

Sacramento Archeological Society, Inc. Newsletter

www.sacarcheology.org.

May/June - 2020

UPCOMING EVENTS

<u>May 9, 2020</u>, Saturday, 2:00 - 4:00 p.m. – SAS Scholar Webinar, "Ethnographic/ethno historical analysis of social identities of women in Sonoma County between 1900 and 1945" by Bee Thao and "Aidonia excavation in Nemea, Greece and artifact scanning" by David Cook

<u>May 30, 2020</u>, Saturday, 2:00 - 4:00 p.m. – SAS Scholar Webinar "Field excavation at Scladina, Belgium" by Sarah Foley and "Glass bead analysis to ascertain interaction between settlers, mission inhabitants and native groups during 18th century" by Danielle Dadiego

June 20, 2020, Saturday, 2:00 – 4:00 p.m. - SAS Scholar Webinar "Analysis of residence during the early period (ca. 5000-2500 BP) in lower Sacramento Valley and San Joaquin Delta" by Candice Ralson and "Historic Native American village excavation in Northern Sierras" by Jonathan Garcia

See calendar in <u>www.sacarcheology.org</u> for complete set of events. Note that the **The Four Corners Tour will be rescheduled to 2021.**

SAS is dedicated to ensuring we can still educate our supporters in any way possible despite the challenges we're all facing due to COVID-19. We are pleased to report that the March and April SAS Scholar Symposiums that was cancelled due to the COVID-19 are being rescheduled as on-line live-streamed webinars.

These webinars are FREE and open to all, **but attendees must register in advance** by contacting <u>registration@sacarcheology.org</u>. We are working through the use of this new approach.

Details for each webinar can be found below:

Scholar Webinar

May 9, 2020 2:00 – 4:00 p.m.

"Ethnographic/ethno historical analysis of social identities of women in Sonoma County between 1900 and 1945" by **Bee Thao** 2:00 p.m. "Aidonia excavation in Nemea, Greece and artifact scanning" by David Cook ~3:00 p.m.

Bee Thao

Bee is a master's student at Sonoma State University. She has had several years of professional experience in cultural resource management with exposure to Asian American archaeological cultural materials and sites. In 2019 she conducted an ethnographic/ethno historical research project on how Chinese, Japanese and Filipina women in Sonoma County created and maintained multiple social and cultural identities between 1900 and 1945. She used the scholarship to offset expenses associated with oral history interviews of Asian American woman.

David Cook

David is a sophomore at University of California, Berkeley. He used the scholarship to attend a field school at Aidonia in Nemea, Greece and make 3D scans of artifacts.

Scholar Webinar

May 30, 2020 2:00 – 4:00 p.m.

"Field excavation at Scladina, Belgium" by **Sarah Foley** 2:00 p.m. "Glass bead analysis to ascertain interaction between settlers, mission inhabitants and native groups during 18th century" by Danielle Dadiego ~3:00 p.m.

Sarah Foley

Sarah graduated from University of California, Davis in 2019. She has been preparing for graduate school by attending a field school at Scladina, Belgium and volunteering with excavations at Régismont-le-Haute, France. The scholarship offset expenses for the field school.

Danielle Dadiego

Danielle is a PhD candidate at University of California, Santa Cruz. She used this scholarship to conduct archaeometric analyses of glass beads and lead shot for her dissertation research. Her dissertation research explores the question: What was the nature of economic interactions between Spanish settlers, mission inhabitants, and interior native groups with British and French alliances during the eighteenth-century? Her methods combine archival research, traditional artifact analysis and chemical composition and isotopic analyses of glass beads and lead shot using Laser Ablation-Inductivity Coupled Plasma-Mass Spectrometry, Isotopic and chemical composition studies.

Scholar Webinar

June 20, 2020 2:00 – 4:00 p.m.

"Analysis of residence during the early period (ca. 5000-2500 BP) in lower Sacramento Valley and San Joaquin Delta" by Candice Ralson at 2:00 p.m. Historic Native American village excavation in Northern Sierras" by Jonathan Garcia at ~3:00 p.m.

Candice Ralson

Candice is a PhD candidate at University of California, Davis. She used the scholarship to fund stable carbon, nitrogen and oxygen analysis of 30 human bone samples. This analysis, along with others such as strontium and sulfur of human bone and teeth will be used to complete her dissertation research which aims to investigate post-marital residence and sexual division of labor for Early Period (ca. 5000-2500 BP) populations from the lower Sacramento Valley and San Joaquin Delta. Her samples come from archaeological sites CA-SAC-107 (the Windmiller Mound) and CA-SJO-68 (the Blossom Mound). With stable oxygen analysis of human bone apatite results she can estimate where a person lived approximately 5-15 years prior to death.

Jonathan Garcia

Jonathan graduated from Sonoma State University in 2019. He used the scholarship to attend a Chico Archaeological Field School. This field school involved the excavation of a historic Native American village in the Northern Sierras in California.

MEMBER'S CORNER

New Members

We would like to welcome Taylor McGregor, Ilia Potanin, and Robert Meyer as new members in March, 2020. We are happy to have you join us.

Membership's Benefits

Thank you to all members who have renewed their memberships. As a membership benefit members are receiving archaeological/anthropological articles as they are available through email. If anyone comes across an article that you think might be interesting to members, please forward a copy or reference for distribution to janjohansen@sbcglobal.net.

Renewal of Annual Memberships

All memberships are renewable on **January 1** annually except for those who join recently (after September of the previous year). Please support the society by promptly paying your **2020** dues. Remember your dues make scholarships possible. For more information use our web site http://sacarcheology.org/society-membership/ to renew and make payment using a credit card or Paypal.

ARCHAEOLOGICAL REFERENCES



The Dirt – A podcast for all ages and backgrounds about archaeology, anthropology, and our shared human story <u>http://thedirtpod.com</u>

Recent Articles

"Diverse cultures dance to a similar tune"

"From Samoans and East Africa's Maasai to Bahia Brazilians and Highland Scots, peoples around the world have different languages, traditions and histories. But their songs share universal patterns.

Samuel Mehr at Harvard University in Cambridge, Massachusetts, and his colleagues analyzed audio recordings of songs from 315 cultures all over the globe. The researchers found that music exists in all the sampled societies and varies more within groups than between them.

In a specific society, songs differ depending on the context in which they are sung, such as lively celebrations or calmer events. But across all cultures the team could identify four distinct, recurrent song types: dance tunes, healing songs, love ballads and lullabies.

Around the world songs that are used in the same way share characteristics. For example dance songs are faster and more rhythmic than lullabies, and love songs use a larger number of pitches, on the average than dance songs do.

The team also showed that Western listeners who have never heard traditional music could listen to a song and successfully guess its type from its musical features." (*Nature*, V 575, 2019-11-28, p, 568)

"Single strain of plague fingered in Europe's Black Death"

"A single, highly virulent strain of *Yersinai pestis* bacterium probably introduced from western Asia or Eastern Europe was responsible for the Black Death pandemic that wiped out as much as 60% of Europe's population in the 14th century. Until now, scientists didn't know whether the deadly pathogen that caused plague came from a single area or was introduced by multiple travelers carrying diverse strains from around the ancient world. Researchers at the Max Planck Institute for Science of Human History in Jena, Germany, identified the single strain by analyzing 34 ancient genomes of *Y. pestis* from the teeth of people buried at 10 sites in Russia and Europe from the 14th to 17th centuries. In *Nature Communications* the researchers describe a strain from Russia's Volga region ancestral to all other, later strains in Europe they studied, differing by only one mutation. But, they note, the pathogen could have reached Russia from elsewhere." (*Science*, 2019-10-4, V 366, p. 15)

"Symbolic behavior in Neanderthals"

"A new discovery provides rare evidence of symbolic behavior in Neanderthal communities and extends the record further geographically and temporally across Europe. Rodriguez-Hidelgo *et al.* analyzed recently unearthed Spanish imperial eagle phalanges, which were found along the

Iberian Peninsula, and inferred that Neanderthal communities used these talons for symbolic purposes. Neanderthals most likely cut the eagle phalanges to extract the talon, presumably for use as pendants. These findings address questions around the recurrent appearance of large raptor talons throughout the Middle Paleolithic time frame." (*Science*, 2019-11-01, V 366 p. 584)

"Cave painting suggests ancient origin of modern mind

Half-human, half-animal hunters in mythical scene show early artists in Indonesia had

sophisticated imaginations"

"Some 44,000 years ago, an artist climbed high onto a cave ledge on an Indonesian Island, paintbrush in hand. Perhaps inspired by spiritual visions, the artist sketched a dynamic scene featuring, tiny, animal-headed hunters armed with spears cornering formidable wild hogs and small buffaloes. In a new study, researchers argue that the scene's visionary story telling—which they claim represents the oldest known figurative are made by modern humans—shows that people already had imaginations much like our own at the time of the cave painting and likely much earlier.

For the past 5 years, Maxime Aubert, an archaeologist at Giffith University in Nathan, Australia and colleagues have been exploring dozens of caves on the Indonesian island of Sulawesi and have turned up hundreds of hand stencils, cave paintings, red pigment crayons, and carved figurines. Archaeological data suggest the artists came with an early wave of modern humans some 50,000 years ago.

In the small cave above a previously explored limestone cave, the archaeologist found the scene. The hunted animals appear to be the Sulawesi warty pig and a small horned bovine called an anoa, or dwarf buffalo, both of which still live on the island. But it was animal like features of the eight hunters, armed with spears or ropes that captivated Aubert. Several appear to have elongated muzzles or snouts. One seems to possess a tail, while another's mouth resembles a bird beak. The features could depict masks or other camouflage, but the researchers argue that dressing like small animals would be a poor disguise for hunters. More likely, the figures represent mythical animal-human hybrids. Such hybrids feature in several instances of early artwork.

By analyzing the uranium to thorium in a mineral layer directly on top of the pigment, the researchers calculated the painting's minimum age: 44,000 years old. That would make the cave scene at least 4000 years older than other instances of figurative ancient rock art found in Indonesia and Europe and some 20,000 years older than the oldest depictions of hunting scenes in Europe" (Michael Price., *Science*, V. 366, 2019-12-13, p. 1299)

"The Arrival of Strangers

New evidence points to a clash between two ancient Mesoamerican cultures, Teotihuacan and the Maya $^{\prime\prime}$

"Evidence from Maya writing and art suggests Teotihuacan conquered Tikal during the 4th century C.E. On 16 January 378, C.E. Sihyaj K'ahk' arrived in Tikal. He was likely a mighty warrior from a distant land, Teotihuacan, a metropolis of 100,000 people about 1000 kilometers northwest of Tikal, near today's Mexico City. On that same day the Tikal ruler, Jaguar Paw died. The stone Maya monuments that record Sihyaj K'ahk's arrival suggest that he had been sent by a

powerful foreign ruler called Spearthrower Owl. Within 2 years, Spearthrower Owl's young son was crowned the new king of Tikal. In portraits carved on stone monuments there, the new king, named Yax Nuun Ayiinm, holds an atlatl, a spearthrower used by Teotihuacan warriors, and wears a Teotihuacan-style headdress adorned with tassels. Some images of him and his father on monuments at Tikal are even carved in the flat geometric style of Teotihuacan art, distinct from the intricate, naturalistic portraits of the Maya. Under the exotic new king and his descendants, Tikal became one of the most powerful cities in the Maya region.

Maya travelers visiting Teotihuacan during the fourth century would have encountered a vibrant city with three enormous pyramids, an orderly grid of roads extending from a central avenue, and standardized apartment complexes. Economic inequality was strikingly low. Depictions of warriors in Teotihuacan's art as well as human sacrifices entombed in military regalia, spoke of the city's military might. Merchants from far-flung places such as Oaxaca to the southeast and the Gulf Coast brought goods for Teotihuacan's markets and pilgrims flocked to the city for religious ceremonies. Some of those foreigners settled and set up ethnic enclaves that archaeologists can identify from their foreign household goods and burial practices. Luxury goods prized in Teotihuacan such as jade, cacao, and brightly colored quetzal feathers, all came from the tropical jungles of the Maya lowlands.

Diplomacy and trade with the Maya area was politically fragmented. It was dotted with largely independent city-states knitted together by shared religion and cultures, similar to ancient Greece. The most powerful, such as Tikal and its nearby rival Calakmul, commanded the loyalty of smaller cities. But alliance shifted constantly, and no Maya king ever managed to politically unite the entire 390,000-square-kilometer region. Teotihuacan likely had distinct and ever-changing relationships with different Maya cities. Radiocarbon dating, as well as the exact dates the Maya recorded on their monuments, shows definitively that the cultures existed at the same time. Their interactions were most intense in the fourth and fifth centuries C.D. What archaeologists disagree on is whether that relationship was peaceful and reciprocal or was based on violence and domination.

During the same period as the conquest, defaced art in Teotihuacan suggests that Teotihuacan may have turned against Maya expatriates who had lived there peacefully for decades. An archaeological team from UC Riverside who has been excavating Teotihuacan uncovered a plush compound of buildings once decorated with elaborate Maya mural painted in vivid hues, such as blues and greens, not often seen in Teotihuacan art. When the team found the elegant murals, they were no longer attached to the compound's walls, as much of Teotihuacan's art still is. The mural had been smashed to pieces and deeply buried. Faces were cut and scratched off until they were unidentifiable. The destruction took place between 350 and 400 C.E.

In about 550 C.E. Teotihuacan collapsed, its downtown burned in what was perhaps a rebellion by its own citizens. But centuries later, Tikal's kings still celebrated military victories by dressing as Teotihuacan warriors. Whatever happened in 378, its member lingered far longer than Teotihuacan itself." (Lizzie Wade, *Science*, 2020-1-17, V. 367 pp. 969-973)

"Stiffness of the human foot and evolution of the transverse arch"

"The stiff human foot enables an efficient push-off when walking or running, and was critical for the evolution of bipedalism. The uniquely arched morphology of the human midfoot is thought to stiffen it, whereas other primates have flat feet that bend severely in the midfoot. However, the relationship between midfoot geometry and stiffness remains debated in foot biomechanics,

podiatry and paleontology. These debates center on the medial longitudinal arch and have not considered whether stiffness is affected by the second, transverse tarsal arch of the human foot. In this article they show that the transverse tarsal arch, acting through the inter-metatarsal tissues, is responsible for more than 40% of the longitudinal stiffness of the foot. The underlying principle resembles a floppy currency note that stiffens considerable when it curls transversally. The researchers derive a dimensionless curvature parameter that governs the stiffness contribution of the transverse tarsal arch, demonstrate its predictive power, using mechanical models of the foot and find its skeletal correlate in hominin feet. In the foot, the material properties of the inter-metatarsal tissues and the mobility of the metatarsal may additionally influence the longitudinal stiffness of the foot and thus the curvature-stiffness relationship of the transverse tarsal arch. By analyzing fossils, they track the evolution of the curvature parameter among extinct hominines and show that a human-like transverse arch was a key step in the evolution of human bipedalism that predates the genus *Homo* by at least 1.5 million years. This renewed understand of the foot may improve the clinical treatment of flatfoot disorder, the design of robotic feet and the study of foot function in locomotion." (Madhusudhan Venkadesan et al., Nature, V. 579, 2020-3-5, pp. 97-100)

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