Sacramento Archeological Society, Inc.
Newsletter

www.sacarcheology.org. **Sept/Oct - 2020**

SAS is continuing its mission to educate our members and supporters in ways possible despite the challenges of COVID-19. We will continue to email current archaeological news to SAS members and offer FREE webinars on various archeological topics. We will be providing Zoom contact information for the webinars to members. Non members are also welcome.

UPCOMING EVENTS

September 14, 2020, Monday, 9:30 a.m. **FSRA Grouse Ridge Outing**

September 19, 2020, Saturday, 1:00 p.m. - **Member Greet** via Zoom

September 19, 2020, Saturday, 2:00 p.m. - **SAS Webinar "Lovelock Cave Excavation – Its Contribution to the Science of Archaeology"** by **John Foster**

September 21, 2020' Monday, September 21, 2020 **FSRA Bear Valley, Spaulding Ridge Outing**

October 9, 2020, Friday, 4:00 p.m. – **Board Meeting** via Zoom

October 17, 2020, Saturday, 2:00 p.m. - SAS Webinar "Maritime Technological Adaptations and the Peopling of the Far West of North America" by Kevin Smith

November, 2020, Saturday, 2:00 p.m. - **SAS Webinar "Cultural Resources and California State Parks: Some History and Philosophy**" by **John Foster**

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

UPCOMING EVENTS

SAS Member Greet Webinar

September 19, 2020
1:00 p.m.

Prior to John Foster's presentation on Lovelock Cave Excavation join the webinar and become familiar with Zoom if you are not a frequent user and greet members that you have not been able to connect with because of the virus. We want all members to be comfortable connecting into our webinars and we don't want to lose sight of your importance as a member. Please put this date and time on your calendar.

SAS Webinar

September 19, 2020
2:00 p.m.

"Lovelock Cave Excavation – Its Contribution to the Science of Archaeology"
by **John Foster**

Lovelock Cave (NV-Ch-18) is a North American archaeological site 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 will discuss the exploration of Locklock Cave and highlight its significance in the evolving discipline of archaeological excavation.

John Foster attended UC Santa Barbara as an undergraduate and transferred to UCLA where he graduated in 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 work 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 creator. John was president of SAS for seven years and continues to be a board member.

Friends of Sierra Rock Art (FSRA)

IS OFFERING TWO SEPTEMBER OUTINGS FOR MEMBERS

Both of these outings will involve social distancing and masks. Participants' temperatures will be checked in the beginning with a no touch laser-reading thermometer, and hand sanitizer will be available if needed.

Participants are accepted on a first-come-first served basis. Sign up by email by **August 27**: Karen Ostergard at cody17k@sbbmail.com. Outing letters with additional details will be sent to those who are going when the outings get closer.

GROUSE RIDGE OUTING, semi-strenuous (you must be in reasonable shape)
Monday, September 14.

This outing is limited to 8 participants in addition to the 2 leaders (Nolan Smith and Bill Drake). If there is a big response, we may consider adding a second date for the outing. This will be about a 4 mile hike round-trip, some of which is uphill and moderately strenuous. We will meet at Blue Lake, 1 ¼ hours from Nevada City, at 9:30 am; moderate clearance (like for a Subaru

Outback) is needed for driving the road to the lake. People from the Nevada City area will return there around 4 or 5 pm.

This is a very nice hike through wooded areas. There are two nearby petroglyph sites. The main one has 100-150 images. The view, featuring distant lakes and mountains, is spectacular.

View toward Lake Spaulding from Grouse Ridge

BEAR VALLEY, SPAULDING RIDGE OUTING, easy hiking
Monday, September 21.

As with the Grouse Ridge outing, there will be 8 participants and 2 leaders (Nolan and Bill), and if a lot of people sign up we will consider a second outing to these sites. We will meet in Bear Valley off Highway 20, about 25 minutes from Nevada City, at 9:30 am. The first visit offers bedrock mortars (for processing acorns) and cupules. (Cupules are small indentations in a rock surface that likely served a ritual function.) This will be close to where we park. From there we will hike ½ mile on mostly level ground to a site with over 100 petroglyphs as well as bedrock mortars before returning to our cars. People who wish to continue will drive a few miles up Highway 20 to visit the Spaulding Ridge site. To get to the rock art we will hike for about 15 minutes. Most of the terrain is level, but some of it is a little rocky. This will not be strenuous for the average person. People from Nevada City will return mid to late afternoon.

This is a very nice site although it has been heavily impacted by lichen. It offers a beautiful view of Bear Valley.

October is California's Archaeology Month

Archaeology Month is a national program to promote the preservation of our country's heritage. California as well as several other states has designated October has Archaeology Month. Think about your promotion of archaeology. Typically the Society schedules an event at the Maidu Museum and Historical Site. Because of the pandemic we will be having our presentation to bring awareness to archaeology via a webinar on October 17th. See following announcement. We will be announcing other events as they are scheduled.

SAS Webinar

October 17, 2020
2:00 p.m.

"Maritime Technological Adaptations and the Peopling of the Far West of North America"
By *Kevin Smith*

This talk synthesizes Kevin's dissertation research concerning the role of watercraft and lithic technologies in early subsistence and settlement systems of the Far West of North America. He specifically focuses on tule canoe production dynamics, late Pleistocene archaeology, and aquatic environments of the Great Basin and Southern California Channel Islands. Specific attention is given to stone tool manufacturing strategies and connections between California's earliest island populations and the broader Western Stemmed Tradition.

Kevin Smith is currently in the final phase of writing his PhD dissertation concerning the peopling of the Americas and late Pleistocene adaptations in the Far West. He is interested in hunter gatherer adaptations, maritime economies, and cultural transmission. Broader perspectives on human adaptation and evolution are supported by methods such as lithic analysis, technological analysis, and replicative studies (experimental archaeology). Kevin received his BA at Humboldt State University in 2007, his MA at Cal State LA in 2012 where he wrote his master's thesis on late Holocene shell fishhook production on San Nicolas Island, and he is currently completing his PhD at UC Davis.

PAST EVENTS

SAS Mound Builders of North America Webinar

On July 18th Lynette Blumhardt presented "Mound Builders of North America" as a webinar**.** Approximately 20 people attended the very informative presentation. Lynette discussed who the builders were, why they created such mound structures, where the mounds were located, when were they built and what happened to the civilization that created them. From the Great Lakes to the Gulf of Mexico mostly along rivers, indigenous people of North America lived, farmed and built earthworks. Their complex cultures thrived for thousands of years, from between 4000 BCE to the 17th century. Some of their earthworks are effigy mounds; others are domes, while the largest are earthen pyramids that rival those found in Mesoamerica. Some of the famous mounds that were featured included the oldest discovered Watson Brake, Louisiana, Great Serpent Mound, Ohio, Hopewell, Ohio and Cahokia, Illinois.

SAS OSL Webinar

On August 15 Tom Johansen, MD gave a talk, "Optically Stimulated Luminescence in Archaeology and Earth Sciences" via Zoom. OSL is a method used to date archeological sites and their associated artifacts. This technique uses the radiation dosimeter property of minerals

such as quartz and feldspar. The method estimates when the mineral was last exposed to sunlight or sufficient heating. Tom described how the method works, its limitations and prognosis as a viable archaeological dating tool. As part of the talk he discussed sites in Australia, South Africa and Europe that have been dated using OSL

MEMBER'S CORNER

By-Laws

The board of directors completed an update of our By-Laws. These are available to members upon request to our secretary. The last amendment was in 2003. In addition to a few minor changes our Code of Ethics was revised. All members are expected to adhere to these principles. The new Code of Ethics which is part of the Membership Application is as follows:

Code of Ethics

Sacramento Archeological Society, Inc. is dedicated to the greater understanding of archaeology, to the protection and preservation of the Sacramento region and the world's archaeological resources, and to the encouragement of archaeological research and publication.

Consistent with these principles, Sacramento Archeological Society, Inc and its members shall adhere to the following, which constitutes a Code of Ethics:

1. Seek to ensure that the study of archaeological sites is conducted according to professional standards and the results be made public;

2. Refuse to participate in the trade of undocumented antiquities;

3. Inform appropriate authorities and public agencies of ways to preserve fragile and irreplaceable heritage resources.

Nomination of Board of Directors for 2021

A nomination committee led by Knuti Van Hoven with John Foster as a member will be securing nominations for board positions for 2021: The positions include officers: President, Vice President, Secretary, and Treasurer and directors: Immediate Past President, Events Coordinator, Membership, Editor, Education, Publicity and Society Relations and At Large Directors.

If you are interested becoming part of the board, please contact Knuti or John. As a Director you have a say into the activities and policies of our origination.

The election of the board is held at the annual meeting. This year the meeting will be on December 5 as a webinar. We encourage all members to attend this meeting.

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:

- Genetic response to pathogens - "How an ancient microbial arms race remodeled human cells - study traces genetic responses to pathogens back to ancestor of Neanderthals and modern humans"
- Ancient DNA in China - "Ancient DNA indicates human population shifts and admixture in northern and southern China"
- Populating the Americas
    - "Genomic insights into the early peopling of the Caribbean"
    - "Evidence of human occupation in Mexico around the Last Glacial Maximum"
    - "The timing and effect of the earliest human arrivals in North America"
    - "Native American gene flow into Polynesia predating Easter Island settlement"
- Ireland - "A dynastic elite in monumental Neolithic society"
- Maya civilization - "Monumental architecture at Aguada Fénix and the rise of Maya civilization"
- Conservation in crop cultivation in America
    - "Early Holocene crop cultivation and landscape modification in Amazonia"
    - "Timing the rise of maize in Mesoamerica"
- Israel - "Paving over the past - Israel is in the middle of a building zoom to house its rapidly growing population, but some researchers fear the country isn't doing enough to conserve its wealth of archaeological sites"

"How an ancient microbial arms race remodeled human cells Study traces genetic responses to pathogens back to ancestor of Neanderthals and modern humans"

"At a recent symposium on the evolution of infectious diseases, University of California, San Diego pathologist, Nissi Varki noted that humans suffer from a long list of deadly diseases—including typhoid, fever, cholera, mumps, whooping cough, and gonorrhea—that don't afflict apes and most other mammals. All of those pathogens follow the same well-trodden pathway to break into our cells: They manipulate sugar molecules called sialic acids. Hundreds of millions of these sugars stud the outer surface of every cell in the human body—and the sialic acids in humans are different from those in apes.

Varki and an international team of researchers have now traced how evolution may have scrambled to construct new defenses after that molecular vulnerability emerged in our distant ancestors. By analyzing modern human genomes and ancient DNA from our extinct cousins, the Neanderthals and Denisovans, the researchers detected a burst of evolution in our immune cells

that occurred in an ancestor of all three types of human by at least 600,000 years ago. These genetic changes may have sharpened the body's defenses against the pathogens that evolved to exploit sialic acid—but created new vulnerabilities.

More than 2 million years ago, a mutation in a gene on chromosome six made it impossible for human ancestors to make the type of sialic acid found in apes and most other mammals (Neu5Gc); instead they made more of another sialic acid (Neu5Ac). The change likely evolved as a defense against malaria. The malarial parasites that infect chimpanzees were no longer able to bind with the altered sialic acids on our red blood cells. But in the next million years or so, that mutation became a liability as Neu5Ac became a portal for a flurry of other pathogens.

In a new study researchers scanned DNA for immune genes in six Neanderthals, two Denisovans, and 1000 humans, and looked at dozens of chimps, bonobos, gorillas, and orangutans as well. They found evolutionary changes that "markedly altered" one class of proteins—sialic acid-binding immunoglobulin-type lectins, or Siglecs—that usually sit on the surface of human immune cells and recognize sialic acids.

Siglecs are molecular sentries: They probe sialic acids to see whether they are familiar parts of our own bodies or foreign invaders. If Siglec spot sialic acids that are damaged or missing, they signal immune cells to activate, ousting an inflammatory army to attack potential invaders or clean up damaged cells. If sialic acids instead appear to be normal parts of our own cells, other inhibitory Siglics throttle back immune defense so as not to attach our own tissues. Presumably they helped to fight pathogens that target NeufAc. Although the recently mutated Siglecs protect us from pathogens, they may also contribute to other diseases such as inflammation and autoimmune disorders (asthma and meningitis)."
(Ann Gibbons, *Science*, 2020-7-31 V 369, p. 491-2)

"Ancient DNA indicates human population shifts and admixture in northern and southern China"

"Human genetic history in East Asia is poorly understood. To clarify population relationships, the researchers obtained genome-wide data from 26 ancient individuals from northern and southern East Asia spanning 9500 to 300 years ago. Genetic differentiation in this region was higher in the past than the present, which reflects a major episode of admixture involving northern East Asian ancestry spreading across southern East Asia after the Neolithic, thereby transforming the genetic ancestry of southern China. Mainland southern East Asian and Taiwan Strait island samples from the Neolithic show clear connections with modern and ancient individuals with Austronesian-related ancestry, which supports an origin in southern China for proto-Austronesians. Connections among Neolithic coastal groups from Siberia and Japan to Vietnam indicate that migration and gene flow played an important role in the prehistory of coastal Asia.

The researchers observed increased northern influences in southern East Asia between the Early Neolithic and today. The spread of northern East Asian ancestry led to increased admixture in both directions, such that most of today's East Asians are a mixture of northern and southern East Asian ancestries. Thus, not only was there spread of northern East Asian ancestry into southern East Asia, but southern East Asian-related ancestry can be found in some present-day northern East Asians." (Melinda A Yang *et al*., *Science*, 2020-7-17, V 369, pp. 282-288)

"Genomic insights into the early peopling of the Caribbean"

"The Caribbean was one of the last regions of the Americas to be settled by humans, but where they came from and how and when they reached the islands remain unclear. The researchers generated genome-wide data for 93 ancient Caribbean islanders dating between 3200 and 400 calibrated years before the present and found evidence of at least three separate dispersals into the region, including two early dispersals into the Western Caribbean, one of which seems connected to radiation events in North America. This was followed by a later expansion from South America. They also detected genetic differences between the early settlers and the newcomers from South America, with almost no evidence of admixture. Their results add to the understanding of the initial peopling of the Caribbean and movements of Archaic Age peoples in the Americas." (Kathrin Nägele *et al, Science*, 2020-7-24, V 369, pp. 456-459)

"Evidence of human occupation in Mexico around the Last Glacial Maximum"

"The initial colonization of the Americas remains a highly debated topic and the exact timing of the first arrivals in unknown. The earliest archaeological record of Mexico which holds a key geographical position in the Americas—is poorly known and understudied. Historically, the region has remained on the periphery of research focused on the first American populations. However, recent investigations provide reliable evidence of a human presence in the northwest region of Mexico, the Chiapas Highlands, Central Mexico and the Caribbean coast during the Late Pleistocene and Early Holocene epochs. In this article they present results of recent excavations at Chiquihuite Cave—a high altitude site in central northern Mexico—that corroborate previous findings in the Americas of cultural evidence that dates to the Last Glacial Maximum (25,500 – 19,000 years ago), and which push back dates for human dispersal to the region possibly as early as 33,000 – 31,000 years ago. The site yielded about 1,900 stone artifacts within a 3-m-deep stratified sequence, revealing a previously unknown lithic industry that underwent only minor changes over millennia. More than 50 radiocarbon and luminescence dates provide chronological control, and genetic, palaeoenvironmental and chemical data document the changing environments in which the occupants lived. Their results provide new evidence for the antiquity of humans in the American and illustrate the cultural diversity of the earliest dispersal groups (which predate those of the Clovis culture) and open new directions of research*" (*Ciprian F. Ardelean *et al. Nature, V 584, 2020-08-6, pp, 87-92*)

Review article: "Evidence grows for early peopling of the Americas (Ruth Gruhn, *Nature, V 584, 2020-08-6, pp. 47-48*)
"Earlier arrival in the Americas claimed – Artifacts hint humans lived in Mexico over 30,000 years ago" (Maria Temming, *Science News*, 2020-08-15, p. 6)

"The timing and effect of the earliest human arrivals in North America"

"The article analyzes chronometric data from 42 North American and Beringian archaeological sites using a Bayesian age modeling approach, and uses the resulting chronological framework to elucidate spatiotemporal patterns of human dispersal. They then integrate these patterns with the

available genetic and climatic evidence. The data obtained show that humans were probably present before, during and immediately after the Last Glacial Maximum (about 26.5 – 19 thousand years ago) but that more widespread occupation began during a period of about warming, Greenland Interstadial 1 (about 14.7 – 12.9 thousand years before AD 2000). They also identify the near-synchronous commencement of Beringian, Clovis and Western Stemmed cultural traditions, and an overlap of each with the last dates for the appearance of 18 now-extinct faunal genera. The analysis suggests that the widespread expansion of humans through North America was a key factor in the extinction of large terrestrial mammal.*" (*Loren Becerra-Valdivia *et al. Nature, V 584, 2020-08-6, pp. 93-97*)

"Native American gene flow into Polynesia predating Easter Island settlement"

"The possibility of voyaging contact between prehistoric Polynesian and Native American populations has long intrigued researchers. Proponents have pointed to the existence of New World crops, such as the sweet potato and bottle gourd, in the Polynesian archaeological record, but nowhere else outside the pre-Columbian Americas, while critics have argued that these botanical dispersals need not have been human mediated. The Norwegian explorer Thor Heyerdahl controversially suggested that prehistoric South American populations had an important role in the settlement of east Polynesia and particularly of Easter Island (Rapa Nui). Several limited molecular genetic studies have reached opposing conclusions, and the possibility continues to be as hotly contested today as it was when first suggested. The researchers analyzed genome-wide variation in individuals from islands across Polynesia for signs of Native American admixture, analyzing 807 individuals from 17 island populations and 15 Pacific coast Native American groups. They found conclusive evidence for prehistoric contact of Polynesian individuals with Native American individuals (around AD 1200) contemporaneous with the settlement of remote Oceania. Their analyses suggest strongly that a single contact event occurred in eastern Polynesia, before the settlement of Rapa Nui, between Polynesian individuals and a Native American group most closely related to the indigenous inhabitants of present-day Colombia.*" (*Alexander G Ioannidis *et al. Nature, V 584, 2020-07-23, pp. 572-577*)

Other reports of this study include: "Ancient Voyage carried native Americans' DNA to remote Pacific Islands" *(Nature, V 583, 2020-07-16, p. 337)*
*"*Polynesians, Native Americans met and mingled long ago- Islanders' DNA suggests contact before European arrival*" (*Lizzie Wade, *Science*, 2020-7-10, V 369, p. 128)
"Early Polynesians had surprise visitors – DNA hints at an ancient encounter with South Americans" (Bruce Bower, *Science News*, 2020-08-01, p. 15)

"A dynastic elite in monumental Neolithic society"

"The nature and distribution of political power in Europe during the Neolithic era remains poorly understood. During this period, many societies began to invest heavily in building monuments, which suggests an increase in social organization. The scale and sophistication of megalithic architecture along the Atlantic seaboard, culminating in the great passage tomb complexes, is particularly impressive. Although co-operative ideology has often been emphasized as a driver of megalith construction, the human expenditure required to erect he largest monuments has led

some researchers to emphasize hierarchy—of which the most extreme case is a small elite marshalling the labor of the masses. In this article they present evidence that a social stratum of this type was established during the Neolithic period in Ireland. They sampled 44 whole genomes, among which they identified the adult son of a first-degree incestuous union from remains that were discovered within the most elaborate recess of the Newgrange passage tomb. Socially sanctioned matings of this nature are very rare, and are documented almost exclusively among politico-religious elites—specifically within polygynous and patrilineal royal families that are headed by god-kings. The researchers identified relatives of this individual within two other major complexes of passage tombs 150 km to the west of Newgrange, as well as dietary differences and fine-scale haplotypic structure (which is unprecedented in resolution for prehistoric population) between passage tomb samples and the larger dataset, which together imply hierarchy. This elite emerged against a backdrop of rapid maritime colonization that displaced a unique Mesolithic isolate population, although they also detected rare Irish hunter-gatherer introgression within the Neolithic population." (Lara M Cassidy *et.al. Nature*, V 582, 2020-06-18, pp, 384-386)

Other reports of this study include: "Incest uncovered at elite prehistoric Irish burial site" (Alison Sheridan, *Nature*, V 582, 2020-06-18, pp, 347-349)
"Incest in ancient Ireland suggests an elite ruled early farmers - DNA from massive Newgrange tomb reveals a practice linked to royalty around the world" (Andrew Curry, *Science*, V. 368, 2020-06-19, p. 1299)

"Monumental architecture at Aguada Fénix and the rise of Maya civilization"

"Archaeologists have traditionally thought that the development of Maya civilization was gradual, assuming that small villages began to emerge during the Middle Preclassic period (1000-350 BC; dates are calibrated throughout) along with the use of ceramics and adoption of sedentism. Recent finds of early ceremonial complexes are beginning to challenge this model. The researchers describe an airborne lidar survey and excavations of previously unknown site of Aguada Fénix (Tabasco Mexico) with an artificial plateau, which measures 1,400 m in length and 10 to 15 m. in height and has 9 causeways radiating out from it. They dated this construction to between 1000 and 800 BC using a Bayesian analysis of radiocarbon dates. To their knowledge, this the oldest monumental construction ever found in the Maya area and the largest in the entire pre-Hispanic history of the region. Although the site exhibits some similarities to the earlier Olmec center of San Lorenzo, the community of Aguada Fénix probably did not have marked social inequality comparable to that of San Lorenzo. Aguada Fénix and other ceremonial complexes of the same period suggest the importance of communal work in the initial development of Maya civilization." *(*Takeshi Inomata *et al. Nature, V 582, 2020-06-25, pp, 530-533*)

Other reports of this study include: "Large-scale early Maya sites revealed by lidar" *(*Patricia A. McAnany, *Nature, V 582, 2020-06-25, pp. 490-492*)
"Oldest, largest Maya monument found" (Bruce Bower, *Science News*, 2020-07-04, p. 6)

"Early Holocene crop cultivation and landscape modification in Amazonia"

"The onset of plant cultivation is one of the most important cultural transitions in human history. Southwestern Amazonia has previously been proposed as an early center of plant domestication, on the basis of molecular markers that show genetic similarities between domesticated plants and wild relatives. However, the nature of the early human occupation of southwestern Amazonia, and the history of plant cultivation in this region, are poorly understood. The researchers document the cultivation of squash (*Cucubita sp.*) at about 10,250 calibrated years before present (cal.yr BP), manioc (*Manihot sp*.) at about 10,350 cal. yr BP and maize (*Zea mays*) at about 6,850 cal.yr BP, in the Llanos de Moxos (Bolivia). They show that, starting at around 10,850 cal.yr BP, inhabitants of this region began to create a landscape that ultimately comprised approximately 4,700 artificial forest islands within a treeless, seasonally flooded savannah. Their results confirm that the Llanos de Moxos is a hotspot for early plan cultivation and demonstrates that—ever since their arrival in Amazonia—humans have markedly altered the landscape, with lasting repercussions for habitat heterogeneity and species conservation."
(Umberto Lonbardo *et al, Nature, V 581, 2020-05-14, pp. 190-193)*

"Timing the rise of maize in Mesoamerica"

"Many lines of evidence suggest that maize (*Zea mays*) became a dietary staple across ancient Mesoamerica. However, there has been little direct evidence of its consumption, and the timing of how it came to dominate the diet of the peoples of the region is unknown. Using stable isotopic evidence from human skeletons excavated from two rock shelter sites in Belize, Kennet *et al*. show that there is no clear evidence of maize consumption by the sites' inhabitants before 4700 years ago. However, isotopes from more recent individuals show the increasing importance of maize in the diet, such that by 4000 years ago, maize had become a persistent dietary staple."
(*Science, V 368, 2020-06-05, p. 077)*

"Paving over the past

Israel is in the middle of a building zoom to house its rapidly growing population, but some researchers fear the country isn't doing enough to conserve its wealth of archaeological sites"

"Israel has hundreds of archaeological sites that might be buried or destroyed this year. That's because most excavations in the country are salvage digs, authorized by the Israel Antiquities Authority (IAA), the government body that oversees antiquities and archaeological sites within the state of Israel. Salvage digs are conducted to document archaeological remains in the danger of destruction because of development plans. The IAA very rarely blocks construction on top of an important archaeological site or takes steps to preserve some portion of the site from being destroyed. In 2019 salvage digs accounted for more than half of the 424 licenses issued by the IAA for archaeological excavation and surveys. In almost all cases after the archaeologist excavated the sites and remove valuable artifacts, construction projects were allowed to proceed. Many of the 35,000 sites in the country would not be excavated if it were not for the construction

projects that provide funding and an impetus for digs. Given Israel's fast-growing population, the country can't preserve as many archaeological sites as supporters would like."
(Josie Glausiuzs, *Nature, V 582, 2020-06-25, pp. 474-477*)

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