



Sacramento Archeological Society, Inc. Newsletter

www.sacarcheology.org.

Jan/Feb - 2020

Happy New Year UPCOMING EVENTS

January 14, 2020, Tuesday, 11:00 a.m. Board Meeting at Doug LaRocca's. Bring a dish to share.

January 25, 2020, Saturday, 1:00 - 4:30 p.m. – **SAS Scholar Symposium (1)**– “Neanderthal subsistence and settlement strategies” by **Susan E. Lagle** “Analysis of deer hunting in Central California during pre-contact period” by **Jill Eubanks** and “The spread of blade technology to the Tibetan Plateau” by **Peiqi Zhang** at North Highlands Antelope Library, 4235 Antelope Road, Antelope, CA 95843.

February 29, 2020, Saturday, 1:00 - 5:30 p.m. – **SAS Scholar Symposium (2)** “Glass bead analysis to ascertain interaction between settlers, mission inhabitants and native groups during 18th century” by **Danielle Dadiego**, “Analysis of residence during the early period (ca. 5000-2500 BP) in lower Sacramento Valley and San Joaquin Delta” by **Candice Ralson**, “Aidonia excavation in Nemea, Greece and artifact scanning” by **David Cook** “Historic Native American village excavation in Northern Sierras” by **Jonathan Garcia** and at North Natomas, 4660 Via Ingoglia, Sacramento, CA 95835

March 28, 2020 Saturday, 1:30 - 4:30 p.m. – **SAS Scholar Symposium (3)** “Field excavation at Scladina, Belgium” by **Sarah Foley**, and “Ethnographic/ethno historical analysis of social identities of women in Sonoma County between 1900 and 1945” by **Bee Thao** at Sylvan Oaks Library, 6700 Auburn Boulevard, Citrus Heights, CA 95621

April 30, 2020 – Scholarship Applications due

See calendar in www.sachaeology.org for complete set of events.

Annual Scholar Symposium (1)

By

2019 Scholarship Recipients

Saturday, January 25, 2020

1:00 – 4:30 p.m.

at

North Highlands – Antelope Library

4235 Antelope Road

Antelope, CA 95843

We are pleased to feature three recipients of our 2019 scholarship.

Program

1:00 **Introduction**

1:15 - “Neanderthal subsistence and settlement strategies” by **Susan E. Lagle**

2:15 - “The spread of blade technology to the Tibetan Plateau” by **Peiqi Zhang**

3:15 - “Analysis of deer hunting in Central California during pre-contact period” by **Jill Eubanks**,

Susan E. Lagle

Susan is a PhD candidate at University of California, Davis. She was on her final dissertation data collection trip to France during the 2019 European Society for the study of Human Evolution conference in Liège, Belgium. There she presented her research. At our symposium she will also present her research comparing published faunal data sets from sites associated with Quina stone toolkits in southwestern France during MIS 4-early MIS 3, elucidating the similarities and differences between these assemblages in terms of prey transport, seasonality, and site use. Her research provides a more comprehensive understanding of Neanderthal subsistence and settlement strategies, in cold-climate, reindeer-dominated landscapes, contributing greatly to long-standing questions about how these strategies may have impacted Neanderthal mobility and thus Quina tool production and use.

Peiqi Zhang

Peiqi is a PhD student at University of California, Davis, who is studying about hunter-gatherer adaptations to extreme environments. She used the scholarship to fund research collecting data on stone tools from Nwya Devu site on Tibetan Plateau and comparing with assemblages from North Mongolia. Importantly, though the hypoxic situation was very specific to the high-elevation environment, the harsh climates in high altitude and high latitude are similar to each other that is difficult for humans to live and stay. This research will lead to a discussion about the spread of a specific stone tool technology - blade technology, and potential migrations of related populations between Northern Asia and East Asia during MIS3.

Jill Eubanks

Jill is a PhD student at University of California, Davis. Her research focuses on human hunting Central California. Previous studies show that the proportions of deer remains in California archaeological sites have fluctuated over time. Are deer distributions a product of local habitat,

biological or sociopolitical factors? She used the scholarship funds to support stable isotope analysis on ten deer mandibles at the UC Davis Stable Isotope Facility. The results will be paired with other analyses to determine locality, sex, age and season of death.

Annual Scholar Symposium (2)

By

2019 Scholarship Recipients

Saturday February 29, 2020

1:00 – 5:30 p.m.

at

North Natomas Library

4660 Via Ingolia

Sacramento, CA 95835

Four additional scholarship recipients from 2019 will present on their research.

Program

1:00 – **Introduction**

1:15 - **“Historic Native American village excavation in Northern Sierras”** by **Jonathan Garcia**

2:15 - **“Analysis of residence during the early period (ca. 5000-2500 BP) in lower Sacramento Valley and San Joaquin Delta”** by **Candice Ralson**

3:15 **“Aidonia excavation in Nemea, Greece and artifact scanning”** by **David Cook**

4:15 - **“Glass bead analysis to ascertain interaction between settlers, mission inhabitants and native groups during 18th century”** by **Danielle Dadiego**

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.

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.

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.

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 Windmill 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.

Annual Scholar Symposium (3)

By

2019 Scholarship Recipients

Saturday March 28, 2020

1:30 – 4:30 p.m.

at

Sylvan Oaks Library
6700 Auburn Boulevard
Citrus Heights, CA 95621

The last two scholarship recipients from 2019 will present on their research.

Program

1:30 - **Introduction**

1:45 - **“Field excavation at Scladina, Belgium”** by Sarah Foley

3:00 - **“Ethnographic/ethno historical analysis of social identities of women in Sonoma County between 1900 and 1945”** by Bee Thao

Sarah Foley

Sarah graduated from University of California, Davis in 2020. She is 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.

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.

PREVIOUS EVENTS

Sacramento Archeological Society, Inc.'s Annual Meeting

On Saturday, December 7, 2019 Carolyn and Gordon McGregor hosted our annual meeting. Over thirty members and guests attended. We were pleased to have two SAS members present on topics of their specific interest.

Martie Lewis, “Are you Aryan? What we now know about the Proto-Indo-Europeans and why they still matter.”

Dennis Fenwick, “Is there evidence for human occupation in the Tule Lake/Kettleman City, California area as much as 30,000 years ago. Could it be 130,000 years ago?”

In addition to the presentations during our annual meeting we elected a Board of Directors for 2020 and specifically honored board members: Carolyn McGregor for many years of service as Secretary, Lydia Peake for continuing contributions as Vice-President and Roger Peake for his ongoing service to the organization. Fortunately these members will continue to board members.

MEMBER'S CORNER

Election of 2020 Board of Directors

The new 2020 Board of Directors for 2020 elected at the 2019 annual meeting.

Candidate	Office	Candidate	Office
Tom Johansen	President	Lynette Blumhardt	Member at Large
Knuti VanHoven	Vice-President	Paul K. Davis	Member at Large
Diane Sangster	Secretary	Jeremy Johansen	Member at Large
Doug La Rocca	Treasurer	Jan Johansen	Member at Large
John Foster	Past President	Ruth McElhinney	Member at Large
		Carolyn McGregor	Member at Large
		Lydia Peake	Member at Large
		Roger Peake	Member at Large

Welcome New Members

We welcome Deborah Ruggles as a new member.

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.** We keep overhead low so that the funds can be used to support students. You may now use our web site <http://sacarcheology.org/society-membership/> to renew and make payment using a **credit card or Paypal.**

The annual dues are:

Student/Limited Member	\$15
Individual Membership	\$30
Family Membership	\$40
Sponsor	\$100 - 499 (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

Thank you in advance for your prompt payment. We really appreciate your support.

Annual Dues for 2020

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

_____ Email: _____ Phone: _____

Address: _____

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

Total enclosed \$_____

ARCHAEOLOGICAL REFERENCES



The Dirt – A podcast for all ages and backgrounds about archaeology, anthropology, and our shared human story <http://thedirtpod.com>
If you want to learn about Neanderthal anatomy, behavior and how we know the things we know about that species, check out the following link.

<https://www.sapiens.org/column/field-trips/neanderthal-anatomy/>

Recent Articles

Here's What 2019 Scientific Discovery Taught Us About Our Human Origins | At the Smithsonian | Smithsonian

<https://www.smithsonianmag.com/smithsonian-institution/heres-what-2019-scientific-discovery-taught-us-about-our-human-origins-180973766/>

Ancient Rock Art of Mythical Half-human Hunting Animals Discovered

December 11, 2019 the earliest ever depiction of a hunting scene has been discovered in a cave in Indonesia. The rock art, which shows human-like figures hunting buffalo and pigs, has been dated to around 44,000 years ago—the oldest example found anywhere in the world. Scientists say the depiction of mythical half-human creatures may suggest some sort of abstract, religious or spiritual thinking among these early artists who created them.

Read in Newsweek: <https://apple.news/AZFcmYAFKS5uynXYCcuC7Qg>

Archaeologists Identify 143 New Nazca Lines | Smart News | Smithsonian

<https://www.smithsonianmag.com/smart-news/ai-helps-identify-1-143-new-nazca-lines-180973621/>

Archaeologists Race to Preserve Artifacts as the Ice Melts in Mongolia

<https://www.smithsonianmag.com/science-nature/archaeologists-race-preserve-artifacts-ice-melts-mongolia-180973585/>

Archaeologists Unearth Remains of Infants Wearing 'Helmets' Made From the Skulls of Other Children | Smart News | Smithsonian

<https://www.smithsonianmag.com/smart-news/remains-infants-found-wearing-helmets-made-skulls-other-children-180973608/>

Church Unearthed in Ethiopia Rewrites the History of Christianity in Africa | History | Smithsonian

<https://www.smithsonianmag.com/history/church-unearthed-ethiopia-rewrites-history-christianity-africa-180973740/>

Archaeologists Unearth Celtic Warrior Grave Complete With Chariot, Elaborate Shield | Smart News | Smithsonian

<https://www.smithsonianmag.com/smart-news/celtic-chariot-grave-found-england-includes-horses-and-elaborate-shield-180973730/>

Archeologists unearth lost town from little-known ancient East African empire – CNN

<https://www.cnn.com/2019/12/11/africa/ethiopia-buried-town-discovery-beta-samati-scn/index.html>

Cave Painting In Indonesia Is Oldest Known Work Of Figurative Art : NPR

<https://www.npr.org/2019/12/11/786760790/44-000-year-old-indonesian-cave-painting-is-rewriting-the-history-of-art>

Newly Discovered Indonesian Cave Art May Represent World's Oldest Known Hunting Scene | Smart News | Smithsonian

<https://www.smithsonianmag.com/smart-news/newly-discovered-indonesian-cave-art-may-represent-worlds-oldest-known-hunting-scene-180973761/>

The intent of this section is to summarize of recent archaeological articles. Some of these in various forms may have been forwarded to SAS members by email.

"Bronze Age inequality and family life revealed in powerful study Combined methods show women married far from home"

"By combining evidence from DNA, artifacts, and chemical clues in teeth, an interdisciplinary team unraveled relationships and inheritance patterns in several generations of high-ranking families buried in cemeteries on their farmsteads in southern Germany. Some of the early farmers studied were part of the Neolithic Bell Beaker culture named for the shape of their pots. Later generations of Bronze Age men who retained Bell Beaker DNA were high-ranking, buried with bronze and copper daggers, axes, and ago in southern Germany chisels. Those men carried a Y chromosome variant that is still common today in Europe. In contrast, low ranking men without grave goods had different Y chromosomes, showing a different ancestry on their fathers' side, and suggesting that men with Bell Beaker ancestry were richer and had more sons, whose genes persist to the present. One-third of the women were also buried with great wealth—elaborate copper head-dresses, thick bronze leg rings, and decorated copper pins. They were

outsiders, however. Their DNA set them apart from others in burials, and strontium isotopes in their teeth, which reflect minerals in the water they drank, show they were born and lived until adolescence far from the Reck River. There was no sign of these women's daughters, in the burials, suggesting they, too, were sent away for marriage, in a pattern that persisted for 700 years. ” (Ann Gibbons, *Science*, 2019-10-11, V 366 p 168)

“Bronze Age DNA hints at roots of social inequality

Family trees gleaned from ancient human genomes are set to transform archaeology”

“During the Bronze Age, the Lech River Valley in southern Bavaria was packed with small farmsteads, each with its own cemetery. Archaeological excavations in the 1980s and 1990s uncovered dozens of skeletons dating to between about 2800 and 1700 BC. (*Nature*, V 574, 2019-10-17, pp, 304-305)

“Seeing Fossils in a new light

Protein residues reveal physiology and family ties from the age of dinosaurs”

“Jasmina Wiemann and Derek Briggs at Yale University have devised a way to extract information locked in degraded proteins, even in fossils hundreds of millions of years old. They have shown how, when conditions are right in the weeks and months after an animal dies, cellular proteins can react with lipids and sugars. The process transforms the proteins into a maze of hardy polymers that repel water, resist microbes, and are impervious to heat.” (Gretchen Vogel, *Science*, 2019-10-11, V 366 p 176-8)

“Adaptive archaic introgression of copy number variants and the discovery of previously unknown human genes”

Characterizing genetic variants underlying local adaptations in human populations is one of the central goals of evolutionary research. Most studies have focused on adaptive single-nucleotide variants that either arose as new beneficial mutations or were introduced after interbreeding with our now-extinct relatives, including Neanderthals and Denisovans. The adaptive role of copy number variants (CNVs), another well-known form of genomic variation generated through deletions or duplications that affect more base pairs in the genome, is less well understood, despite evidence that such mutations are subject to stronger selective pressures. The results of this study suggest that large CNVs originated in archaic hominins and introgressed into modern humans have played an important role in local population adaptation. For example, Neanderthal and Denisovan haplotypes encompassing large CNVs occur at high frequencies in Melanesians but are absent in all non-Melanesians. These CNVs create positively selected genes (TNFRSF10D1, TNFRSF10D2, and NPIP16) that were absent in the reference genome.” (Ping-Hsun Hsieh *et al.*, *Science*, 2019-10-18, V 324 p 324)

"Immigrants from the Middle East shaped Rome

Genetic history of the city finds little European DNA at the height of the imperial period

and

Ancient Rome: A genetic crossroads of Europe and the Mediterranean"

"Ancient Rome was the capital of an empire of ~70 million inhabitants, but little is known about the genetics of ancient Romans. This study analyzed 127 genomes from 29 archaeological sites in and around Rome, spanning 12,000 years. They observed two major prehistoric ancestry transitions: one, with the introduction of farming and another prior to the Iron Age. By the founding of Rome, the genetic composition of the region approximated that of modern Mediterranean populations. During the Imperial period, Rome's population received net immigration from the Near East, followed by an increase in genetic contributions from Europe. These ancestry shifts mirrored the geopolitical affiliations of Rome and were accompanied by marked interindividual diversity, reflecting gene flow from across the Mediterranean." (Lizzie Wade. and Margaret L. Antonio *et al.*, *Science*, 2019-11-8, V 366, pp 673 and 708-714)

"Unearthing the Reality of Slavery

Excavations on a Caribbean island reveals the lives of enslaved African, and how their labor built today's world"

"Justin Dunnivant, archaeologist at Vanderbilt University in Nashville co-lead excavations on St. Croix's Estate Little Princess and its island. St. Croix was once at the center of the world economy. For more than 300 years, thousands of European ships sailed to the Caribbean carrying enslaved Africans and sailed away full of sugar, coffee, and other cash crops their labor produced. Slavery drove the world economy and it permeated all corners of the globe. Between 1500 and 1875 about 4.8 million enslaved Africans were brought to the Caribbean. The St. Croix excavation produced many artifacts reflecting on the daily life of the enslaved. It is now believed that the enslaved people sold surplus crops or crafts and bought trade items." (Lizzie Wade, *Science*, 2019-11-8, V 366, pp 678 - 681)

"Early Pleistocene enamel proteome from Dmanisi resolves *Stephanorhinus* phylogen"

"The sequencing of ancient DNA has enabled the reconstruction of speciation, migration and admixture events for extinct tax. However, the irreversible post-mortem degradation of ancient DNA has so far limited its recovery—outside permafrost areas—to specimens that are not older than approximately 0.5 million years. By contrast, tandem mass spectrometry has enabled the sequencing of approximately 1.5 million year old collagen type I and suggested the presence of protein residues in fossils of Cretaceous period—although with limited phylogenetic use. In this study the team addresses the phylogenetic relationships of the Eurasian *Rhinocertidae* of Pleistocene epoch, using proteome of dental enamel from a *Stephanorhinus* tooth that is

approximately 1.77 million years old, recovered from the archaeological site of Dmanisi (South Caucasus, Georgia). They demonstrated that sequencing the proteome of Early Pleistocene dental enamel overcomes the limitations of phylogenetic inference based on ancient collagen or DNA.” (Enrico Cappellini *et al.*, *Nature*, V. 574, 2019-10-3, pp. 103 -107)

“Early European babies bottle-fed animal milk” and

“Milk of ruminants in ceramic baby bottles from prehistoric child graves”

“The earliest known clay vessels that were possibly used for feeding infants appear in Neolithic Europe and became more common throughout the Bronze and Iron Ages. However, these vessels—which included a spout through which liquid could be poured—have also been suggested to be feeding vessels for the sick or inform. In this study the authors report evidence for the foods that were contained in such vessels, based on analyses of the lipid fingerprints and the compound specific values of the major fatty acids of residues from three small, spouted vessels that were found in Bronze and Iron Age graves of infants in Bavaria. The results suggest that the vessels were used to feed infants with milk products derived from ruminants. This evidence of the foodstuffs that were used to either feed or wean prehistoric infants confirms the importance of milk from domesticated animals for these early communities and provides information on the infant-feeding behaviors that were practiced by prehistoric human groups.” (Siân E. Halcrow, and J. Dunne *et al.*, *Nature*, V. 574, 2019-10-10, pp. 182-183 and 246-253)

“Evolutionary insights from *Australopithecus*”

“Ramond Dart in 1924 extracted a fossil from a chunk of rock found in Taungs, South Africa. In 1925 *Nature* published a report on Taung Child and Dart became famous. But he had many critics. To answer his critics, Dart spent four years preparing a book about the Taung Child. It was never published. The most controversial aspect of Dart’s paper, then and now, is his view that the back of the Taung Child’s endocast is human-like. Some have argued that Dart misidentified a skull imprint as a brain groove similar to a human one, a feature that is inconsistent with Taung Child’s otherwise ape-like brain. Dart’s 1925 *Nature* paper describes two endocast brain grooves but his book identifies 14 further grooves and describes 3 dispersed brain regions that look expanded in comparison with those of ape brains. If these findings had been published, they might have influenced the still-controversial debate about whether the human brain evolved in a piece-meal, mosaic fashion or in a more globally connected manner. Dart correctly inferred that hominins originated in Africa, and that our genus *Homo* arose from *Australopithecus*.” (Dean Falk, *Science*, 2019-11-7, 565 p 41-42)

“A new Miocene ape and locomotion in the ancestor of great apes and humans”

“Many ideas have been proposed to explain the origin of bipedalism in hominins and suspension in great apes (hominids); however, fossil evidence has been lacking. It has been suggested that bipedalism in hominins evolved from an ancestor that was a palmigrade quadruped (which would have moved similarly to living monkeys), or from amore suspensory quadruped (most

similar to extant chimpanzees). This study describes the fossil ape *Danuvius guggenmosi* (from the Allgäu region of Bavaria) for which complete limb bones are preserved, which provides evidence of a newly identified form of positional behavior—extended limb clambering. The 11.62 million year old *Danuvius* is a great ape that is dentally most similar to *Dryopithecus* and other European late Miocene apes. With a broad thorax, long lumbar spine and extended hips and knees, as in biped, and elongated and fully extended forelimbs, as in all apes (hominoids), *Danuvius* combines the adaptations for bipeds and suspensory apes, and provides a model for the common ancestor of great apes and humans.” (Madelaine Böhme et al., *Nature*, V 575, 2019-11-27, pp, 489-493)