Sacramento Archeological Society, Inc.
Newsletter

www.sacarcheology.org. September/October - **2025**

UPCOMING EVENTS CALENDAR

September 2025

September 13, 2025 - Saturday, 2:00 – 3:30 PM PT - **SAS Webinar** **Teresa Steele,** Professor, Dept. of Anthropology - UC Davis, **"**The Middle Stone Age from Varsche Rivier 003, South Africa: environmental variation, innovation, and behavioral diversity" at Pena Archaeology Facility (607 Pena Dr. Suite 600; Davis, CA) and via Zoom

September 13, 2025 – Saturday 4:00 – 5:00 PM PT **SAS Board Meeting** at Pena Archaeology Facility (607 Pena Dr. Suite 600; Davis, CA) and via Zoom

September 27, 2025 – Saturday 2:00 – 3:30 PM PT rescheduled **SAS Webinar**, **Tara Johnson,** "Artifactor Scanning System" and **Paleontology Museum Tour in Fremont** at Children's Natural History Museum, 4074 Eggers Dr, Fremont, CA 94536 and presentation via Zoom

October 2025

October 11, 2025 – Saturday 2:00 – 3:30 PM PT - **SAS Webinar** **Brenna M. Henn**, Associate Director for Human Genomics, Associate Professor - UC Davis and **Gillian Meeks**, PhD student UC Davis, "100,000 years of human evolution in Southern Africa" at Pena Archaeology Facility (607 Pena Dr. Suite 600; Davis, CA) and via Zoom
October 11, 2025 – Saturday 4:00 – 5:00 PM PT **SAS Board Meeting** at Pena Archaeology Facility (607 Pena Dr. Suite 600; Davis, CA) and via Zoom

October 17-19, 2025 - **Mariposa field trip**

November 2025

November 1, 2025 – Saturday, 2:00 – 3:30 PM PT - **SAS Webinar** **Melissa Darby,** Historian and anthropologist, Anthropology Department at Portland State, "Culprits behind Plate of Brass: Dare Stones" Zoom
November 2025 - **SAS Board Meeting** Zoom

December 2025

December 6, 2025, Saturday, 1:00 – 6:00+ PM PT **- SAS Annual Meeting and Webinar**
Christyann Darwent, UCD Professor "Inuit cultures in the Arctic"

See announcements: https://sacarcheology.org/announcements/ for **webinar access information** and calendar: https://sacarcheology.org/archaeology-activities/calendar-of-events/ for the complete set of events in our website: www.sacarcheology.org.

UPCOMING EVENTS

SAS Webinar

Saturday, September 13, 2025

2:00 – 3:30 PM PT

"The Middle Stone Age from Varsche Rivier 003, South Africa: environmental variation, innovation, and behavioral diversity"

By

Teresa Steele, Professor, Dept. of Anthropology - UC Davis

at

Pena Archaeology Facility (607 Pena Dr. Suite 600; Davis, CA) and via Zoom

The Middle Stone Age of Africa is significant because it provides the context for the evolution of all living people. During this time and within this technocomplex, human innovations appear which indicate the early evolution of many behaviors that are often seen as reflecting humans' complex cognition and sociality. Historically, much of the evidence comes from archaeological sites situated in the Fynbos of South Africa's southern and southwestern coasts. To explore diversity within the Middle Stone Age, our team initiated excavations at Varsche Rivier 003 to investigate adaptations to the arid Succulent Karoo. In deposits dating from 92-80 thousand years ago we found innovations that distinguished these populations from contemporaries living 100 km to the south in more hospitable environments. However, with subsequent environmental changes, the people using Varsche Rivier 003 employed technologies similar to the people living further in the south, indicating connections between the populations. These results provide the opportunity to further consider the contexts for Middle Stone Age innovation and cultural transmission, in southern Africa and beyond. They can be compared with other innovations found elsewhere in southern Africa, as well as in northern and eastern Africa.

Teresa Steele is a paleoanthropologist who studies the later phases of human evolution – the emergence and evolution of people who were behaviorally and anatomically like recent humans. Professor Steele's research focuses on Middle and Late Pleistocene (780,000-10,000 years ago) archaeology – the Middle Paleolithic made by Neanderthals in Europe and the Middle Stone Age (MSA) made by their contemporaries in Africa. She studies the mode and tempo of human behavioral evolution during this time through zooarchaeology – reconstructing human subsistence and ecology through the patterns of variation found in animal bones and mollusks preserved in archaeological sites. She conducts research in South Africa, Morocco and France.

Rescheduled SAS Webinar and Paleontology Museum Tour in Fremont

Saturday, September 27, 2025

2:00 – 3:30 PM PT

"Artifactor Scanning System"

By

Tara Johnson

at

Children's Natural History Museum, 4074 Eggers Drive, Fremont, CA 94536 and via Zoom

Add a visit the Children's Natural History Museum to enjoy their paleontology and natural history exhibits and view a demonstration of the Artifactor Scan System. As you might recall this presentation was scheduled for June 14 but then cancelled for that day.

What is the Artifactor Scan System?

A simple, convenient, fast, and durable system for unidirectionally scanning three-dimensional objects has many applications in archaeological fieldwork and cataloging collections. Please join us for a presentation on and demonstration of the Artifactor Scan System, a fossil and artifact scanning platform created by Tara Johnson and manufactured at Maker Nexus in Sunnyvale, CA. Using the Widar software (subscription required), scans take approximately 3-5 minutes to collect and 15-20 minutes to process. Please feel free to bring your iPhone and a non-fragile artifact, roughly 1 cubic foot in size, to try scanning for yourself. The Artifactor Scan System is still a prototype, with new types of clamping supports under

active development, so feedback on possible new use cases would be greatly appreciated.

Tara Johnson is a senior at Irvington High School in Fremont, CA. She has eight years of experience applying computer modeling, programming, and rapid prototyping technologies in the digital humanities. She is the creator of the Artifactor scanning system, which was prototyped at Maker Nexus and is being tested in collaboration with the Children's Natural History of Fremont. She is also a contributor to Pyhiero, a Python-based computational linguistics processor that translates *Manual de Codage* (MdC) notation to Unicode Egyptian hieroglyphs.

The seminar will start at 2:00 PM PT and formally conclude at 4:00 PM. Come early (1:00 PM) and explore the museum. Friends are welcome and also invited to join our organization. There is no participation fee. You are invited to attend in person but the presentation will be available in a webinar.

SAS Webinar

Saturday, October 11, 2025

2:00 – 3:30 PM PT

"100,000 years of human evolution in Southern Africa"

By

Brenna M. Henn,

Associate Director for Human Genomics, Associate Professor @ UC Davis

and Gillian Meeks, PhD student @ UC Davis

at

Pena Archaeology Facility (607 Pena Dr. Suite 600; Davis, CA) and via Zoom

South Africa holds a prominent place in the story of human evolution, particularly due to the significant number of hominin fossils found there. The "Cradle of Humankind," a UNESCO World Heritage site near Johannesburg, is a key location for discoveries related to early human ancestors. Fossils like those of *Australopithecus africanus* and *Homo naledi* have provided crucial insights into our evolutionary journey. The advent of population genetic and quantitative genetic theory has added dimensions to this story of human evolution. Genomic data from Sub-Saharan African populations is being coupled with the phenotypic data to paint an evolutionary history. Join U. C. Davis, Professor Brenna Henn and her PhD student in a tour of 100,000 years of human Sub-Saharan evolution from its beginning to South African colonial period.

Brenna Henn is a population geneticist in the Department of Anthropology and in the Genome Center at the University of California, Davis. She began her research by studying the deep population structure and complex migration patterns of African hunter-gatherer groups. Motivated by her PhD training in anthropology, she aims to approach questions of genomic and phenotypic diversity from an interdisciplinary standpoint. She continues to primarily focus on African populations. Her field sites include efforts to collect DNA samples, demographic data and biomedical phenotypes in the Kalahari Desert, Cederberg Mountains and the Richtersveld of South Africa, as well as collaborations in Namibia and Ethiopia.

SAS Mariposa Archaeological Field Trip

October 17-19, 2025

Don't miss Sacramento Archeological Society's Mariposa Archaeological Field Trip. It is scheduled for Friday, October 17 through Sunday, October 19, 2025. The highlights will be a private tour of a Southern Sierra Miwok Village near Mariposa, tours of museum and historic city of Mariposa, visit to Wassama Round House State Park (the site of Gathering Day), and a visit to museum and mining town of Coulterville. The detailed schedule, not the dates are subject to change.

October 17, Friday – Begin tour of Mariposa's historic mining town especially see the courthouse. Visit Mariposa Southern Sierra Miwok Village during the afternoon. See bedrock mortars around a meadow also 1 - 1.5 mile RT hike to an old cabin.
October 18, Saturday – Continue tour of Mariposa and its museum (guided tour 1 1/2 hour $15/person) Drive to Wassama Round House State Park for possible Gathering Day. If Gathering Day happens enjoy the afternoon festivities (dancing, crafts, and basket weaving).
October 19, Sunday - Tour historic mining town of Coulterville prior to a guided tour of museum About 40 minutes-drive from Mariposa to Coulterville. Possible stops at Bagby or Bear Valley on way to Coulterville.

All attendees should make their own lodging reservations. The recommended motel is Miner's Inn, Mariposa (5181 Highway 49 North, Mariposa CA 95338 phone 209 742 7777). Make reservations as soon as possible because space is limited.

All attendees must be members. Since the tour has a limited number of attendees, Please indicate your interest to attend by sending a reservation email with names of attendees to sacarcheology@gmail.com and offer a small donation of. $25/person via https://sacarcheology.org/society-membership/sas-donations-and-membership-payment/.

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PAST EVENTS

SAS Webinar "Discover Mayan Civilization in Meso America: Reflections from Mexico City, Belize and Guatemala"

On Tuesday, July 1 Lynette Blumhardt, Jan Johansen, Tom Johansen, Jeremy Johansen reminisced on their tour of Mexico City, Belize and Guatemala. Before the archaeological tour of Belize and Guatemala tour organized by The Archeological Conservancy the group of four went to Mexico City and visited archaeological sites including Teotihuacan. Pictures and commentary from these locations highlighted the architecture, calendar, astronomical knowledge, trade and conflict between cities.

Seventh Annual SAS Pool-Party/Pot-Luck/Social

Thanks again to Dan and Victoria Foster for hosting this social on July 26. It is so nice to meet fellow SAS members.

SAS Workshop "A Workshop on Identifying Fluted Points"

On Saturday, August 16, sixteen SAS members learned about lithics by viewing and identifying fluted points at Pena Archaeology Facility (607 Pena Dr. Suite 600; Davis, CA). Michael F. Rondeau, a noted lithics expert provided hands-on samples (casts and replicas) of various fluted points and showed pictures highlighting salient characteristics of fluted points.

MEMBER'S CORNER

Memberships

No new members this period. We are welcoming Renaissance Society members with a special offer.

Major Donors

We are pleased to acknowledge our major contributors for 2024/2025. These donations support our scholarship program.

Patron (**$1000** or more, listed in alphabetical order)
Paul K. Davis and Knuti VanHoven
Jan and Tom Johansen
Dennis Fenwick and Martha Lewis
Ruth McElhinney
Carolyn and Gordon McGregor

Sponsor ($100 - $999)
OSISoft a division of AVEVA
Lynette Blumhardt
Larry Boerio
Jean Coy
George W. Foxworth
Jeremy Johansen
Tori Lyon
Roger and Lydia Peake
Teresa Steele

Annual Memberships

All memberships are renewable on **January 1** annually except for those who joined recently (after September 1 of the previous year). Please support the society by promptly paying your **2025** dues. Remember your dues help make **scholarships** possible. We keep overhead low so that the funds can be used to support students. You may now use our web site https://sacarcheology.org/society-membership/pay-dues/ to renew and make payment using a

credit card or Paypal. Remember a membership benefit is email receipt of archaeological/anthropological articles and notices of related events.

The annual dues are:	
Student/Limited Member	$15
Individual Membership	$30
Family Membership	$40
Sponsor	$100 - 999 (individual)
	$500 - 999 (business)
Patron	$1000

Alternatively, please make out your check to "**Sacramento Archeological Society, Inc**." and mail it to:

Sacramento Archeological Society, Inc.
P.O. Box 163287
Sacramento, CA 95816-9287
We really appreciate your support.

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Annual Dues for 2025

Name(s):_____ Email: _____ **Phone:** _____

_____ Email: _____ **Phone:** _____

Address:

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Student/Limited Member	$15	____	$_____
Individual Membership	$30	____	$_____
Family Membership	$40	____	$_____
Sponsor	$100	____	$_____
Scholarship Donation			$_____

Total enclosed $_____

ARCHAEOLOGICAL REFERENCES

Recent Articles

The reviewed article(s) chronologically presented (oldest subject first) are:

- “The Riddle of Coexistence – Two million years ago, three kinds of hominins walked the same valley in South Africa Did they meet—and compete?”
- “Female lineages and changing kinship patterns in Neolithic”
- “Ancient DNA helps pinpoint source of Roman sauce”
- “Pre-European contact leprosy in the Americas and its current persistence”
- “Origins and diversity of Greenland’s *Qimmit* reveals with genomes of ancient and modern sled dogs”
- “Picuris Pueblo oral history and genomic reveal continuity in US Southwest”
- “AI challenge to find lost Amazonian cities draws critics”

“The Riddle of Coexistence

“Uniquely human’ language capacity found in bonobos

Two million years ago, three kinds of hominins walked the same valley in South Africa. Did they meet—and compete?”

“A selection of 2-million-year-old archaeological sites in the Cradle of Humankind shows that our own genus, *Homo*, *Australopithecu*s and the more robust hominin called *Paranthropus* all shared the landscape. But it’s hard to prove all three were present at the exact same time. All three genera of hominins inhabited the cradle 2 million years ago walked upright; had short, likely hairy bodies with relatively small brains; and ventured along riverine forests near the caves. Stone and bone tools found near *Paranthropus* and early *Homo* remains suggest both hominins may have used tools. Also, females of all three species had smaller bodies, suggesting social structures in which a few males lead groups of females and infants. But there are key differences. A remarkably complete, articulated *P. robustus* hip thigh, and shin bone found in 2019 at Swartkrans shows adult females of this species were sturdy but very short, about the size of a baboon (1 meter high weighing ~27 kilograms). That’s a shade smaller than diminutive hominins such as Lucy’s species, *A. afarensis*. But *Paranthropus* had a robust head, with a crest to attach its powerful chewing muscles and a brain rather larger than a male chimp’s. As for *A. africanus*, it resembled Lucy’s species in East Africa, with a brain slightly bigger than Lucy’s or a chimp’s but 1/3 smaller than that of early *Homo*. Shoulder and hand bones suggest *A. africanus* still climbed tree, as did *Paranthropus*. Although its hands could have made tools, none have so far been found in the same layers with *A. africanus* or *A. sediba*. The South African discoveries show our ancestors emerged from a diversity of forms unimaginable today. But they may also reveal that made those ancestors stand out from their contemporaries.” (Ann Gibbons, Science, 2025-07-24 pp. 338-343)

“Female lineages and changing kinship patterns in Neolithic Çatalhöyük”

“Çatalhöyük is a Neolithic settlement in Anatolia and a United Nations Educational, Scientific and Cultural Organization World Heritage Site. Occupied for 1000 years (9000 to 8000 BCE), it is renowned for its size, apparent egalitarian social structure and subfloor burials, where children

and adults were buried within houses during their use. It is also known for its large corpus of female figurines, which were long debated as possible representatives of a "Mother Goddess" cult and signs of a matriarchal society. The researchers studied social organization at Çatalhöyük by fusing rich archaeological data with paleogenomic dataset of 131 individuals buried in 35 houses. They focused on identifying genetic ties between individuals buried together inside the same buildings. Comparing genetic ties within and between buildings, they found that the maternal lineage had a key role in connecting Çatalhöyük household members. They estimated that 70 to 100% of the time, female offspring remained connected to buildings, whereas adult male offspring may have moved away. They also discovered preferential treatment of female infant and child burials, with five times more grave goods offered to females than to males. They noted that social organization patterns changed over time in Çatalhöyük. In the early phases of the settlement, individuals buried together within houses frequently represented extended family members. Through time, the genetic composition of house burials became less homogeneous. In later periods, they found groups of neonates who were genetically unrelated but buried in the same house. Despite this shift, female-centered practices continued at Çatalhöyük through the occupation." (Eren Yüncü *et al*, Science, 2025-06-26 p. 1386)

"Ancient DNA helps pinpoint source of Roman sauce"

"Remnants of DNA extracted from bone fragments confirm that sardines were a major ingredient of the Roman Empire's favorite fish sauce. Garum—an umani-packed fish sauce—was a common condiment in the cuisine of ancient Rome. It was created at vast outdoor facilities, at which small fish were smashed and then pickled in vats of brine. Fish bones at the bottom of these vats suggest that sardines might have been a key ingredient. However, the remains are often mangled and hard to identify. To see whether DNA could provide some answers, Gonçalo Thermudo at the University of Porto in Portugal and his colleagues sequenced DNA in fish bones found in garum vats at the archaeological site in northwestern Spain. Even though the remains had been mashed and fermented and then left to rot for centuries, the team succeeded in extracting DNA. All of the fish bones belonged to European sardines (*Sardina pilchardus*). Along with other archaeological finds from across the empire, this suggests that sardines were a standard component of garum and a major food source for ancient Romans." (*Nature*, V643, 2025-07-10 p. 307)

"Pre-European contact leprosy in the Americas and its current persistence"

"Leprosy is a chronic infectious disease historically associated with *Mycobacterium leprae*, a pathogen whose emergence and global spread have been extensively studied through ancient and modern genomes. By contrast, the second causative agent of leprosy, *Mycobacterium lepromatosis*, was only identified in 2008 and is mostly reported in the Americas, with a few sporadic cases in Asia, and in red squirrels from the British Isles. Although *M. leprae* was introduced to the American during European colonization the evolutionary and epidemiological

history of *M. lepromatosis*—including is origin and diversification—remains poorly understood, largely owing to the scarcity of genomic data. This study provides definitive evidence that leprosy caused by *M. lepromatosi*s existed in the Americas before European contact and was geographically widespread. The researchers identified multiple distinct *M. lepromatosis* clades circulating across the continent, some of which persist today. Their findings suggest that this pathogen diversified within the Americas during the Late Holocene, underscoring the value of ancient genomic for understanding infectious disease history. Expanding the temporal and geographic sampling of both ancient and modern strains will be critical to better understand the evolutionary and epidemiological history of this neglected human pathogen." (Maria Lopopolo and Charlotte Avanzi *et al*, *Science*, 2025-07-24 p. 367)

"Origins and diversity of Greenland's *Qimmit* revealed with genomes of ancient and modern sled dogs"

"The *Qimmeq* (Greenland sled dog) has worked continuously with the Inuit in Greenland for more than 800 years. However, they now face drastic population declines caused by climate changes, urbanization, and competition from snowmobiles. This study sequenced 92 modern and ancient genomes to investigate how centuries of isolation shaped the regional *Qimmeq* populations and the impact of European contact. The researchers found distinct regional populations and evidence for two migrations of dogs into Greenland with the Inuit from Canada. Furthermore, they found that there is minimal European ancestry in present day *Qimmit* and limited recent inbreeding despite low heterozygosity. These insights are critical for conservation efforts aimed at preserving the *Qimmit* amid environmental changes and cultural transitions." (T. R. Feuerborn *et al*, Science, 2025-07-10 pp. 163-168)

"Picuris Pueblo oral history and genomics reveal continuity in US Southwest"

"Indigenous groups often encounter significant challenges when asserting ancestral claims and cultural affiliations base on oral histories, particularly in the USA where such narratives have historically been undervalued. Although ancient DNA offers a tool to complement traditional knowledge and address gaps in oral history, longstanding disregard for Indigenous sovereignty and beliefs has understandably led many Indigenous communities to distrust DNA studies. Earlier research often focused on repatriation clams, whereas more recent work has increasingly moved towards enhancing Tribal histories. In this article the researchers present a collaborative study initiated by a federally recognized Native American tribe, the sovereign nation of Picuris Pueblo in the Northern Rio Grande region of New Mexico, USA to address gaps in traditional knowledge and further their understanding of their population history and ancestry. They generated genomes from 16 ancient Picuris individuals and 13 present-day members of Picuris Pueblo, providing genomic data spanning the last millennium. They show genetic continuity between ancient and present-day Picuris and more broadly with Ancient Puebloans from Pueblo Bonito in Chaco Canyon, 275 km to the west. This suggests a firm spatiotemporal link among these Puebloan populations of the North American Southwest.

Furthermore, they see no evidence of population decline before European arrival and no Athabascan ancestry in individuals predating 1500 CE, challenging earlier migration hypotheses." (Thomas Pinotti *et al*, *Nature*, V642, 2025-06-5 pp. 125-132)

"AI challenge to find lost Amazonian cities draws critics

"Scientists claim OpenAI's contest ignores heritage protection norms"

"OpenAI encourages the public to use AI tools to scrutinize existing data from the Amazon rainforest for traces of lost ancient cities. The OpenAI to Z Challenge has mobilized tech-savvy researchers worldwide but has also faced criticism from archaeologist, Indigenous communities, and tech ethicists who argue it ignores important research norms, including consultation with the more than 300 Indigenous groups, who live in the rainforest. The contest offers an award of up to $250,000 in cash and credits for OpenAI's products to people who find previously unknown sites by using the company's AI tools to analyzed publicly assessable data, such as satellite and laser imagery and archaeological surveys. Brazil's Indigenous ministry wrote a letter to OpenAI to demand that no data, findings, or site coordinates resulting from the competition be published until OpenAI provides more details on the goals, methodology and legal basis of the challenge." (Sofia Moutinho, Science, 2025-07-10 pp. 115-116)

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