



Sacramento Archeological Society, Inc. Newsletter

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May/Jun - 2021

UPCOMING EVENTS

May 8, 2021 - Saturday, 2:00 p.m. PDT - **SAS Webinar** *“Polynesian Contact with the Americas: An Update”* by **Terry Jones**, Department of Social Sciences, California Polytechnic State University and **Kathryn A. Klar**, University of California, Berkeley

May 17-29, 2021 – SAS Four Corners Pre-Tour

June 12, 2021 - Saturday, 2:00 p.m. PDT - **SAS Webinar** *“The Olmec Cascajal Block through the Portable Portals”* by SAS Member, **Joanne Carpenter**

June 16-18, 2021 – A Taste of Nevada Heritage - Caves, Rock Art, and Paiute Culture Tour led by archaeologists, Dan and John Foster

July 10, 2021 - Saturday, 2:00 p.m. PDT - **SAS Webinar** *“The potential of Obsidian Hydration Dating for Titicaca Basin archaeology”* by Peruvian Archaeologist, Luis Flores Blanco

September 12-25, 2021 – SAS Four Corners Tour led by Jan Johansen and Diane Sangster

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.

UPCOMING EVENTS

SAS Webinar

Saturday, May 8, 2021

2:00 p.m.

“Polynesian Contact with the Americas: An Update”

By **Terry Jones**, Department of Social Sciences, California Polytechnic State University
and **Kathryn A. Klar**, University of California, Berkeley

The possibility of prehistoric Polynesian contact with the Americas has been considered by historians, archaeologists, and other scholars for centuries. Most evidence and most scholarly discourse have focused on South America, but as early as the 1930s, Alfred Kroeber suggested that cultural similarities between southern California and Oceania could be the product of prehistoric trans-oceanic diffusion. This talk reviews archaeological, linguistic, and other evidence for such contact in North and South America with an emphasis on recent genetic studies that challenge some longstanding ideas.

Dr. Terry Jones joined the Cal Poly San Luis Obispo faculty in 1998. His research interests include North American prehistory, hunter-gatherer ecology, and maritime adaptations. His area of geographic expertise is the central California coast, where he has conducted field research for the last 35 years. He is actively involved in research on a number of issues related to the archaeology and ecology of prehistoric California including: the impacts of late Holocene droughts on indigenous populations, the effects of human-caused extinction of the flightless duck (*Chendytes lawi*) on near shore ecology during the Holocene, the prehistory of fishing on the central California coast, and possible pre-Columbian Polynesian contact with the New World. His most recently published books focus on the archaeology and prehistory of the Pecho Coast and Morro Bay in San Luis Obispo County.

Dr. Kathryn Klar is a historical/comparative and anthropological linguist. Her specialties are California Indian languages, especially Chumashan languages, and Celtic languages and cultures. She was a lecturer in the Celtic Studies at UC Berkeley, and is now retired. She has a special interest in the original peopling of the Americas, and long-distance relationships between languages. She works with the Northern Chumash people on their language revitalization program.

You may join early at 1:30 pm PST and enjoy a social half hour. Friends are welcome. There is no participation fee. See announcements: <https://sacarcheology.org/announcements/> for **webinar access information**

SAS Webinar
Saturday, June 12, 2021
2:00 p.m.

"The Olmec Cascajal Block through the Portable Portals"
by **Joanne Carpenter**

The Cascajal Block is a tablet-sized writing slab in Mexico made of serpentinite which has been dated to the early first millennium BCE. It is incised with hitherto unknown characters that may represent the earliest writing system in the New World. Joanne will discuss the possible link between this discovery and the Olmec civilization. The Cascajal Block was first discovered in 1999 and refused as a possible connection to the Olmec; however many archaeologists are academically finding evidence to prove its arrival is connected to Olmec representation.

Joanne Carpenter is a native Hawaiian. James Booth Cummings of the Cummings Clan is her great grandfather her and her great grandmother; Sarah Nela Kaimu Kuhaulua is a third generation Native Hawaiian. She resides on the big island and has an AA and BA in Anthropology. She is a member of the Sacramento Archeological Society and with pleasure she has served as the Vice President with Travis County Archeological Society in Texas for years. She has 18 years of archaeology experience in the field and taught grade school. At an early age she searched the ground for artifacts and still does.

You may join early at 1:30 pm PST and enjoy a social half hour. Friends are welcome. There is no participation fee. See announcements: <https://sacarcheology.org/announcements/> for **webinar access information**

*A Taste of Nevada Heritage - Caves, Rock
Art and Paiute Culture Tour*

June 16-18, 2021

Sacramento Archeological Society, Inc. is offering an archaeological tour in Nevada for three days (2 nights) June 16, 17 and 18. We will explore prehistoric cave occupation, investigate rock art, and learn about Paiute history and culture.

The tour itinerary is as follows:

Day 1, Wednesday, June 16, 2021

12:00 - Noon - Meet in Sparks, NV (RR) at tour meeting place: **Jack in the Box**. (122 Los Altos Parkway, Sparks, NV.) Take exit 18 north from I-80 (NV 449) approximately 3.9 mi on Pyramid Way. (R) on Los Altos Parkway, first (L) turn into shopping center to Jack in the Box.

12:30 - Caravan to **Griffith Canyon Petroglyphs**



1:00 pm. – Hike to see **Griffith Canyon Petroglyphs** (2 hrs total) led by Dan and John Foster
 3:00 pm. - Drive to **Fort Churchill State Historic Park**. (10000 Hwy 95A, Silver Springs, NV 89429) (1 hr. from Sparks) \$10 entrance fee for non-NV vehicles
 4:00 pm – Visit the visitor center.
 5:00 pm. - Tailgate orientation/ icebreaker in group picnic area (RR). BYOB
 6:00 pm - Check in **Holiday Inn Express**, (55 Commercial Way, Fallon NV)

Day 2 – Thursday, June 17, 2021

8:00 am - Meeting at Holiday Inn Express
 9:00 am - Drive to **Churchill County Museum** (1050 S Main Street, Fallon, NV 89406) An early opening is offered for SAS group and Hidden Cave exhibit can be reviewed. Donna Cossette (Paiute) will give an orientation. (RR)
 11:00 am - Travel to **Grimes Point** picnic area (RR)
 12:00 - Lunch and walking tour **Grimes Point Petroglyphs** Donna Cossette to accompany us.
 3:00 pm - Tour **Burnt Cave and Picnic Cave** area trail (RR)
 5:00 pm - Return to **Holiday Inn Express**



Day 3 – Friday, June 18, 2021



8:00 am - Check out of motel
 9:00 am - Depart Holiday Inn for **Lovelock, NV** (51 mi.)
 10:00 am - Meet Cory Wilkins (TAC) in Lovelock (RR) at meeting place: **McDonalds**, 1555 Main Street, Lovelock, NV 89419. (RR). Deliver TAC waivers.
 10:30 am - Depart for **Leonard Rockshelter**
 12:30 pm - Depart for **Lovelock Cave**
 1:00 pm - Lunch Lovelock Cave (RR)
 2:00 pm - Tour **Lovelock Cave**
 3:00 pm - Depart

Note: (RR) = Restroom Facilities

Griffith Canyon: <https://www.outdoorproject.com/united-states/nevada/griffith-canyon>
<https://www.alltrails.com/trail/us/nevada/griffith-canyon-petroglyphs>
Fort Churchill State Historic Park <https://www.americansouthwest.net/nevada/fort-churchill/state-historic-park.html>
Grimes Point Petroglyphs https://en.wikipedia.org/wiki/Grimes_Point
John Foster's slideshow on Grimes Point: <https://youtu.be/0liLgvnEqQg>
BLM Grimes Point site link: <https://www.blm.gov/visit/grimes-point/hidden-cave-archaeological-site>
Leonard Rock shelter https://en.m.wikipedia.org/wiki/Leonard_Rockshelter
Lovelock Cave https://en.wikipedia.org/wiki/Lovelock_Cave:
John's slideshow on Lovelock Cave: <https://youtu.be/tDoJtUIJFfk>

Other sites in the Nevada but not included in this tour:

Hidden Cave https://www.ccmuseum.org/contact_us/ Hidden Cave video
<https://youtu.be/oEc958dkotE>
https://en.wikipedia.org/wiki/Hidden_Cave
Hickison petroglyphs <https://www.blm.gov/visit/hickison-petroglyph-recreation-area>
Berlin-Ictheosaur State Park <https://www.americansouthwest.net/nevada/berlin-ichthyosaur/state-historic-park.html>

Tour Details

This is a Members only event and attendance is limited. Reservations are accepted on a first come basis. A reservation fee of \$20 per person is required with the reservation.

Participants are responsible for making their own lodging reservations, arranging their own transportation to and on the tour, and paying for their food, fees and incidentals. The itinerary is subject to change at the discretion of Sacramento Archeological Society, Inc., but participants will be notified of significant changes in advance.

A block of rooms has been arranged at the Holiday Inn Express, 55 Commercial Way, Fallon, NV 89406, phone **775-428-2588**. The rate is approximately \$109/room plus tax. Please call and make your reservation referencing Sacramento Archeological Society to obtain the group rate.

All participants are required to sign a Hold Harmless Agreement, Covid and TAC waiver. Bring completed forms with you. Also bring cooler with drinks, snacks, etc. pack good humor, hiking sticks, sunscreen, water, hat, and more good humor. Fill gas tank before group travel. Use your car Navigation to street addresses

To make tour reservations **contact John Foster**, parkarky@yahoo.com . John cell: 1-916-673-7343. Also, optionally send the registration fee of \$20 per person to Sacramento Archeological Society, Inc. at P.O Box 163287, Sacramento, CA 95816-9287 or use our web site <https://sacarcheology.org/society-membership/sas-donations-and-membership-payment/>.
Or, bring your filled in forms on June 16 at the beginning of the tour with \$20 fee..

Four Corners Archaeological Tour

September 13-25, 2021

The archaeological exploration in the four corners area is still on schedule. The Four Corners Committee will be reviewing the sites during a trip there on May 17 through May 29. Additional information on the tour will be available after the pre-tour. See the March/April SAS Newsletter for published information on the tour.

Tour Details

This is a Members only event and attendance is limited. Reservations are accepted on a first come basis. This event is fully booked and a waiting list has been established. Many participants signed up last year for the tour that was cancelled. A reservation fee of \$50 per person is required with the reservation.

Participants are responsible for making their own lodging reservations, arranging their own transportation to and on the tour, and paying for their food, fees and incidentals. The itinerary is subject to change at the discretion of Sacramento Archeological Society, Inc., but participants will be notified of significant changes in advance. All participants are required to sign a Hold Harmless Agreement with Covid attachment prior to the tour.

To make reservations contact Jan Johansen janjohansen@sbcglobal.net Also, send the registration fee of \$50 per person to Sacramento Archeological Society, Inc. at P.O Box 163287, Sacramento, CA 95816-9287 or use our web site <https://sacarcheology.org/society-membership/sas-donations-and-membership-payment/>.

PAST EVENTS

SAS Webinar - Seven Outstanding Petroglyph Sites in Central and Northwest California: Tales of Discovery and Collaboration

On Saturday, March 13 to an audience of about 40 Zoom attendees Dan Foster gave a dynamite presentation on California petroglyphs. He discussed the early years of the Archaeology Program at the California Department of Forestry and Fire Protection (CalFire), and its successful outreach utilizing volunteers, landowners, and archaeologically-trained personnel. Specifically Dan related stories about rock art at Slakaiya Rock (CA-TR1-1) in Trinity County, Spyrock (CA-MEN-1912) and Keystone (CA-MEN-2200) in Mendocino County, Swallow Rock at Corral site, Cupule Point (CA-FRE-2109), Buckwheat (CA-FRE-2261), and Birdwell Rock (CA-FRE-2241) in Fresno County.

SAS Webinar - Evaluating the Dog as a Hunting Tool in Prehistoric Alta and Baja California: Preliminary Results

On Saturday, April 10 Jessica Morales, a graduate student at University of California, Davis and a 2020 scholarship recipient gave a Zoom talk on her dissertation topic: the potential use of dogs for hunting. Jessica discussed the various roles that dogs played in Native American societies. From ethnographical research she found that dogs are mentioned in a hunting context more than in other roles. In her preliminary research to ascertain domestic from wild canids she used isotope analysis of specimens from the Channel Islands and Baja California and found definite differences between coyotes and dogs, Her research will continue addressing Jessica's study goals to (1) identify dogs from other canids in the archaeological record, (2) identify hunting dogs from other dogs, and (3) examine changes in key prey before and after the adoption of dogs.

MEMBER'S CORNER

Welcome New Members

We welcome new members Mark Kerfoot, Mari Kurzawinski and Mariann Weed. We hope to see you in person soon,

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:

- “Human-like grips go back 2 million years”
- “A mammoth step back in genomic time” – Asia and America
- “Million-year-old DNA shed light on the genomic history of mammoths” – Asia and America
- “Innovative *Homo sapiens* behaviors 105,000 years ago in a wetter Kalahari” – South Africa
- “Early Africans living inland collected unusual objects” – South Africa
- “Initial Upper Paleolithic human in Europe had recent Neanderthal ancestry”
- “Hear hear: the Neanderthal ear heard like ours”
- “Cave kangaroo” – Australia
- “Of caves and cows: ingredients of an ancient face cream” - China

- “Dire wolves were the last of an ancient New World canid lineage”
- “Ancient humans led canine companions on epic journey” - Americas
- “Burial treasures hint at “England’s Stonehenge was erected in Wales first man’s esteemed status”
- “Genomic insights into the formation of human populations in East Asia”
- “Great Lakes people among first coppersmiths” - North America
- “An ancient Egyptian mummy was wrapped in mud”
- “Burial treasures hint at woman’s esteemed status” - Spain

“Human-like grips go back 2 million years

Thumb dexterity gave some hominids an edge in tool-making”

“Thumb dexterity similar to that of people today already existed around 2 million years ago, possibly in some of the earliest members of *Homo* genus. Thumbs that enabled a forceful grip and improved the ability to manipulate objects gave *Homo* or a closely related hominid line offered an advantage over hominid contemporaries, say a team led by Fotios Alexandros Karakostis and Katerina Harvati in an on line report in January 28 *Current Biology*.

The team digitally simulated how a key muscle influenced thumb movement in 12 fossil hominids, five 19th century humans and five chimpanzees. Surprisingly, a pair of roughly 2-million-year-old thumb fossils from South Africa display agility and power on par with modern human thumbs.

Australopithecus made and used stone tools as early as about 3.4 million years ago but lacked human-like thumb dexterity, thus limiting its tool-making capacity. Major changes to the thumb were not observed until around 2 million years ago, soon after which stone artifact became far more common across the African landscape.” (Bruce Bower, *Science News*, 2021-2-27, p. 9)

“A mammoth step back in genomic time

DNA has been retrieved from mammoth specimens that are more than one million years old. Comparing the genomes of these animals and their descendants provides insights into the changes that occurred as one species evolved into another”

“The ancestors of mammoths and Asian elephants (*Elephas maximus*) originated in Africa. Both lineages migrated into Eurasia after they had diverged (the date of this divergence is uncertain). Van der Valk *et al.* have sequenced DNA from three ancient mammoth specimens from Siberia, dubbed respectively Krestovka, Adycha and Chukochya. Genomic analyses found that Adycha and Chukochya were part of the lineage that gave rise to woolly mammoths. By contrast Krestovka did not contribute to the woolly mammoth genome, but came from lineage that diverged roughly two million years (Myr) ago, before migrating into North America. Genomic analyses suggest that hybridization occurred between the Krestovka and woolly mammoth lineages, leading them each to contribute 50% to the ancestry of North American Columbian mammoth (*Mammuthus columbi*). After woolly mammoths entered North America about 10,000 years ago, they interbred with the Columbian mammoths, replacing 12% of the Columbian mammoth genome.” (Alfred L. Roca. *Nature*, V 591, 2021-3-11 pp. 208-209)

"Million-year-old DNA shed light on the genomic history of mammoths"

"Temporal genomic data hold great potential for studying evolutionary processes such as speciation. However, sampling across speciation events would, in many cases require genomic time series that stretch well back into the Early Pleistocene sub epoch. Although theoretical models suggest that DNA should survive on this timescale, the oldest genomic data recovered so far are from a horse specimen dated to 780-560 thousand years ago. In this article they report the recovery of genome-wide data from three mammoth specimens dating to the Early and Middle Pleistocene sub epochs, two of which are more than one million years old. They found that two distinct mammoth lineages were present in eastern Siberia during the Early Pleistocene. One of these lineages gave rise to the woolly mammoth and the other represents a previously unrecognized lineage that was ancestral to the first mammoths to colonize North America. Their analyses reveal that the Colombian mammoth of North America traces its ancestry to a Middle Pleistocene hybridization between these two lineages, with roughly equal admixture proportions. Finally they show that the majority of protein-coding changes associated with cold adaptation in woolly mammoths were already present one million years ago." (Van der Valk *et al. Nature*, V 591, 2021-3-11 pp. 265-270)

"Innovative *Homo sapiens* behaviors 105,000 years ago in a wetter Kalahari"

"The archaeological record of Africa provides the earliest evidence for the emergence of the complex symbolic and technological behaviors that characterize *Homo sapiens*. The coastal setting of many archaeological sites of the Late Pleistocene epoch, and the abundant shellfish remains recovered from them, has led to a dominant narrative in which modern human origins in southern Africa are intrinsically tied to the coast and marine resources and behavioral innovations in the interior lag behind. However, stratified Late Pleistocene sites with good preservation and robust chronologies are rare in the interior of southern Africa, and the coastal hypothesis therefore remains untested. In this article they show that early human innovations that are similar to those dated to around 105 thousand years ago (ka) in coastal southern Africa existed at around the same time among humans who lived over 600 km inland. They report evidence for the intentional collection of non-utilitarian objects (calcite crystals) and ostrich eggshell from excavations of a stratified rock shelter deposit in the southern Kalahari Basin, which they date by optically stimulated luminescence to around 105 ka. Uranium-thorium dating of relict tufa deposit indicates sporadic periods of substantial volumes of fresh, flowing water; the oldest of these episodes is dated to between 110 and 100 ka and is coeval with the archaeological deposit. Their results suggest that behavioral innovations among humans in the interior of southern Africa did not lag behind those of populations near the coast, and that these innovations may have developed within a wet savannah environment. Models that tie the emergence of behavioral innovations to the exploitation of coastal resources by our species may therefore require revision." (Jayne Wilkins *et al, Nature*, V 592, 2021-4-8 pp 248-252)

"Early Africans living inland collected unusual objects"

Review of above article. "Ostrich eggshells and crystals gathered more than 100,000 years ago shed light on the cultural evolution of early humans. Found in South Africa's interior, they

reveal that technological innovations occurred beyond its coast”. (Pamela R Willoughby, *Nature*, V 592, 2021-4-8 pp 193-4)

“Initial Upper Paleolithic human in Europe had recent Neanderthal ancestry”

“Modern humans appeared in Europe by at least 45,000 years ago but the extent of their interactions with Neanderthals, who disappeared by about 40,000 years ago and their relationship to the broader expansion of modern humans outside Africa are poorly understood. In this article they present genome-wide data from three individuals dated to between 45,930 and 42,580 years ago from Bacho Kiro Cave, Bulgaria. They are the earliest Late Pleistocene modern humans known to have been recovered in Europe so far, and were found in association with an Initial Upper Paleolithic artifact assemblage. Unlike two previously studied individuals of similar ages from Romania and Siberia who did not contribute detectably to later populations, these individuals are more closely related to present-day and ancient populations in East Asia and the Americas than to later west Eurasian populations. This indicates that they belonged to a modern human migrating into Europe that was not previously known from the genetic record, and provides evidence that there was at least some continuity between the between the earliest modern humans in Europe and later people in Eurasia. Moreover, they found that all three individuals had Neanderthal ancestors a few generations back in their family history, confirming that the first European modern humans mixed with Neanderthals and suggesting that such mixing could have been common.” (Mateja Hrdinjak et al, *Nature*, V 592, 2021-4-8 pp 253-258)

“Hear hear: the Neanderthal ear heard like ours”

“The anatomy and physiology of the Neanderthal ear suggests that these early humans could communicate much like modern humans do...”

Scientists disagree on whether the vocal tracts of Neanderthals could have produced the most common sounds in modern-human speech. To explore what these extinct relatives of *Homo sapiens* could hear, Mercedes Conde-Valverde, at the University of Alcalá in Madrid and her colleagues created 3D reconstructions of the middle and outer ears of five Neanderthal individuals and assessed which sound frequencies the structures could hear well.

The results suggest that Neanderthals heard a range of frequencies similar to that heard by modern humans. The capabilities of both species skew towards higher frequencies made when pronouncing consonant sounds, such as those corresponding to the English letter T, K and F this is a departure from any non-human animals, such as chimpanzees (*Pan troglodytes*) whose hearing is focused predominantly on vowel sounds.

Language also requires symbolism which is difficult to recover from fossils. However, the authors note that cave art from the Neanderthals’ time suggests that they could think abstractly.” (*Nature*, V 591, 2021-3-11 p 181)

“Cave kangaroo”

“A 17,000-year-old depiction of a kangaroo is Australia’s oldest-known rock painting. The 2-meter-high drawing in red ochre was found on the ceiling of a rock shelter in the Kimberley region, which is known for Indigenous rock art

Geoscientist Damien Finch at the University of Melbourne, Australia and his colleagues calculated the radiocarbon dates of ancient mud-wasp nests surrounding the painting, which showed that the kangaroo was between 17,100 and 17,500 years old.” (*Nature*, V 591, 2021-3-25 p 507)

“Of caves and cows: ingredients of an ancient face cream”

“Chemical analysis has revealed that a pot buried with a Chinese nobleman some 2,700 years ago held a skin cream made from animal fat and ground stalactite—a mixture that was probably foundational to China’s cosmetic industry.

The ornate bronzer jar was still sealed when researchers unearthed it at the Liujiawa archaeological site in northern China. That allowed Yimin Yang at the University of the Chinese Academy of Sciences in Beijing and his colleagues to analyze the composition of the yellowish lumps inside the pot.

The lumps consisted of beef fat mixed with minerals that absorb sweat and skin oil. Those minerals came from ‘cave moon milk’, a powdered form of white stalactites found in limestone caves. Caves were important to the Taoist philosophy prevalent during the nobleman’s day, and the cream would have had symbolic power as well as the ability to moisturize and whiten the face.

The presence of similar pots in many royal and noble graves suggests that a cosmetics industry serving elite customers had appeared in China by roughly 700 BC.” (*Nature*, V 590, 2021-2-18 p 366)

“Dire wolves were the last of an ancient New World canid lineage”

“Dire wolves are considered to be one of the most common and widespread large carnivores in Pleistocene America, yet relatively little is known about their evolution or extinction. In this article to reconstruct the evolutionary history of dire wolves, the authors sequenced five genomes from sub-fossil remains dating from 13,000 to more than 50,000 years ago. Their results indicate that although they were similar morphologically to the extant grey wolf, dire wolves were a highly divergent lineage that split from living canids around 5.7 million years ago. In contrast to numerous examples of hybridization across Canidae, there is no evidence for gene flow between dire wolves and either North American grey wolves or coyotes. This suggests that dire wolves evolved in isolation from the Pleistocene ancestors of these species. Their results also support an early New World origin of dire wolves, while the ancestors of grey wolves, coyotes and dholes evolved in Eurasia and colonized North America only relatively recently.

Despite their overall phenotypic similarities, grey wolves and coyotes survived the Late Pleistocene mega faunal extinction whereas dire wolves did not. Analysis suggests that dire wolves survived until at least the Younger Dryas cold reversal. One possible reason for the varied survival may be that both grey wolves and coyotes possessed greater morphological plasticity and dietary flexibility, thus allowing them to avoid extinction and become the dominant terrestrial predators in North America.” (Angela R. Perri, *et al. Nature*, V 591, 2021-3-4 p 10)

"Ancient humans led canine companions on epic journey"

"The first humans to make the arduous trek from Asia to the Americas might have had company. New genomic evidence suggests that they travelled with the most faithful of friends: their dogs.

Charlotte Lindqvist at the University of Buffalo in New York and her colleagues sequenced genetic material from a scrap of bone found in Alaska and discovered that the bone belonged to a domestic dog (*Canis lupus familiaris*). The animal lived roughly 10,000 years ago, making it one of the oldest domestic dogs known in the Americas.

The team constructed a family tree using mitochondrial DNA—a type of DNA that is inherited only from the mother—from the dog and more than 1,000 other dogs and wolves, both ancient and modern. The results indicate that dogs that lived in the Americas before Europeans arrived branched off from a line of dogs in Eastern Siberia almost 17,000 years ago. That's roughly the same time that humans first crossed from Asia to the Americas, supporting the idea that dogs trotted alongside humans during this momentous migration." (*Nature*, V 591, 2021-4-4 p 10)

"Stonehenge may have Welsh roots

Excavations suggest a distant origin for some of the stones"

"At an ancient site in Wales, researchers suspect they have uncovered the remnants of a stone circle that contained initial building blocks of Stonehenge. The stone circle was found at Waun Mawn, a site in western Wales that's near quarries previously identified as sources of smaller Stonehenge stones known as bluestones. Excavations are in the early stages, but the stone circle was probably dismantled between 5,400 and 5,200 years ago, say archaeologist Mike Parker Pearson of University College London and colleagues. That's a few hundred years or less before work began at Stonehenge. Ancient people at the newly excavated site may have moved about 280 kilometers to southern England, bringing stones that were used in the first phase of building the monument, the investigators propose the February *Antiquity*.." (Bruce Bower, *Science News*, 2021-3-13, p. 12)

"England's Stonehenge was erected in Wales first

Stones were set upright before being moved east"

(Andrew Curry, *Science*, 2021-2-19 V 371 p. 765)

"Genomic insights into the formation of human populations in East Asia"

"The deep population history of East Asia remains poorly understood owing to a lack of ancient DNA data and sparse sampling of present-day people. In this article the authors report genome-wide data from 166 East Asian individuals dating to between 6000 BC and AD 1000 and 46 present-day groups. Hunter-gatherers from Japan, the Amur River Basin and people of Neolithic and Iron Age Taiwan and the Tibetan Plateau are linked by a deeply splitting lineage that probably reflects a coastal migration during the Late Pleistocene epoch. They also follow expansions during the subsequent Holocene epoch from four regions.

- First, hunter-gatherers from Mongolia and the Amur River Basin have ancestry shared by individuals who speak Mongolic and Tungusic languages, but do not carry ancestry characteristic of farmers from the West Liao River region (around 3000 BC), which contradicts theories that the expansion of these farmers spread the Mongolic and Tungusic proto-languages.
- Second, farmers from the Yellow River Basin (around 3000 BC) probably spread Sino-Tibetan languages, as their ancestry dispersed both to Tibet—where it forms approximately 84% of the gene pool in some groups—and to the Central Plain, where it has contributed around 59-84% to modern Han Chinese groups.
- Third people from Taiwan from around 1300 BC to AD 800 derived approximately 75% of their ancestry from a lineage that is widespread in modern individuals who speak Austronesian, Tai-Dadai and Austronesian languages, and that the authors hypothesize derives from farmers of the Yangtze River Valley. Ancient people from Taiwan also derived about 25% of their ancestry from a northern lineage that is related to but different from farmers of the Yellow River Basin, which suggests an additional north-to-south expansion.
- Fourth, ancestry from Yamnaya Steppe pastoralist arrived in western Mongolia after around 3000 BC but was displaced by previously established lineages even while they persisted in western China, as would be expected if this ancestry was associated with the spread of proto-Tocharian Indo-European languages. Two later gene flows affected western Mongolia: migrants after around 2000 BC with Yamnaya and European farmer ancestry and episodic influences of later groups with ancestry from Turan.” (*Nature*, V 591, 2021-3-18 pp 413-419)

“Burial treasures hint at woman’s esteemed status”

“She was buried some 3,700 years ago, inside a large clay jar. But archaeologists say that the bracelets on her wrist, the heavy silver diadem still clinging to her temple and the trove of expensive silver ornaments at her side make the mysterious woman as a powerful figure—and perhaps even a young queen.

Roberto Risch at the Autonomous University of Barcelona in Spain and his colleagues found the woman’s grave at the La Almoloya archaeological site in southeastern Spain. The tomb sits below a sprawling compound that researchers identify as a palace—the oldest known from western Europe’s Early Bronze Age, which lasted from roughly 2200 to 1550 BC.

The woman was buried beside a male partner, but the researchers link most of the 29 objects interned at the site to her. The items include silver headdress ornaments and earlobe plugs, along with objects that signified social status, such as pots with intricate silver plating and daggers with silver-plated handles.

The findings suggest that one of the earliest European civilizations held some women in esteem.” (*Nature*, V 591, 2021-3-18 p 349)

“An ancient Egyptian mummy was wrapped in mud”

“A mud-wrapped mummy is leading archaeologists to rethink how non-royal Egyptians preserved their dead. CT scans of a mummy from about 12 BC reveal that the body is sheathed in a mud shell between its layers of linen wrapping. Ancient Egyptians may have used this preservation technique, never before seen in Egyptian archaeology, to repair damage to the

mummified body. Leg fractures and other damage to the mummy's body hint that the mud wrap may have been used to restore the body after it was desecrated, potentially by tomb robbers. Repairing the body would have ensured that the deceased could continue existing in the afterlife.

While parts of the mummy's legs is caked with mud about 2.5 centimeters thick, the mud over the face is spread as thin as 1.5 millimeters. Chemical analyses of mud flakes from around the head indicate that the mud layer is covered in a white, possibly limestone-based pigment, topped with a red mineral paint." (*Science News*, 2021-2-27, p. 15)

"Great Lakes people among first coppersmiths

New dates show Native Americans worked pure ore nearly 10,000 years ago"

"The earth's largest and purest copper deposits are found around North America's Great Lakes. Early Native Americans learned to harvest the ore and heat, hammer, and grind it into tools. They left behind thousands of mines and countless copper artifacts, including lethal projectile point, hefty knives and axes, and petite fish hooks and awls.

A team led by David Pompeani, a geologist at Kansas State University, Manhattan tackled the dating of the Old Copper Culture. In a recent article in *Radiocarbon* Pompeani reports that the most reliable dates, combined with the sediment data, indicate the Old Copper Culture emerged at least 9500 years ago and it peaked between 7000 and 5000 years ago. That makes it at least as old, and perhaps older, than the Middle East, where archaeologists have documented a copper pendant believed to be 8700 years old.

The Old Copper Culture mysteriously faded about 3000 years ago. After that, early Native Americans used copper mostly for smaller, less utilitarian items associated with adornment, such as beads and bracelets. Copper awls, however, bucked this trend: They required relatively little ore to make and the people of the Great Lakes continued to use them for thousands of years" (David Malakoff, *Science*, 2021-3-26 V 371 p. 1299)