Have you ever thought about how ancient people made and used artifacts in the past? This semester, Sierra Bow is teaching a unique class centered on experimental archaeology, a dynamic field that connects theoretical concepts with practical experimentation. Through reconstructing and testing ancient methods and technologies, experimental archaeology serves as a vital bridge between theory and practice.

In this class, students do not merely learn about the past through examining material remains, but actively explore how dynamic human behaviors in the past led to the creation of static artifacts that archaeologists uncover today. Students also learn how to formulate research questions, conduct small-scale experiments, and publicly report on their findings.

A recent visit from Andrew Bradbury, a local archaeologist with Cultural Resource Analysts, Inc. (CRAI), has further enriched this hands-on approach. During his demonstration of flintknapping, students witnessed the process of crafting stone tools and were able to create their own, an experience that proved more challenging than many of them had anticipated.

After flintknapping, students had the chance to use their stone tools in a practical setting: butchering and processing deer. This unique opportunity arose through a partnership with a Tennessee State Park, which, as a part of an active management plan to mitigate deer overpopulation, had just completed a deer cull on park property. By using deer harvested as part of this management activity, class members accessed these resources without undue waste, adding sustainability and resourcefulness to their experience.

This collaboration underscores the importance of interdisciplinary partnerships in archaeological research and has provided course participants with a distinctive learning experience. Many students have planned their research projects with materials sourced from the deer. Some focused on distinguishing stone tool use-wear signatures on fresh and frozen meat, bone, and wood. Others chose to replicate bone artifacts like awls and fishhooks. One student has collected and burned long bones to test how bone black pigments are created, while another collected deer hides and brains to explore Native American tanning practices.

Students are also using a range of other materials and techniques for class projects. For example, two students intend to examine the production of hickory nut flour from harvested nuts, while concurrently analyzing the wear patterns on grinding stones employed in this procedure. Another student intends to replicate atlatl (spear thrower) weights and assess their impact on throwing velocity.

Throughout the semester, students will engage in many additional hands-on activities including processing local clays, hand-building pottery vessels, and, if the weather is nice, firing these vessels. Additionally, students will assist Kandi Hollenbach with planting the Southern Foodways Garden, gaining insights into the practical aspects of agricultural practices. Aaron Deter-Wolf, an archaeologist from the Tennessee Division of Archaeology, will share insights from his research on ancient tattooing practices later in the semester.

Through hands-on experimentation and collaboration with experts in the field, Sierra Bow’s Experimental Archaeology course offers students a unique opportunity to engage with the past in a meaningful and tangible way. Through the integration of theoretical knowledge with practical experience, students gain a deeper understanding of ancient cultures while honing valuable skills in critical thinking and scientific research methodologies. At the end of the semester, students will present their research in a public poster symposium held in the anthropology department.
Remarkable things are happening in anthropology, and I am excited to share them with you in this issue of Anthropos. Our academic programs continue to thrive, with yet another year of increasing undergraduate enrollment, faculty growth, and the launch of the new archaeology concentration.

In August we welcomed Arsalan Khan to the department as a new associate professor. He is a cultural anthropologist who specializes in the intersections of ritual, gender, ethics, and semiotics. In January we welcomed back Yanaseung Jeong as a new assistant professor. His work focuses on forensic anthropology in the areas of decomposition and biological profile reconstruction. Sierras Blos has also joined the faculty as a full-time lecturer in archaeology. She uses non-destructive analyses of ancient rock art paintings and pottery to better understand past native peoples of the Southeast. We are also excited that recent PhD Kathleen Hauther joined the department for the spring 2024 semester as a lecturer in biological anthropology, teaching human osteology and lab-based courses in forensic anthropology. Two new staff members also joined the department, Helen Spencer, and Joey O'Dea. You can read more about the exciting work of these new faculty in this edition of the newsletter. Welcome all!

Our faculty continue to do impactful research that is attracting national and international attention. Arsalan Khan’s first book, The Promise of Peiyi: Islam and the Politics of Moral Order in Pakistan, was published in February, earning glowing reviews. The outstanding and long-term research relationship of Amy Mundorff, Joanne Devlin, Dawne Steadman, and Giovanna Vidoli with the National Institute of Justice brought them well-deserved recognition in 2023. Gracelina Calabria’s collaborative work to increase diversity within evolutionary anatomical sciences resulted in a prestigious three-year award from the National Science Foundation, Kandi Hellenbach, Amelie Janzen, and I received a two-year research award to explore human-plant-animal interactions in the early colonial Chesapeake. This funding will also further graduate student research and public outreach.

Last spring, the faculty gathered to celebrate the retirement of Lee Jantz, forensic anthropologist and distinguished lecutor. An emeritus faculty member, Lee remains active working on cases with the Forensic Anthropology Center. We also celebrated the career of Professor David Anderson, who retired after more than 18 years at the university. An expert in the archaeology of the Southeast, he served as associate department head and director of graduate studies for the department for many years. David was a professor emeritus. I have generously contributed funds to help establish an endowment for southeastern archaeology that will provide support to graduate students working in this area. Over the next two years, the department will seek additional funds to ensure that the endowment goals are met and that David’s legacy in southeastern archaeology is honored through the future work of our students.

For the last two years, the department has provided funding to graduate students needing research support for travel, pilot studies, and equipment. Our students work around the world on groundbreaking projects encompassing the diversity of modern anthropological inquiry. We are working to establish a long-term, sustainable source of funding for future student research needs, and we welcome your support.

I recently enjoyed attending a luncheon and award ceremony hosted by the Office of Alumni Affairs in honor of the University’s Volunteer 40 Under 40 Class of 2024. I am excited and proud to report that Bonnie Johnson, who earned her bachelor’s degree in anthropology in 2015, was recognized for her outstanding work as director of the Pride Center, the university’s LGBTQ+ resource center.

I hope you enjoy this issue of the newsletter. Please reach out if you would like to learn more about the department and our exciting plans for the coming year.

Sincerely,
Barbara Heath
Professor and Head

UT hosted a delegation from the National Institute of Justice (NIJ), the research and development arm of the US Department of Justice, on December 4, 2023. The event kicked off with the announcement of three new awards involving Department of Anthropology faculty and staff as principal investigators, co-principal investigators, and key personnel. The event included a panel discussion bringing together forensic scientists, law enforcement, victim’s family members, the National Missing and unidentified Persons System (NamUs), and Bode Technology Group, moderated by Lucas Zarwell, the director of the Office of Investigative and Forensic Sciences at NIJ. During the panel, Zarwell highlighted how NIJ’s support of forensic research has led to more efficient and effective technology for the identification of missing persons.

“I am so pleased we have partnered today to lift up this important research and engage in a panel discussion to learn from forensic scientists, law enforcement, and victim advocates about how this research is developed and used in support of NamUs specifically and in the interests of safety, equity, and justice with larger,” said Nancy La Vigne, director of the National Institute of Justice.

Following the panel, guests received a tour of the Forensic Anthropology Center (FAC) and Anthropology Research Facility, led by Director Dawne Steadman. Steadman explained that the more than 2,000 individuals who have donated their bodies to the FAC from across the United States make this rich research possible. La Vigne underscored the importance of the research conducted at the University of Tennessee, explaining that the research efforts contribute to fundamental knowledge in forensics and helps solve cold cases, identifies suspects, supports prosecutions, and brings justice to victims and their families.

In addition to the long-term impact of 23 research awards totaling more than $7 million supported by NIJ since 2010, the Department of Anthropology has supported many graduate students with Graduate Research Assistantships funded by this work.

A study evaluating the reliability and accuracy of multi-spectral remote sensing methods in the search for clandestine graves. Giovanna Vidoli and Jodi Armour, co-Principal Investigators, collaborating with investigators Joanne Devlin and Amy Mundorff, UT Department of Anthropology, Alison Demick, UT McClung Museum and the Department of Anthropology, and William Doi, UT Department of Earth Environmental and Planetary Sciences. For this research, the team will use three different geophysical methods of locating graves—ground-penetrating radar, electromagnetic conductivity, and magnetometry—under a variety of conditions, including differing terrain. Their goal is to identify and map locations of clandestine graves, and to estimate time since death (the postmortem interval or PMI) and in situ evidence analysis. However, these geophysical-based forensic tools have a margin of error that is not well understood and that reduces the reliability and forensic science potential of the geophysical methods. Extracellular microbial DNA left over from dead cells, known as relic DNA, may contribute to this margin of error. The grant-funded research seeks to validate these methods for forensic microbiome tools, such as PMI estimation and trace evidence analysis, through the inhibition of relic DNA.

A study evaluating the reliability and accuracy of forensic microbiome applications in criminal investigations. Zach Burchan and Alison Buchan, UT Department of Microbiology, and Giovanna Vidoli. UT Department of Anthropology, are collaborating as co-Principal Investigators on this grant. Because of the ubiquity of microbes, forensic microbiome tools can aid in estimating time since death (the postmortem interval or PMI) and in situ evidence analysis. However, these microbiome-based forensic tools have a margin of error that is not well understood and that reduces the reliability and forensic science potential of the microbiome methods. Extracellular microbial DNA left over from dead cells, known as relic DNA, may contribute to this margin of error. The grant-funded research seeks to validate these methods for forensic microbiome tools, such as PMI estimation and trace evidence analysis, through the inhibition of relic DNA.

The three recent NIJ awards include:

A study of the impact of relic DNA on forensic microbiome applications in criminal investigations. Zach Burchan and Alison Buchan, UT Department of Microbiology, and Giovanna Vidoli. UT Department of Anthropology, are collaborating as co-Principal Investigators on this grant. Because of the ubiquity of microbes, forensic microbiome tools can aid in estimating time since death (the postmortem interval or PMI) and in situ evidence analysis. However, these microbiome-based forensic tools have a margin of error that is not well understood and that reduces the reliability and forensic science potential of the microbiome methods. Extracellular microbial DNA left over from dead cells, known as relic DNA, may contribute to this margin of error. The grant-funded research seeks to validate these methods for forensic microbiome tools, such as PMI estimation and trace evidence analysis, through the inhibition of relic DNA.
The FAC congratulates Lee Meadows Jantz on her retirement from UT. Jantz has tirelessly served the FAC for over 20 years and now enjoys her status as Distinguished Lecturer Emeritus. She is keeping busy helping with forensic casework, maintaining her work with the National Center for Missing & Exploited Children, and visiting her children and grandchild.

Mary Davis is the new FAC Research and Facilities Manager. She joined the FAC in 2017. In her new role, she leads the Body Donation Program, oversees the Anthropology Research Facility and Bass Building spaces, and does a million other things. We are currently hiring a new research associate and look forward to expanding the team in the near future.

Erin Patrick and Stephanie Goble serve as research assistants on Dawnie Steadman’s Biometrics Project. This project aims to gather data which will increase the amount of time that biometric markers (i.e., iris scans, facial photographs, and fingerprints) can be used after an individual’s death to identify them. Both Patrick and Goble received their bachelor’s degrees in Anthropology. They also help with the Body Donation Program and other FAC projects.

Dawsen Hairston and Halleigh Phelps each received funding through UT’s Office of Undergraduate Research and Fellowships to serve as department research assistants. They assist Mary Davis in researching the efficacy of mulch and compost in increasing the rate of decomposition of mummified remains. They will present their research this spring at the EURéCA symposium.

We are excited to be breaking ground this year on the new Forensic Anthropology Laboratory, which will be attached to the William M. Bass Forensic Anthropology Building. This building is dedicated to forensic casework and brings us another step closer to laboratory accreditation. Work is expected to be completed in 2025.

We were pleased to host the National Institute of Justice (NIJ) Director and staff in December 2023. The NIJ has been the primary sponsor of our research for over twenty years. Our current scope of research includes remote sensing, microbiome/necrobiome, DNA degradation, fire trauma, biometrics, AI use in predicting the postmortem interval, soils and plant sciences, and entomology and entomotoxicology.

Joanne Devlin is an active consultant for the National Center for Missing & Exploited Children. Both she and Dawnie Steadman are Diplomates-at-large for the American Board of Forensic Anthropology Board Exam Committees, and Steadman was selected as a member of the Anthropology Section of the Organization of Scientific Area Committees that provides standards for the field.

Five students presented papers and posters this year and one former student won the Ellis R. Kerley Research Award at the American Academy of Forensic Sciences annual meeting. In addition, Joanne Devlin and Giovanna Vidoli joined partners at Arizona State University to present a sold-out workshop titled, “The Impact of Burning on Skeletal and DNA Evidence.”

The FAC annually hosts a variety of short courses for law enforcement officers, forensic professionals, and students in forensic programs at other universities around the globe. In 2023, we welcomed 254 course participants to UT for training in techniques ranging from the recovery of human remains to the identification of non-human bones. The agencies that came to the FAC includes the National Park Service, Tennessee Bureau of Investigations, and three different FBI teams. We also hosted Lewis University and Utah Valley University. We are continuing our relationship with the Bureau of International Narcotics and Law Enforcement Affairs and hosting professionals from Mexico twice a year to hone their skills in burial search, burial excavation, and bone identification. We are looking forward to our summer 2024 courses where we will continue to train forensic professionals from around the world.
In spring 2023, the department recognized outstanding undergraduate and graduate students at our annual awards ceremony. The following students received awards:

Keaundra Allen, Outstanding Graduating Senior in the DDHR concentration
Jonah Bullen, Outstanding Graduating Senior in the Major and the Gerald F. Schroedl Outstanding Graduating Senior Award
William Cavley, Professor Michael H. Logan Outstanding Graduate Student Teaching Award
Megan McQueen, Outstanding Graduating Senior in the Forensics concentration.
Umeria Taylor, the Sandy Jeffers Memorial Scholarship

The annual Exhibition of Undergraduate Research and Creative Achievement (URBICA), took place on April 25, 2023, with 1,179 student participants and 161 awardees. The event provides an opportunity for undergraduates to share their research through poster presentations judged by a panel of faculty. Anthropology major Jack Orebough received an Achievement Award in the College of Arts & Sciences, Division, for his poster titled “Observations of Blows Fly Diversity in Cases of Advanced Burnings.”

Welcome New Faculty

Arsalan Khan, a cultural anthropologist, has joined the department as an associate professor after previously earning tenure at Union College in Schenectady, NY. Through an examination of the Iranian Bektashi and Tablighi Jamaat in Pakistan, his research explores the broader relationship between Islam, secularism, and modernity.

Sierra Bow, a new lecturer in the department, is an anthropological archaeologist who integrates techniques and approaches from the physical, chemical, and earth sciences to address archaeological questions and problems. Her primary research delves into pre-contact cultures within the Southeast United States, utilizing innovative, non-destructive techniques to understand the material properties of ceramics and rock art pigments.

Visit anthropology.utk.edu to read more from the department and learn more about our new faculty members.

Student Excellence

Graduate Students in the News

Megan Kleeschulte, a doctoral candidate in anthropology, received UT’s Excellence in Community Engagement award and was also named the 2023 Graduate Volunteer of the Year.

PhD student Lateefa Abel was awarded a $5,000 McClure Scholarship for travel to Peru to conduct dissertation work with the Lambayeque Valley Biohistory Project.

PhD candidate Mac Archer was awarded a $25,000 American Dissertation Fellowship from the AAWU for her work on Haitian orphanages.

PhD candidate Jordan Schaefer won first place in the Southeastern Archaeological Conference’s Student Paper Competition for “A Phenomenological Study of 12th Century Unnamed Cave, a Dark-Zone Cave Art Site, through 3D Photogrammetric Modeling and Archaeoacoustics” at their annual meeting in Chattanooga.

The March “Student Spotlight” for the Center for Teaching and Learning Innovation featured PhD candidate Jenna Watson. Read more at teaching.utk.edu/graduate-student-spotlight/jenna-watson.

From the Carrels

Anthropology graduate students are hard at work locally and globally. The McClung Museum recently hired doctoral candidate Sadie Counts as curatorial project manager. Her research focuses on the reappropriation of institutional spaces as means of dissent and resistance by Indigenous communities in East Tennessee.

As part of a multi-sited ethnographic research project including Mardi Gras in New Orleans and Carnival in Trinidad and Tobago, doctoral student Brian Boyce is currently studying masking and masquerade as an intrinsic part of the Mardi Gras tradition. His work examines these practices as important forms of cultural resilience and resistance in the African diaspora.

Doctoral candidate Mac Archer’s research focuses on the emotional labor of orphans and nannies to the functioning of orphanages in Haiti. She has worked during the last year as a consultant for the international NGOs Hope and Mercy Corps in Haiti. In November 2023, Archer was featured in an interview titled The Emotional Labor of Care-Affected Children by the podcast Think Orphan.

Between teaching, taking classes, and writing theses and dissertations, anthropology graduate students are also finding time for exciting side projects. Doctoral students Taylor Bowden-Gray, Bridgid Ogden, and Elizabeth Tarulis recently received an EXARC Experimental Archaeology Award for their project “Skin Deep: Determining the Efficacy of ZooMS Methods on Processed Intestinal Artifacts.”

In collaboration with the Maryland Archaeological Conservation Laboratory, they have used Zooarchaeology by Mass Spectrometry to determine which animal species was used to make a condom recovered archaeologically from the fill of an 18th-century well in Maryland. Their work will also examine how manufacturing processes may affect artifact preservation and explore the efficacy of non-destructive analyses.

The Anthropology Graduate Student Association (AGSA) continues to manage the food pantry, a popular and essential free resource for students. AGSA provides snacks, shelf-stable food, household supplies, and hygiene products to all department members. This spring, AGSA members are also working with the Undergraduate Anthropology Association (UAAA) to plan a panel that will include advice to undergraduates about the process of searching for and applying to graduate programs. AGSA has also been holding regular social events to allow graduate students to get together in a more informal setting, with faculty invited to join once a month. They celebrated the end of the fall semester by attending Emo Karaoke night, where students ate holiday cookies and performed their favorite Emo hits together.

Visit anthropology.utk.edu to read more from the department and learn more about our new faculty members.
Studying every aspect of the human condition.

Students in our department have the opportunity to learn about the breadth and diversity of anthropology by studying archaeological, biological and cultural anthropology because of support from generous friends and alumni. Learn more about how you can support students, faculty, and our mission by visiting anthropology.utk.edu.