

### Sacramento Archeological Society, Inc. Newsletter

www.sacarcheology.org.

Nov/Dec - 2020

## **UPCOMING EVENTS**

November 14, 2020, Saturday, 1:30 p.m. - SAS Webinar "Cultural Resources and Parks - A View from California and Beyond" by John Foster

**December 5, 2020**, Saturday, 1:30 p.m. - **SAS Annual Meeting Webinar** "Indus Valley Civilization" **by Ruth McElhinney** and "Tule Boat Replication" video by **Kevin Smith** 

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

### **UPCOMING EVENTS**

#### SAS Webinar Saturday, November 14, 2020 1:30 p.m. Social Time 2:00 p.m. "Cultural Resources and Parks - A Diew from California and Beyond" by John Foster

This talk will discuss the emergence of cultural resources within the Park movement in California. It will highlight the contributions of three giants who left important legacies for today- Frederick Law Olmsted, Jr., Aubrey Neasham, and Francis A. Riddell. Other examples beyond California will provide context for early historic preservation activities.

**John Foster** attended UC Santa Barbara as an undergraduate and transferred to UCLA where he graduated with a degree in Anthropology. He continued his studies at Long Beach State, where he was awarded an MA degree in 1973. He continued his graduate studies at the University of Arizona before returning to California to begin his career with State Parks. In 1975 John accepted a position in the Cultural Heritage Section of State Parks in Sacramento. He became the assistant archaeologist to Francis A "Fritz" Riddell, the first California State Archaeologist hired outside an academic setting. He was assigned to "ride herd on the cultural resources of the

State Park System," and that has allowed him to record, investigate and preserve historic sites and archaeological features throughout California. Prehistoric rock art became a special interest to him because it allows a glimpse into the world view of its creators. John was president of SAS for seven years and continues to be a board member.

Sacramento Archeological Society, Onc.'s Annual Meeting Webinar Featuring "Indus Valley Civilization" by Ruth McElhinney and Tule Boat Replication video

by Kevin Smith

#### Saturday, December 5, 2020 1:30 p.m. – 4:30 p.m.

At our annual meeting in addition to a review of the year, a peek into 2021 and our election of officers for 2021we are pleased to have two featured events, a video on reed boat building by Kevin Smith and a talk by Ruth McElhinney on the Indus Valley Civilization.

#### **Annual Meeting Program**

The schedule for the event is as follows:

- 1:30 Meet and Greet
- 2:00 Tule Boat Replication video by Kevin Smith
- 2:30 SAS Annual Meeting with election of officers for 2021
- 3:30 Indus Valley Civilization by Ruth McElhinney

During the meet and greet period we will use the breakout room feature of Zoom and give attendees the opportunity to chat in small groups.

Kevin Smith who presented a webinar on October 17<sup>th</sup> will show the video that follows his process of building a tule reed boat using only stone tools. This a fantastic follow up to his discussion of ancient water craft that he gave during his webinar.

At the SAS Annual Meeting President, Tom Johansen will review SAS events for 2020, highlight expectations for 2021, and conduct an election of officers. See the Members' Corner section of this newsletter for the list of candidates. In 2020 our typical in person presentations were replaced by monthly webinars. These will continue in 2021. Hopefully we will be able to have some face to face activities in 2021, including Lovelock Cave and Four Corners Tour. In 2020 several of the scholars were unable to use their SAS scholarships because the excavations that they were planning to attend were cancelled. We are hopeful to award more scholarships in 2021.

Following the annual meeting Ruth McElhinney will explore the Harappan Civilization of the Indus Valley located in what is today Pakistan. This culture, which peaked during the period from 2600 to 1900 BCE, featured urban planning, far reaching trade and symbols on trade seals that may have been a written language. Ruth will highlight the ancient cities of Mohenjo-Daro, Harappa and Lothal.

**Ruth McElhinney**, a retired economic development, community relations and legislative professional has a keen avocational interest in history, anthropology and archaeology. She has been a member of the Board of Directors of the Sacramento Archeological Society, Inc. for more than twenty years. She has participated in archaeological excavations and lab work in Italy, Mississippi, and California, has attended historical classes at Oxford University, co-led classes for the Renaissance Society, a lifelong learning community sponsored by Sacramento State University, and served as a board member of Friends of San Juan (San Juan de Oriente, Nicaragua). She has traveled widely, visiting archaeological sites in Great Britain, Ireland, Meso-America, and South Africa.

Don't miss this annual meeting. Friends are invited to join our organization.

# PAST EVENTS SAS Webinar - Lovelock Cave Excavation - The rise of Modern Scientific Archaeology

On September 19<sup>th</sup> after an hour of social interchange among 26 attendees John Foster first highlighted a cave excavation at Indian Hill Rock shelter in Anza-Borrego. He introduced the concept of storage in pits and discussed the advent of pottery in that area. The focus then changed to Lovelock Cave (NV-Ch-18) which is a North American archaeological site located in the Great Basin near Lovelock, Nevada. The cave was previously known as Sunset Guano Cave, Horseshoe Cave, and Loud Site 18. The cave is about 150 feet long and 35 feet wide. Lovelock Cave is one of the most important classic sites of the Great Basin region because the conditions of the cave are conducive to the preservation of organic and inorganic material.

John related the history of the cave's mining of bat guano and then archaeological exploration with Llewellyn L. Loud in 1912, Mark Harrington in 1924 and Robert Heizer in 1949, 1950 and 1965. In excavations with Lewis Napton during 1968 and 1969 disturbed human remains were discovered. The most renowned discovery at Lovelock Cave was a cache of eleven duck decoys M.R. Harrington and L.L. Loud found when they were digging for the Museum of the American Indian in 1924 in Pit 12, Lot 4. The cache included eight painted and feathered decoys and three unfinished decoys. Items found in the same pit consisted of feathers and two bundles of animal traps. The remarkable decoys were made from bundled tule, a long grass-like herb, covered in feathers and painted. John emphasized that the exploration of Lovelock Cave exemplifies the evolving discipline of archaeological excavation.

# SAS Webinar - Maritime Technological Adaptations and the Peopling of the Far West of North America

On Saturday, October 17, 2020 Kevin Smith, a PhD candidate from U. C. Davis gave a very informative webinar talk on his dissertation research to about 30 attendees. In two hours he distilled research on settlement systems and lithic technologies of the Far West of North America and the role of watercraft. He talked about lithic finds including crescents, Channel Island Barb Points, amoles, bifaces, fragments and preforms from Channel Islands specifically Santa Rosa (CA-SMI-678 and 679) and San Miguel Islands (CA-SRI-512). In addition he described possible reduction sequences for the production of these tools and related the channel island tools to the broader Western Stemmed Tradition. Kevin also discussed tule canoe production as it may have occurred during the late Pleistocene in the Great Basin and Channel Islands.

### **MEMBER'S CORNER**

### Election of 2021 Board of Directors

During the Annual Meeting the 2021 Board of Directors will be elected. The following slate of officers is proposed but additional members may still be nominated. We invite members to become involved. Serving on the Board of Directors is a way to influence the content and timing of events. Join us on Zoom for the annual meeting and consider participation on the Board.

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

The slate of the board is:

### Welcome New Members

We welcome new members: Encourage your friends to join us.

### 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 **2021** 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.

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.

Name(s):		Email:	Phone:
	Email:	Phone:	
Address:			
Student/Limited Member	\$15	\$	
Individual Membership	\$30	\$	
Family Membership	\$40	\$	
Sponsor	\$100	\$	
Scholarship Donation		\$	

### ARCHAEOLOGICAL REFERENCES



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

#### **Recent Articles**

The topics of the reviewed articles are:

Vikings - "Smallpox goes back to the Viking era"

"Ancient DNA tracks Vikings across Europe" and "Population genomics of the Viking world"

Genetics - "The nature of Neanderthal introgression revealed by 27,566 Icelandic • genomes"

"The evolutionary history of Neanderthal and Denisovan Y chromosomes"

• "Environmental drivers of megafauna and hominin extinction in Southeast Asia"

#### "Smallpox goes back to the Viking era

#### DNA shows the disease has plagued people for over 1,000 years"

"Researchers collected DNA from viruses in the remains of northern Europeans living during the Viking Aga, some of whom were likely Vikings themselves and found that these people had been infected with extinct versions of the variola virus that causes smallpox. That pushes back the proven record of smallpox infections in people to the year 603.

Written records from over 3,000 years ago have documented smallpox like symptoms, and scientists have identified possible smallpox skin lesions on mummified remains. But it is difficult to prove that a smallpox virus was the cause.

Martin Sikora, a computational biologist at the University of Copenhagen and colleagues isolated viral DNA from the teeth and bones of 1,867 humans who lived about 31,000 to 150 years ago. Of those people, 13 had remnants of the variola virus. Eleven of those people including some thought to be Vikings-had lived in northern Europe, western Russia or Great Britain during the Viking Age more than 1,000 years ago. The two other people had lived in western Russia during the 19<sup>th</sup> century and were infected with variola virus strains closely related to modern versions." (Eric Garcia De Jesus, Science News, 2020-8-29, p. 16)

#### "Ancient DNA tracks Vikings across Europe

# Massive sequencing effort show people of diverse genetic backgrounds adopted Viking

#### culture"

"Over the course of almost 10 years, a team led by geneticist Eske Willersley of the University of Cambridge and the University of Copenhagen assembled samples from across Scandinavia dating to the Viking Age, from about 750 C.E to 1050 C.E, as well as some earlier and later samples. The team also gathered human remains from burials elsewhere in Europe and beyond that had Viking graves goods or burial styles. The results tell dramatic stories of individual mobility, such as a pair of cousins buried in Oxford, U.K. and Denmark, separated in death by hundreds of kilometers of open-ocean. The genetic details may also rewrite popular perceptions of Vikings, including their looks: Viking Age Scandinavians were more likely to have black hair than people living there today. And comparing DNA and archaeology at individual sites suggests that for some of the Viking bands, "Viking" was a job description not a matter of heredity.

Viking-style graves excavated on the United Kingdom's Orkney Islands contained individuals with no Scandinavian DNA, whereas some people buried in Scandinavia had Irish and Scottish parents. And several individuals in Norway were buried as Vikings, but there genes identified them as Saami, an Indigenous group genetically closer to East Asians and Siberians than to Europeans. DNA in hand, researchers for the first time could conclusively trace the origins of people from the far edges of the Viking diaspora back to their roots in Scandinavia. They found that Vikings from what is now Sweden moved east to Baltics, Poland, and rivers of Russia and Ukraine, whereas Danes were more likely to head west to what is today England. Norwegians were most likely to set sail for the North Atlantic Ocean, colonizing Ireland, Iceland, and eventually Greenland. To the team's surprise, there was little evidence of genetic mixture within Scandinavia itself, except in trading hubs." (Andrew Curry., *Science News*, 2020-9-18, pp. 1416-7)

This is the source document for the previous article.

#### "Population genomics of the Viking world"

"The maritime expansion of Scandinavian populations during the Viking Age (about AS 750-1050) was a far-flung transformation in world history. The authors sequence the genomes of 442 humans from archaeological sites across Europe and Greenland (to a median-depth of about 1x) to understand the global influence of this expansion. They found the Viking period involved gene flow into Scandinavia from the south and east. They observed genetic structure within Scandinavia, with diversity hotspots in the south and restricted gene flow within Scandinavia. They found evidence for a major influx of Danish ancestry into England; a Swedish influx into the Baltic; and Norwegian influx into Ireland, Iceland and Greenland. Additionally, they saw substantial ancestry from elsewhere in Europe entering Scandinavia during the Viking Age. Their ancient DNA analysis also revealed that a Viking expedition included close family members. By comparing with modern populations, they found that pigmentation associated loci have undergone strong population differentiation during the past millennium, and traced positively selected loci-including the lactase-persistence allele of LCT and alleles of ANKA that are associated with the immune response-in detail. They concluded that the Viking diaspora was characterized by substantial transregional engagement: distinct populations influenced the genomic makeup of different regions of Europe, and Scandinavia experienced increased contact with the rest of the continent." (Ashot Margaryan et al. Nature, V 585, 2020-09-17 pp. 390-396)

### "The nature of Neanderthal introgression revealed by 27,566 Icelandic genomes"

"Human evolutionary history is rich with the interbreeding of divergent populations. Most humans outside of Africa trace about 2% of their genomes to admixture from Neanderthals, which occurred 50-60 thousand years ago. In this article they examine the effect of this event using 14.4 million putative archaic chromosome fragments that were detected in fully phased

whole genome sequences from 27,566 Icelanders, corresponding to a range of 56,388-112,709 unique archaic fragments that cover 38.0-48.2% of the callable genome. On the basis of the similarity with known archaic genomes, they assign 84.5% of fragments to an Altai or Vindija Neanderthal origin and 3.3% to Denisovan origin; 12.2% of fragments are of unknown origin. They found that Icelanders have more Denisovan-like fragments than expected through incomplete lineage sorting. This is best explained by Denisovan gene flow, either into ancestors of the introgressing Neanderthals or directly into humans. A within-individual, paired comparison of archaic fragments with syntenic non-archaic fragments revealed that, although the overall rate of mutation was similar in humans and Neanderthals during the 500 thousand years that their lineages were separate, there were differences the relative frequencies of mutation types—perhaps due to different generation intervals for males and females. Finally, they assessed 271 phonotypes, report 5 associations driven by variant in archaic fragment and show that the majority of previously reported associations are better explained by non-archaic variants." (Laurits Skov *et al. Nature*, V 582, 2020-06-4 pp. 78-83)

# "The evolutionary history of Neanderthal and Denisovan Y chromosomes"

"Ancient DNA has provided new insights into many aspects of human history. However, we lack comprehensive studies of the Y chromosomes of Densovans and Neanderthals because the majority of specimens that have been sequenced to sufficient coverage are female. Sequencing Y chromosomes from two Denisovans and three Neanderthals shows that the Y chromosomes of Denisovans split around 700 thousand years ago from a lineage shared by Neanderthals and modern human Y chromosomes, which diverged from each other around 370 thousand years ago. The phylogentic relationships of archaic and modern human Y chromosomes differ from the population relationships inferred from the autosomal genomes and mirror mitochondrial DNA phylogenies, indicating replacement of both the mitochondrial and Y chromosomal gene pools in late Neanderthals. This replacement is plausible if the low effective population size of Neanderthals resulted in an increased genetic load in Neanderthals relative to modern humans." (Martin Petr *et al, Science*, 2020-9-25, V 369, pp. 1653-56)

### "Environmental drivers of megafauna and hominin extinction in Southeast Asia"

"Southeast Asia has emerged as an important region for understanding hominin and mammalian migrations and extinctions. High-profile discovers have shown that Southeast Asia has been home to at least five members of the genus *Homo*. Considerable turnover in Pleistocene megafauna has previously been linked with these hominins or with climate change. In this article the authors present a large-scale dataset of stable isotope data for Southeast Asian mammals that spans the Quaternary period. Their results demonstrate that the forests of the Early Pleistocene had given way to savannahs by the Middle Pleistocene, which led to the spread of grazers and extinction of browsers. Savannahs retreated by the Late Pleistocene and had completely disappeared by the Holocene epoch, when they were replace by highly stratified closed-canopy rainforest. This resulted in the ascendency of rainforest adapted species as well as *Homo sapiens*—which has a unique adaptive plasticity among hominins---at the expense of savannah and woodland specialist, including *Homo erectus*. At present mega fauna are restricted

to rainforests and are severely threatened by anthropogenic deforestation." (Julien Louys and Patrick Roberts, *Nature*, V 586, 2020-10-15 pp. 402-406)

Sacramento Archeological Society, Inc. P.O. Box 163287 Sacramento, CA 95816-9287