



# Sacramento Archeological Society, Inc. Newsletter

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[www.sacarcheology.org](http://www.sacarcheology.org).

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January/February - 2022

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## HAPPY NEW YEAR ANNOUNCEMENTS

Applications for 2022 scholarships are due March 15, 2022 instead of April 30. Please pass this new date on to scholars. Application information is available at <https://sacarcheology.org/student-scholarships/>

## UPCOMING EVENTS

### January 2022

January 8, 2022 Saturday, 2:00 p.m. - **SAS Webinar** *"Native American Village in Sierra Foothills— Excavation"* by Kiana Hugins, University of California, Merced student  
January 15, 2022 Saturday, 2:00 p.m. – Board meeting

### February 2022

February 12, 2022, Saturday, 2:00 p.m. - **SAS Webinar** *"Backing of Stone Tools – Experimental Archaeology"* by Caleb Chen, New York University graduate student

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](http://www.sacarcheology.org).

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## SAS Webinar

### ***"Native American Village in Sierra Foothills— Excavation"***

by

Kiana Hugins, University of California, Merced

**Saturday, January 8, 2022**

**2:00 p.m. – 3:30 p.m. PST**

Grandad Archaeological Field School has been conducted at the Native American village site (Polachi) in the Sierran Foothills between Oakhurst and Mariposa for 20+ years. The village was occupied for over 9,000 years and provides Fresno State students with a rich learning experience to gain basic skills in field work in archaeology as well as learn about Sierran pre-

history. The property the site is located on is land owned by a Miwuk/Chuckchansi family, who asked them to dig at their village site. Kiana will discuss her experiences with this field school and how she expanded her knowledge of Indigenous people.

**Kiana Hugins** is a senior at University of California, Merced majoring in Anthropology and a 2021 SAS scholarship recipient. She co-founded and has been president of the Anthropology Society of UC Merced since 2018. In 2019 and again in 2021 she participated in a Fresno State Archaeological Field School, first as a crew member and then as a crew chief. Her archaeological interests lay in studying the transformation that colonialism had on North America's ecosystems and how the process impacted Indigenous cultural perceptions of the continent's landscape.

Friends are welcome to this webinar and also invited to join our organization. There is no participation fee.

You may join early at 1:30 pm PST and enjoy a social half hour. See announcements: <https://sacarcheology.org/announcements/> for **webinar access information**.

## **Mission San Jose 225<sup>th</sup> Anniversary Speaker Series**

***"Our Sacred Ground" – The Ohlone Story***

by

Andy Galvin, University of California, Merced

**Saturday, January 8, 2022**

**9:30 – 10:30 a.m. PST**

To set the stage for the SAS Webinar join the celebration of Mission San Jose's 225<sup>th</sup> anniversary. (Note the event occurs the same day as the SAS Webinar but in the morning and physically in Fremont) In person at Mission San Jose (43300 Mission Boulevard, Fremont, CA, 94539) enjoy a talk by Andy Galvin, a descendant of the Ohlone, Bay Miwok, Plains Miwok and Patwin Indians whose ancestral lands comprise the greater San Francisco Bay Region. Andy will trace the culture and life style of the Ohlone native people from pre-contact, through the mission era, Mexican secularization and gold rush. For more information go to <https://mission225.org/speaker-series>

## **SAS Webinar**

***"Backing of Stone Tools – Experimental Archaeology"***

by

Caleb Chen, New York University graduate student

**Saturday, February 12, 2022**

**2:00 p.m. – 3:30 p.m. PST**

Archaeologists record backed stone tools (tools that have been dulled along one edge by retouch or other intentional breakages) in worldwide assemblages. There are two main hypotheses to explain backing's use to modify stone flakes and blades. One hypothesis (symbolic) predicts that "backing" served as a social signaling mechanism between cultural groups (Wurz 199). Another hypothesis (functional) predicts that backing increases a stone tool's adhesion strength in a hafting bond (Barham 2013). Caleb will discuss the results of a collaborative experimental project (PI's: Dr. Justin Pargeter (NYU) and Dr. Metin Eren (Kent State University) designed to test the functional hypothesis.

**Caleb Chen** graduated from University of California, Davis in 2020 with a Bachelor of Sciences in Anthropology, *Summa Cum Laude*. He is continuing his studies in Anthropology at New York University. He has experience from the Center of Experimental Archaeology at Davis in replication of self and sinew-backed prehistoric bows and tule canoes, and creating fishhooks from Channel Island single pieces. During the summer of 2021 Caleb studied backed stone tools at Kent State University. He created copies from South African archaeological blades from various materials that are backed and unbacked. He fired these manually and mechanically into clay targets until hafting bond failed and recorded the results.

Friends are welcome to this webinar and also invited to join our organization. There is no participation fee.

You may join early at 1:30 pm PST and enjoy a social half hour. See announcements: <https://sacarcheology.org/announcements/> for **webinar access information**.

## PAST EVENTS

### **SAS Webinar - "Rondelles – Artistic Objects from the Upper Paleolithic Magdalenian Culture"**

On Saturday November 13, 2021 Marlena Billings, a UC Davis Anthropology student and recipient of a 2021 scholarship gave a very informative talk on Rondelles. Rondelles are circular discs made from various materials (the most common being bone and stone) with a central hole. They have been found in sites from the Upper Paleolithic Magdalenian culture (ca. 15-13,000 BP). Many have figurative engravings on their surfaces. They are considered to be artistic objects but their use and technical stages of operation (*chaîne opératoire*) are a subject of research and speculation. Marlena described these objects, discussed when and where they were found (La Mas d'Azil), described her work reproducing rondelles and explained her museum experience with original rondelles in Saint Germain-en-Laye, France.

## **Annual Meeting Webinar – “An Indigenous Archaeology of Pawneeland: Oral Traditions, Archaeology, and Euro-American Accounts of Pawnees in the Central Plains”**

On Saturday, December 11 at our annual meeting Carlton Shield Chief Gover, member of Pawnee Nation and PhD candidate, University of Colorado gave an excellent talk on the Pawnees of the Central Plains. He talked about the Pawnee tribes as they are tied to the land from Colorado to Nebraska and how they related to other Indigenous tribes and adapted to the arrival of Europeans. He also relayed oral traditions that date back to the Ice Age.

## **Annual Meeting**

Following the presentation Tom Johansen, SAS President reviewed the activities of the year, introduced plans for 2022 and conducted our election of officers for 2022. In 2021 we hosted two archaeological tours: Lovelock Cave and Four Corners Tour. Scholarships were awarded to seven scholars. In 2022 we will be hearing about their research and field schools and have more in person activities such as flintknapping and picnics.

## **MEMBER’S CORNER**

During the Annual Meeting the 2022 Board of Directors were elected. The following lists the officers for 2022.

<b>Directors</b>	<b>Office</b>	<b>Directors</b>	<b>Office</b>
Tom Johansen	<b>President</b>	Lynette Blumhardt	<b>Member at Large</b>
Jan Johansen	<b>Vice-President</b>	Paul K. Davis	<b>Member at Large</b>
Diane Sangster	<b>Secretary</b>	Kim Frasse	<b>Member at Large</b>
Doug La Rocca	<b>Treasurer</b>	Jeremy Johansen	<b>Member at Large</b>
John Foster	<b>Past President</b>	Tori Lyon	<b>Member at Large</b>
		Ruth McElhinney	<b>Member at Large</b>
		Carolyn McGregor	<b>Member at Large</b>
		Lydia Peake	<b>Member at Large</b>
		Roger Peake	<b>Member at Large</b>
		Knuti VanHoven	<b>Member at Large</b>

## Renewal of 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 **2022** 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 <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**

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

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### Annual Dues for 2022

Name(s): \_\_\_\_\_ Email: \_\_\_\_\_ Phone: \_\_\_\_\_

\_\_\_\_\_ Email: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

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

Total enclosed \$\_\_\_\_\_

We are pleased to acknowledge our major contributors for 2021. These donations help to support our scholarship program.

**Patron (\$1000 or more)**

Martie Lewis and Dennis Fenwick  
Carolyn and Gordon McGregor  
OSIsoft - part of Aveva

**Sponsor (\$100 - \$999)**

Paul K. Davis and Knuti VanHoven  
Jeremy Johansen  
Jan and Tom Johansen  
Ruth McElhinney  
Roger and Lydia Peak  
Diane Sangster

## ARCHAEOLOGICAL REFERENCES



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

### Recent Articles

The reviewed articles are:

- “The huge stone monuments that pre-date pyramids”.
- “Ancient DNA shows Asia upheaval”
- “Footprint evidence of early hominin locomotor diversity at Laetoli, Tanzania”
- “Dairying enable Early Bronze Age Yamnaya steppe expansions”
- “The origins of spread of domestic horses from the Western Eurasian steppes
- “Ancient empire thrived on quinoa and potato power”
- “Rare ancient hominin skull discovered in South Africa”
- “Mammoth pendant could be Eurasia’s oldest jewelry”
- “Ancestral Puebloans rebounded”
- “Viking presence is 1000 years old”

### “The huge stone monuments that pre-date pyramids”

“Cattle herders on the Arabian Peninsula built the world’s first large-scale monuments some 7,000 years ago, more than 4 millennia before the ancient Egyptians built the pyramids or Stonehenge rose on Britain’s plains.

The structures are called mustatils, the Arabic word for rectangle, in reference to the characteristic shape of the open courtyard at their center. Melissa Kennedy and her colleagues

at the University of Western Australia in Perth documented more than 1,000 mustatils that are scattered over a 200,000 square-kilometer area of the desert in modern day Saudi Arabia. Built with local stone and often hundreds of meters long, they occur singly at some sites and in groups at others. Most have a narrow entranceway at one end.

The team excavated one site and found horns and bone fragments from cattle, gazelle, and sheep. An analysis of the remains, which seem to be ritual offerings, dates the site to the sixth millennium BC.

The bigger mustatils would have taken thousands of hours to construct, suggesting that people of the day were organizing and building collectively. Antiquity <https://doi.org/f9d2> (c 9d1)" (*Nature*, V 593, 2021-05-13 p. 171)

### "Ancient DNA shows Asia upheaval"

"A study published in *Cell* suggests that after the last ice age, the population of modern humans in northern East Asia may have undergone a major turnover, Researchers analyzed DNA from across the genomes of 25 ancient hunter-gatherers. It shows that the earliest known modern humans in the north China Plain, which stretches from Mongolia to the Amur Peninsula of Russia, who lived there 33,000 to 40,000 years ago, belonged to one widespread population. But by the end of the Last Glacial Maximum, about 19,000 years ago, they had been replaced by another population of people related to living East Asians and ancient Siberians. The first group may have died out during the ice age, the research team writes, noting that frigid temperatures in Europe may have driven a similar ancient population turnover." (*Science*, 2021-05-28 V 372 p. 888)

### "Footprint evidence of early hominin locomotor diversity at Laetoli, Tanzania"

"Bipedal trackways discovered in 1978 at Laetoli site G, Tanzania and dated to 3.66 million years ago are widely accepted as the oldest unequivocal evidence of obligate bipedalism in the human lineage. Another trackway discovered two years earlier at nearby site A was partially excavated and attributed to a hominin, but curious affinities with bears (ursides) marginalized its importance to the paleoanthropological community, and the location of these footprints fell into obscurity. In 2019 the researchers located, excavated and cleaned the site A trackway producing a digital archive using 3D photogrammetry and laser scanning. In this article they compare the footprints at this site with those of American black bears, chimpanzees and humans, and show that they resemble those of hominins more than ursids. In fact the narrow step width corroborates the original interpretation of a small, cross-stepping bipedal hominin. However, the inferred foot proportions, gait parameters and 3D morphologies of footprints at site A are readily distinguished from those at site G, indicating that a minimum of *two* hominin taxa with different feet and gaits coexisted at Laetoli." (Ellison J. McNutt *et al*, *Nature*, V 600, 2021-12-16 pp. 468-471)

## "Dairying enabled Early Bronze Age Yamnaya steppe expansions"

"During the Early Bronze Age, populations of the western Eurasian steppe expanded across an immense area of northern Eurasia. Combined archaeological and genetic evidence supports widespread Early Bronze Age population movements out of the Pontic-Caspian steppe that resulted in gene flow across vast distances, linking populations of Yamnaya pastoralists in Scandinavia with pastoral populations (known as the Afanasievo) far to the east in the Altai Mountains and Mongolia. Although some models hold that this expansion was the outcome of a newly mobile pastoral economy characterized by horse traction, bulk wagon transport and regular dietary dependence on meat and milk, hard evidence for these economic features has not been found. In this article the researchers draw on proteomic analysis of dental calculus from individuals from the western Eurasian steppe to demonstrate a major transition in dairying at the start of the Bronze Age. The rapid onset of ubiquitous dairying at a point in time when steppe populations are known to have begun dispersing offers critical insight into a keen catalyst of steppe mobility. The identification of horse milk proteins also indicates horse domestication by the Early Bronze Age, which provides support for its role in steppe dispersal. Their results point to a potential epicenter for horse domestication in the Pontic-Caspian steppe by the third millennium BC and offer strong support of the notion that the novel exploitation of secondary animal products was a key driver of the expansions of Eurasian steppe pastoralists by the early Bronze Age." (Shevan Wilkin, *et al*, *Nature*, V 598, 2021-10-28 pp. 629 - 633)

## "The origins and spread of domestic horses from the Western Eurasian steppes"

"Domestication of horses fundamentally transformed long-range mobility and warfare. However, modern domesticated breeds do not descend from the earliest domestic horse lineage associated with archaeological evidence of bridling, milking and corralling at Botai, Central Asia around 3500 BC. Other longstanding candidate regions for horse domestication, such as Iberia and Anatolia have also recently been challenged. Thus, the generic, geographic and temporal origins of modern domestic horses have remained unknown. In this study the researchers pinpoint the Western Eurasian steppes, especially the lower Volga-Don region, as the homeland of modern domestic horses. Furthermore, they map the population changes accompanying domestication from 273 ancient horse genomes. This reveals that modern domestic horses ultimately replaced almost all other local populations as they expanded rapidly across Eurasia from about 2000 BC, synchronously with equestrian material culture, including Sintashta spoke-wheeled chariots. They found that equestrianism involved strong selection for critical locomotor and behavioral adaptations at the GSDMC and ZFPM1 genes. Their results reject the commonly held association between horseback riding and the massive expansion of Yamnaya steep pastoralist into Europe around 3000 BC driving the spread of Indo-European languages. This contrasts with the scenario in Asia where Indo-Iranian languages, chariots and horse spread together, following the early second millennium BC Sintashta culture." (Pablo Librado *et al*, *Nature*, V 598, 2021-10-28 pp. 634 - 630)



## “Ancient empire thrived on quinoa and potato power”

“Hailed as a superfood, quinoa has seen its popularity soar in the past decade. But the grain-like seed was already prized some 3,000 years ago: researchers have found that it helped to fuel an ancient Andean civilization in an inhospitable climate through centuries of political upheaval.

Melanie Miller at the University of Otago in Dunedin, New Zealand, Christine Hastorf at the University of California, Berkeley and their colleagues reconstructed the diets of people living in the Andean highlands near Lake Titicaca between 1400 BE and AS 1100. During this time, the region grew from an agricultural society to a powerful empire whose political center was Tiwanaku, located in what is now Bolivia.

The team found that, for millennia, quinoa, potatoes and llama meat were the staple foods of people in the region including the Tiwanaku people. They ate little fish, despite living near a lake, and used maize (corn) to make an alcoholic drink for special occasions.

The findings suggest that locally grown quinoa, potatoes and llamas provided long-term food security, which helped the Tiwanaku culture to flourish. (*Proc. Natl Acad. Sci, USA* 118, e2113395118 (2021) (*Nature*, V 600, 2021-12-9 p. 193)

## “Rare ancient hominin skull discovered in South Africa”

“The first partial skull of a 4- to 6- year-old *Homo naledi* child, who died almost 250,000 years ago has been found in the depths of Rising Star Cave near Johannesburg, South Africa, where the ancient hominin species was first discovered in 2015.

The skull comprises 28 fragments and 6 teeth that researchers have pieced together into a reconstruction (J.K. Brophy *et al. Paleoanthropology* <http://doi.org/g46n;2021>) The team named the skull’s owner Leti, after the Setswana work *letimela*, which means ‘the lost one’. It is a rare find. Juvenile hominin remains are usually thin and extremely fragile.” (*Nature*, V 600, 2021-12-16 p. 365)

## “Mammoth pendant could be Eurasia’s oldest jewelry”

“A 41,500-year-old pendant carved from a piece of a woolly-mammoth tusk could be the oldest known example of decorated jewelry in Eurasia made by humans, according to archaeologists.

The oval-shaped pendant has two drilled holes and is decorated with at least 50 smaller puncture marks that create a looping curve. It was found in the Stajnia Cave, a natural rock shelter in southern Poland. The results of radiocarbon dating, published in *Scientific Reports* (S. Talamo *et al, Sci. Rep.* 11, 22078; 2021), suggest that it is 2,000 years older than similarly decorated artifacts from other sites.

The claim that the pendant is the oldest ornate jewelry in Eurasia could prove controversial. The researchers restricted their comparisons to other artifacts that have been decorated with puncture marks and did not include items of a similar age that could also have been used as jewelry. But it is the only decorated artifact of its kind that is directly radiocarbon dated and compared with other punctuated ornaments it is the oldest.” (*Nature*, V 600, 2021-12-2 p. 13)

## "Ancestral Puebloans rebounded"

"Two giant volcanic eruptions in the mid-sixth century, likely in North and Central America, caused both crisis and evolution for people around the world, including the Ancestral Puebloans, who lived in small farming groups across the U.S. Southwest, a study (*Antiquity*, February; 2022) suggests. Using tree-ring data, anthropologists found temperatures and rainfall plummeted after the eruptions, which likely killed crops and forced people to relocate. However, this breakdown enabled the rise of a larger, more cohesive society. As rain and warmth returned, the Ancestral Puebloans regrouped and grew new crops and built great communal buildings." (*Science*, 2021-11-26 V 374 p. 1022)

## Viking presence is 1000 years old"

"In the 1960s, scientists discovered the only confirmed Viking settlement in North America, at L'Anse aux Meadows in Newfoundland; but researchers couldn't determine exactly when the Norse had lived there: Radiocarbon dating of artifacts suggested it was within a 275-year window starting in the 790s. Now, using chemical clues left by ancient solar storms, scientist report in *Nature*;2021 that they've determined the Vikings were present in 1021. When big solar storms hit Earth, the particles caused a spike in the creation of carbon-14 atoms, which are incorporated into growing trees. One such storm hit in 993, previous research found, and researchers used tree rings containing the telltale carbon spike to calculate that three pieces of cut wood found at L'Anse aux Meadows had all come from trees felled 28 years later." (*Science*, 2021-10-22 V 374 p. 380)

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### Officers and Directors

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