMASDA subscriptions. She kept the staff informed about changing university policies and procedures. Her efforts and knowledge were essential to ARAS moving efficiently through the transition to Workday. Whitman served as Treasurer on the board of the Arkansas Association of College and University Business Officers (AACUBO) and is active in that organization. The Survey appreciates Rachel’s efficiency and collegiality and we wish her all the best.

**Shavawn Smith** (MA, University of Arkansas, 2017) was welcomed as the Survey’s new Assistant Director of Fiscal Affairs beginning in March 2020. Smith comes to us from Business Services at the University of Arkansas where she was the Manager of Travel Support for the Travel Office. Before earning her master’s degree in English Literature, Smith got her BA in English and Women’s Studies from the University of Nevada (2005). She was instrumental in completing our transition to Workday this year, and ably carries out every responsibility of her position, going the extra mile to help staff understand all of the new procedures. Due to her love of travel, Shavawn maintains a collection of rocks brought to her from other’s adventures, with the conceit that she will some day return each of them to their respective origins. Shavawn’s master’s thesis is titled “We Can Come Back From This: Navigating the Perils of the Anthropocene in The Walking Dead.” She maintains wildly varied interests and is excited to learn interesting things from her new ARAS colleagues.

#### Fiscal Support Analyst

Nancy Smith

**Nancy Smith** has been with the Survey since November 2014, initially as an Administrative Assistant. She moved to her current position of Fiscal Support Analyst in May 2020. Nancy Smith works closely with Shavawn Smith to perform a variety of fiscal-related tasks such as analyzing and processing accounts payables, accounts receivables, and procurement transactions for all research stations and the CO for monthly reporting. For the Publications Program, she monitors the inventory, processes orders, and creates deposits for all receivables coming into the coordinating office. Nancy Smith acts as timekeeper for hourly employees’ time and wage rates, reports on vehicle fleet usage and expenses, including registrations for 16 assigned motor-pool vehicles. Monthly reports are sent to the university and state. She assists the UAF campus Property Accounting Office by ensuring all capital property assets have been 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.

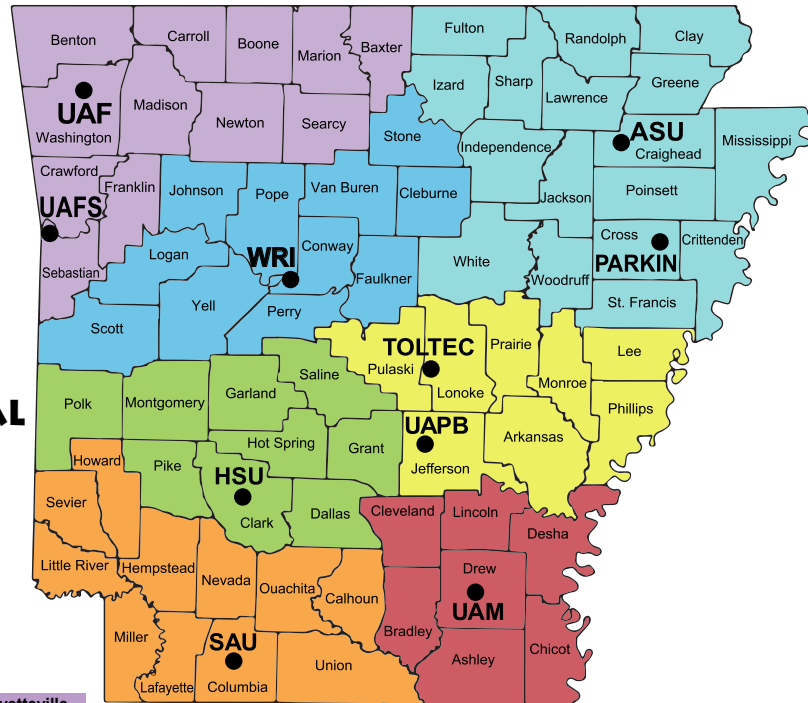
#### Administrative Specialist II

Laura Kowalski

**Laura Kowalski** has been with the Survey since May of 2019 as an Administrative Specialist II. She has educational degrees in Business Administration and Veterinary Science Technology. She comes to the Survey from New York with a background in Corporate Retail and Animal Welfare. In her role, Laura Kowalski is responsible for duties such as scanning and uploading records for the AMASDA database, ordering supplies, and greeting and directing members of the public to the appropriate Survey personnel.

## How to Contact the Arkansas Archeological Survey

<http://archeology.uark.edu>



### UAF: University of Arkansas, Fayetteville

Dr. Jessica Kowalski, Station Archeologist  
Email: jkowsalsk@uark.edu  
2475 N. Hatch, Fayetteville, AR 72704  
(479) 575-3556  
Jared Peabworth, 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

490 Toltec Mounds Road  
Scott, AR 72142-9212  
(501) 961-2420  
Katherine Gregory, Station Assistant Email:  
kwo001@uark.edu

### UAPB: University of Arkansas, Pine Bluff

Dr. Andrew Beaupre, Station Archeologist  
Email: abeaupre@uark.edu  
Mail Slot 4814, UAPB  
106-C Rust Tech - 1200 University Ave. Pine  
Bluff, AR 71601  
(870) 535-4509  
Dr. Robert Scott, Station  
Assistant  
Email: rscottjr@uark.edu

### University of Arkansas-WRI

Dr. Emily Beahm, Station Archeologist  
Email: beahm@uark.edu  
Petit Jean Mountain  
1 Rockefeller Drive  
Morrilton, AR 72110  
(501) 727-6250 or 1-866-972-7778  
Larry Porter, Station Assistant  
Email: lporter@uark.edu

### ASU: Arkansas State University, Jonesboro

Dr. Juliet Morrow, Station Archeologist  
Email: jemorro@uark.edu  
ASU-Jonesboro  
P.O. Box 820  
320 University Loop West Circle  
ASU Museum, Rm 168  
State University, AR 72467  
(870) 972-2071  
Sarah Stuckey, Station Assistant  
Email: sdstucke@uark.edu

### Parkin Archeological State Park

Dr. Jeffrey M. Mitchem, Station Archeologist  
Email: jmmitchem1@yahoo.com  
P.O. Box 241  
#60 Hwy 184 North  
Parkin, AR 72373-0241  
(870) 755-2119  
Dr. Michelle Rathgaber, Station Assistant  
Email: mmrathga@uark.edu

### UAM: University of Arkansas, Monticello

\*Contact the Coordinating Office\*

UAM-Box 3087  
580 University Drive  
Visual and Performing Arts, Rm 117  
Monticello, AR 71656-3087  
(870) 460-1290

### HSU: Henderson State University

Dr. Mary Beth Trubitt, Station  
Archeologist Email: mtrubitt@uark.edu  
P.O. Box H-7841, HSU  
1100 Henderson St.  
Arkadelphia, AR 71999-0001  
(870) 230-5510  
Tommie Cotton, Station Assistant  
Email: tncotton@uark.edu  
(870) 230-5463

### SAU: Southern Arkansas University

Dr. Carl Drexler, Station Archeologist  
Email: cdrexler@uark.edu  
SAU Campus  
100 East University  
MSC 9381  
Magnolia, AR 71753-9381  
(870) 235-4230

January 2021

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 2019–2020\*

### ARAS Registrar's Office

- 2019 Notice of Inventory Completion: Arkansas Archeological Survey, Fayetteville, AR. 84 Federal Register 197 (10 October 2019), pp. 54637–54639.
- 2019 Notice of Inventory Completion: Arkansas Archeological Survey, Fayetteville, AR; Correction. 84 Federal Register 217 (8 November 2019), pp. 60441–60442.
- 2019 Notice of Inventory Completion: Arkansas Archeological Survey, Fayetteville, AR; Correction. 84 Federal Register 217 (8 November 2019), p. 60448.
- 2019 Notice of Inventory Completion: Arkansas Archeological Survey, Fayetteville, AR; Correction. 84 Federal Register 217 (8 November 2019), pp. 60448–60449.

### ARAS Staff

- 2020 Research into Making Southeastern Archeological Field Schools Safe and Welcoming to All Students. Electronic document online at <https://archeology.uark.edu/learn-discover/current-research/safe-field-schools/>
- 2020 Preserving and Presenting Arkansas History through Artifacts. Electronic document online at <https://archeology.uark.edu/learn-discover/collectionsinventory/>

### Barnes, Jodi A.

- 2019 Galvanized Metal Etching from Camp Monticello. Artifact of the Month for November 2019. Electronic document online at <https://archeology.uark.edu/artifacts/camp-monticello-etching/>

### Beahm, Emily

- 2019 Pitted Stone from Rockhouse Cave. Artifact of the Month for August 2019. Electronic document online at <https://archeology.uark.edu/artifacts/pitted-stone-rockhouse-cave/>
- 2020 Interpreting Imaginary Cultures: The Project Dig Program. *Field Notes, Newsletter of the Arkansas Archeological Society* 415:3–7.
- 2020 Mount Nebo: Archeology of an Historic Resort Town. *Field Notes, Newsletter of the Arkansas Archeological Society* 416:3–8.

### Beahm, Emily, Jodi A. Barnes, and Carl G. Drexler

- 2020 Best Wishes to Dr. Horton on Her New Endeavors. *Field Notes, Newsletter of the Arkansas Archeological Society* 416:13–14.
- 2020 Best Wishes to Dr. Horton on Her New Endeavors. Electronic document online at <https://archeology.uark.edu/staff-news/best-wishes-dr-liz-horton/>

### Beaupré, Andrew

- 2020 A Lead Seal from Fort Desha. Artifact of the Month for April 2020. Electronic document online at <https://archeology.uark.edu/artifacts/lead-seal/>

### Bottoms, Bryan, Adriana Potra, **John R. Samuelsen**, and Stephen R. Schutter

- 2019 Geochemical Investigations of the Woodford-Chattanooga and Fayetteville Shales: Implications for Genesis of the Mississippi Valley-type Zn-Pb Ores in the Southern Ozark Region and Hydrocarbon Exploration. *American Association of Petroleum Geologists Bulletin* 103(7):1745–1768. doi:10.1306/12171818101

### Cande, Kathleen

- 2019 Franklin Pierce Anthropomorphic Tobacco Pipe. Artifact of the Month for September 2019. Electronic document online at <https://archeology.uark.edu/artifacts/pipe/>

### Cinotto, Chelsea

- 2019 Uncovering a Pit at Caddo Hills (3MN22). *The Arkansas Archeologist* 57:1–20.

### Colaninno, Carol, Shawn P. Lambert, **Emily L. Beahm**, and **Carl G. Drexler**

- 2020 Creating and Supporting a Harassment- and Assault-Free Field School. *Advances in Archaeological Practice* 8(2):111–122.

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

- Collins, C. Fred, T. Andrus, **Robert J. Scott**, Amy, Moe-Hoffman, and Evan Peacock  
 2020 Refit and Oxygen Isotope Analysis of Freshwater Mussel Shells from the Tillar Farms Site (3DR30), Southeast Arkansas. *Midcontinental Journal of Archaeology* 45(1):39–63.
- Drexler, Carl G.  
 2019 The June 2019 Training Program in SW Arkansas: A Summary. Electronic document online at <https://archeology.uark.edu/2019trainingprogramsummary/>  
 2020 3rd Illinois Cavalry Shoulder Scale Fragment from Pea Ridge. Artifact of the Month for June 2020. Electronic document online at <https://archeology.uark.edu/artifacts/pea-ridge-cavalry-shoulder-scale/>  
 2020 Going Further into the Native History of the Caddo in Western Arkansas: The 2020 Training Program. *Field Notes, Newsletter of the Arkansas Archeological Society* 413:3–6.
- Drexler, Carl G., Jami J. Lockhart, Jamie C. Brandon, Jared S. Pebworth, Michael E. Evans, Victoria A. Jones, and Jerry E. Hilliard  
 2020 Archeological and Geophysical Investigations of the Ruddick's Field, Leetown, Broad Ridge, Terrace, Clemens Farm, and Foster's Fields Areas in Pea Ridge National Military Park, Benton County Arkansas. Final report submitted to the Midwest Archeological Center, National Park Service, U.S. Department of the Interior, and Pea Ridge National Military Park. ARAS Project No. 16-06. Arkansas Archeological Survey, Fayetteville.
- Early, Ann M.  
 2019 Joe Parks, 1954–2019. *Field Notes, Newsletter of the Arkansas Archeological Society* 410:3–4.
- Horton, Elizabeth T.  
 2019 Ancient Innovations: Rivercane Basketry from Cobb Cave. Artifact of the Month for October 2019. Electronic document online at <https://archeology.uark.edu/artifacts/cobbcavebasketry/>
- House, John H.  
 2019 Two Radiocarbon Dates from the Dumond Site, 3AR40, Arkansas County, Arkansas. *Field Notes, Newsletter of the Arkansas Archeological Society* 409:6–9.
- Jeter, Marvin D., Robert J. Scott, Jr., and John H. House  
 2020 Possible Cahokian Contacts in Eastern and Southeastern Arkansas. In *Cahokia in Context: Hegemony and Diaspora*, edited by Charles H. McNutt and Ryan Michael Parish, pp. 185–204. University Press of Florida, Gainesville.
- Knapp, Marilyn  
 2020 Celebrating Archeology in Arkansas: A Summary of Archeology Month in 2019. *Field Notes, Newsletter of the Arkansas Archeological Society* 412:3–5.
- Morrow, Juliet  
 2019 What is a Sloan Point? *Field Notes, Newsletter of the Arkansas Archeological Society* 410:8–13.
- Mulvihill, Tim  
 2020 Engraved Silver Pendant from the Drennen-Scott Historic Site. Artifact of the Month for February 2020. Electronic document online at <https://archeology.uark.edu/artifacts/silverpendant/>
- Mulvihill, Tim, Mary Brennan, Elizabeth Horton, Jami Lockhart, and George Sabo III  
 2019 Radiocarbon Dating of Two Pit Features from 3FR46. *Field Notes, Newsletter of the Arkansas Archeological Society* 409:10–13.
- Mulvihill, Tim, George Sabo III, Jami J. Lockhart, Jessica Crawford, and Larry Porter  
 2019 The Preservation of Cavanaugh Mound. *Field Notes, Newsletter of the Arkansas Archeological Society* 411:7–10.
- Pebworth, Jared, and Michelle Rathgaber  
 2019 An Interesting Bowl from Northeast Arkansas. *Field Notes, Newsletter of the Arkansas Archeological Society* 409:3–5.
- Pebworth, Jared, and Lydia Rees  
 2020 Applying Realistic Finishes to 3D Printed Artifacts for Teaching and Exhibits. Electronic document online at <https://archeology.uark.edu/learn-discover/current-research/realistic-3dprinted-artifacts/>
- Porter, Larry  
 2020 Antler Atlatl Hook. Artifact of the Month for January 2020. Electronic document online at <https://archeology.uark.edu/artifacts/antler-atlatl-hook/>

Rathgaber, Michelle

- 2020 A Daub Fragment with Fingerprint from NE Arkansas. Artifact of the Month for March 2020. Electronic document online at <https://archeology.uark.edu/artifacts/daub-fingerprint/>

Rathgaber, Michelle, and Madelyn Rose

- 2019 Preserving and Presenting Arkansas History Through Artifacts. *Field Notes, Newsletter of the Arkansas Archeological Society* 411:11–13.

Sabo, Deborah

- 2020 Review of *Time Song: Journeys in Search of a Submerged Land*, by Julia Blackburn. *Field Notes, Newsletter of the Arkansas Archeological Society* 413:12.

Sabo, Deborah, Victoria Jones, and Jamie Brandon

- 2019 Sky King Radio Show Ring. Artifact of the Month for July 2019. Electronic document online at <https://archeology.uark.edu/artifacts/sky-king-ring/>

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

- 2020 Carden Bottoms: Indigenous Responses to Europeans on the Far Reaches of the Mississippian Shatter Zone. In *Contact, Colonialism, and Native Communities in the Southeastern United States*, edited by Edmond A. Boudreaux III, Maureen Meyers, and Jay K. Johnson, pp. 16–34. University of Florida Press, Gainesville.

Sabo, George III, Mary Beth Trubitt, and Kathy Cande

- 2020 Ann M. Early ARAS Career Highlights. Electronic document online at <https://archeology.uark.edu/staff-news/ann-early-career/>

**Samuelsen, John R.**, and Adriana Potra

- 2020 Biologically Available Pb: A Method for Ancient Human Sourcing Using Pb Isotopes from Prehistoric Animal Tooth Enamel. *Journal of Archaeological Science* 115:105079. doi:10.1016/j.jas.2020.105079

Scott, Robert

- 2020 *Epioblasma triquetra* – (Rafinesque, 1820) (snuffbox). Artifact of the Month for May 2020. Electronic document online at <https://archeology.uark.edu/artifacts/epioblasma-triquetra/>

Shepard, Sarah, Madelyn Rose, and Jared Pebworth

- 2019 New Discoveries in Old Collections. *Field Notes, Newsletter of the Arkansas Archeological Society* 410:5–7.

Simbo, Christophe W., Adriana Potra, and **John R. Samuelsen**

- 2019 A Geochemical Evaluation of the Genetic Relationship between Ouachita Mountains Paleozoic Rocks and the Mississippi Valley-type Mineralization in the Southern Ozark Region, USA. *Ore Geology Reviews* 112:103029. doi:10.1016/j.oregeorev.2019.103029

Smallwood, Ashley M., Charlotte D. Pevney, Thomas A. Jennings, and **Juliet E. Morrow**

- 2020 Projectile? Knife? Perforator? Using Actualistic Experiments to Build Models for Identifying Microscopic Usewear Traces on Dalton Points from the Brand Site, Arkansas, North America. *Journal of Archaeological Science Reports* 31:102337. <https://doi.org/10.106/j.jasrep2020.102337>

Trubitt, Mary Beth

- 2019 Recent Activities of the Ouachita Chapter of the Arkansas Archeological Society. *Field Notes, Newsletter of the Arkansas Archeological Society* 411:3–6.

- 2019 An Engraved Shell Gorget from the Shepherd Site. Artifact of the Month for December 2019. Electronic document online at <https://archeology.uark.edu/artifacts/engraved-shell-gorget/>

- 2019 *Ouachita Mountains Archeology: Researching the Past with Two Projects in Arkansas*. Popular Series No. 6. Arkansas Archeological Survey, Fayetteville.

- 2020 Current Research: Update on the Hodges Collection of Native American Artifacts. *Caddo Archeology Journal* 30:73–75.

- 2020 Interpreting the Hodges Collection and Caddo History for the Public. *Connect (Arkansas Humanities Council magazine)* 1(3):4–6. Online at <https://arkansashumanitiescouncil.org/wp-content/uploads/2019/12/AHC-Connect-Magazine-Spring-Issue-2020.pdf>

- 2020 Update on the Hodges Collection in Arkadelphia. *Field Notes, Newsletter of the Arkansas Archeological Society* 414:3–5.



Trubitt, Mary Beth, and Tommie Cotton

- 2020 A Sherd Type Collection from Standridge (3MN53). *Field Notes, Newsletter of the Arkansas Archeological Society* 414:6–10.

Tuttle, Martitia P., Lorraine W. Wolf, Mary Evelyn Starr, Pilar Villamore, Robert H. Lafferty III, **Juliet E. Morrow**, **Robert J. Scott Jr.**, Steven L. Forman, Kathleen Hess, Kathleen Tucker, James Dunahue, and Marion L. Haynes

- 2019 Evidence for Large New Madrid Earthquakes about AD 0 and 1050 BC, Central United States. *Seismological Research Letters* 90(3):1393–1406.

## Appendix 2. Papers, Symposia & Workshops by ARAS Staff during 2019–2020\*

Astle, Melody, and Madelyn Rose

- 2020 Preservation and Discovery at Grandview Society Dig. Presented at the virtual annual meeting of the Arkansas Archeological Society. Online at <https://www.youtube.com/watch?v=VsJHZiHCyFY&feature=youtu.be>

Barnes, Jodi A.

- 2019 Arkansas Stories: Captivity and Resistance. Hosted by University of Arkansas at Fayetteville's Arkansas Humanities Center in Monticello AR.
- 2019 Make No Bones about It: Kitchens, Foodways, and Public Archaeology in Arkansas. Paper presented at the 76th Southeastern Archaeological Conference. Jackson MS.
- 2019 Discussant for the symposium "Current African Diaspora Archaeology in the Gullah Geechee Cultural Heritage Corridor," organized by David Palmer, at the 76th Southeastern Archaeological Conference. Jackson MS.
- 2020 Home Front Archeology: World War II in Arkansas. National Park Service's ArcheoThursday Topics in Archeology Webinar. National Park Service, Washington DC.
- 2020 Public Archaeology 2020: Arkansas as a Case Study. Plenary address at the annual meeting of the Archaeological Society of South Carolina. Columbia SC.
- 2020 Antiracism and the Challenges of Interpreting Race and Slavery: A Behind the Big House Workshop, organized with J. Skipper for the 53rd Annual Conference of the Society on Historical and Underwater Archaeology. Boston MA.
- 2020 Panelist for the session "Where Do We Go from Here? Archaeology as Social Activism," organized by C. Barton, at the 53rd Annual Conference of the Society on Historical and Underwater Archaeology. Boston MA.

Beaupré, Andrew

- 2020 Toward an Archeology of French Settlement in the Arkansas River Valley: Chasing the Arkansas Post in the Documentary and Archeological Records. Invited paper presented at the 53rd Annual Conference of the Society on Historical and Underwater Archaeology. Boston MA.

**Beaupré, Andrew**, Holly Delwiche, and Erin Delwiche

- 2020 Skeletons in the Cabinet: Historical Memory and the Treatment of Human Remains Attributed to the Schenectady Massacre of 1690. Paper presented at the 53rd Annual Conference on Historical and Underwater Archaeology. Boston MA.

Cande, Kathleen

- 2019 Medicine in Early Nineteenth Century Arkansas Revealed by Records from Doctors Ritchey and Lister, Davidsonville, Arkansas. Paper presented at the annual meeting of the Arkansas Archeological Society. Hot Springs AR.

Cotton, Tommie, and Mary Beth Trubitt

- 2020 Archeology at Amos, 1976 and 2020. Paper presented at the 62nd Caddo Conference and 27th East Texas Archeological Conference. Tyler TX.

Drexler, Carl G.

- 2019 Digging into the Little River Region: Preliminary Results from the 2019 Arkansas Archeological Society Training Program. Paper presented at the annual meeting of the Arkansas Archeological Society. Hot Springs AR.
- 2020 Conflict Behind the Lines: Considering Civilians in Conflict Archeology. Paper presented at the 53rd Annual Conference on Historical and Underwater Archaeology. Boston MA.

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

- 2020 Conflict Archeology and Thanatourism in Arkansas in the 2020s. Presented at the virtual annual meeting of the Arkansas Archeological Society. Online at <https://www.youtube.com/watch?v=bV1b8Jz0S64&feature=youtu.be>
- Drexler, Carl G., and Jami J. Lockhart
- 2020 A Four-Year Walk in the Park: Surveying the Pea Ridge CESU. Presented at the virtual annual meeting of the Arkansas Archeological Society. Online at <https://www.youtube.com/watch?v=TYSmqdOd90&feature=youtu.be>
- Hammerstedt, Scott W., Patrick C. Livingood, **Jami J. Lockhart**, **Tim Mulvihill**, Amanda L. Regnier, **George Sabo III**, and **John R. Samuelsen**
- 2019 Identifying Social Landscapes at Spiro through Geophysical Survey. Paper presented at the 76th Southeastern Archaeological Conference. Jackson MS.
- 2020 Identifying Social Landscapes through Geophysics. Paper presented at the 62nd Caddo Conference and 27th East Texas Archeological Conference. Tyler TX.
- Kowalski, Jessica A.**, and Erin S. Nelson
- 2020 Above and Below the Greenline: Variation in Mississippian Settlement Patterns in the Yazoo Basin of the Lower Mississippi Valley. Paper presented at the joint meeting of the Louisiana Archaeological Society and the Mississippi Archaeological Association. Natchez MS.
- Kowalski, Jessica A., Jared Pebworth, Michael Evans, and Jami J. Lockhart
- 2020 The Borden House Hillslope: An Important Feature of the Civil War Landscape in Northwest Arkansas. Presented at the virtual annual meeting of the Arkansas Archeological Society. Online at <https://www.youtube.com/watch?v=nZVmoQrqFb0&feature=youtu.be>
- Livingood, Patrick C., Scott W. Hammerstedt, **Jami J. Lockhart**, **Tim Mulvihill**, Amanda L. Regnier, **George Sabo III**, and **John R. Samuelsen**
- 2020 Understanding the Organization of a Pilgrimage at Spiro. Paper presented at the 62nd Caddo Conference and 27th East Texas Archeological Conference. Tyler TX.
- Lockhart, Jami J.
- 2019 Results of Pea Ridge Battlefield Landscape Archeology. Presentation for management and staff of Pea Ridge National Military Park. Pea Ridge, AR.
- 2019 Landscape Archeology for the Battle of Pea Ridge. Paper presented to the Pea Ridge National Military Park Foundation. Pea Ridge AR.
- Morrow, Juliet E.**, J. Christopher Gillam, **Sarah Stuckey**, and Sean Roads
- 2019 Human Colonization of the Ozarks. Paper presented at the annual meeting of the Arkansas Archeological Society. Hot Springs AR.
- 2019 Paleoindians in the Ozarks. Paper presented at the 76th Southeastern Archaeological Conference. Jackson MS.
- Rathgaber, Michelle**, and Chris Nance
- 2020 Preliminary Analysis of Richard's Bridge Area 5. Presented at the virtual annual meeting of the Arkansas Archeological Society. Online at <https://www.youtube.com/watch?v=AH5cLm8HOE0&feature=youtu.be>
- Sabo, George III
- 2020 The Archeology of Caddo Story Telling. Keynote presentation at the 62nd Caddo Conference and 27th East Texas Archeological Conference. Tyler TX.
- Samuelsen, John R.**, and Adriana Potra
- 2020 Biologically Available Pb: A Method for Ancient Human Sourcing Using Pb Isotopes from Prehistoric Animal Teeth. Paper presented at the 62nd Caddo Conference and 27th East Texas Archeological Conference. Tyler TX.
- Scott, Robert J.
- 2019 The Mike Wilson Collection: A Recent Donation to the Arkansas Archeological Survey. Paper presented at the annual meeting of the Arkansas Archeological Society. Hot Springs AR.
- Trubitt, Mary Beth
- 2019 The Local and National Significance of Hot Springs National Park's Novaculite Quarries. Paper presented at the annual meeting of the Arkansas Archeological Society. Hot Springs AR.
- 2019 Publishing in *Southeastern Archaeology*. Poster presented at the 76th Southeastern Archaeological Conference. Jackson MS.

Trubitt, Mary Beth, George Sabo III, and Teka McGlothlin

2020 Interpreting Caddo Effigy Vessels through Technology, Stories, and Dance. Paper presented at the 62nd Caddo Conference and 27th East Texas Archeological Conference. Tyler TX.

Zabecki, Mel, and Michelle Rathgaber

2020 Outreach when Reaching Out is Not an Option. Presented at the virtual annual meeting of the Arkansas Archeological Society. Online at [https://www.youtube.com/watch?v=3F9E\\_qMd\\_X4&feature=youtu.be](https://www.youtube.com/watch?v=3F9E_qMd_X4&feature=youtu.be)

### **Papers accepted to professional conferences that were postponed or cancelled due to the pandemic:**

Lockhart, Jami J., George Sabo III, and Jerry Hilliard

[2020] Geophysics, Discovery, and Changing Perceptions in the Protohistoric Arkansas River Valley. Society for American Archaeology. Austin TX. (April 2020)

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

[2020] Multisensor Geophysical Survey at Spiro Mounds: Changing the Landscape. Society for American Archaeology. Austin TX. (April 2020).