



Sacramento Archeological Society, Inc. Newsletter

www.sacarcheology.org

September/October - 2017

UPCOMING EVENTS

(SAS-sponsored events highlighted in blue)

September 3, 2017, Sunday – 1:00 to 4:00 p.m. Potluck Board Meeting at Peake's home,
October 21, 2017, Saturday – 1:00 to 4:00 p.m. Archeological Symposium "Archaeology – A Journey of Discovery from Ancient Origins to Recent Past" at Maidu Museum and Historical Site 1970 Johnson Ranch Drive, Roseville, California 95661

October 2017 – Board Meeting TBD

December 9, 2017 – Scholar Presentations and Annual Board Meeting at Carolyn and Gordon McGregor's

Archaeology - A Journey of Discovery from Ancient Origins to Recent Past

Saturday, October 21, 2017

1:00 p.m. – 4:00 p.m.

at Maidu Museum & Historical Site

1970 Johnson Ranch Drive, Roseville, California 95661

OPEN TO THE PUBLIC

Join us for an archaeological journey from human origins in South Africa to emigrants moving west in North America.

Program

- 1:00 - **Human Origins in South Africa –**
"Pinnacle Point" by **Allan Keown**, Renaissance Society at CSUS Membership Chair and
"Pleistocene Coast South Africa – A Special Environment for the Evolution of our unique species" video presentation by **Curtis Marean**, Professor, Anthropology, Arizona State University



- 2:00 - “**Varsche River 003 (South Africa)**: recent investigations into behavioral variation during the Middle Stone Age and implication for modern human origins” by **Teresa Steele, PhD**, Professor, University of California Davis
- 3:00 - **Emigrant Trails** – “Archaeology of Emigrant Trail Routes”, by **John Winner**, Past-President of Oregon-California Trails Association



Distinguished Presenters

Allan Keown through discussion and a video will present on human origins in South Africa. The video “Pleistocene Coast South Africa – A Special Environment for the Evolution of our unique species” will feature **Curtis Marean**. Dr. Marean gave this presentation sponsored by Arizona State University Institute of Human Origins at Evolutionary Foundations of Human Uniqueness Symposium on April 8, 2017. It describes the ongoing excavation and preliminary findings of the caves at Pinnacle Point, Mossel Bay, South Africa. Pinnacle Point, also known as PP13B, is the name of a sea cave in the coastal cliffs near Mossel Bay, on the southern coast of South Africa. The site includes an extensive Middle Stone Age deposit with multiple occupations, dated between 39,000 and 162,000 years ago. Pinnacle Point represents the oldest known occurrence of human consumption of shellfish and an early use of ochre. Most interesting is that the bladelet technologies associated with the Howiesons Poort assemblage are dated to ca 70,000 years old; the Pinnacle Point assemblage is *not* Howiesons Poort, but shares some technological characteristics.

Dr. Teresa E. Steele is an Associate Professor in the Evolutionary Wing of the Department of Anthropology, University of California, Davis and an Associated Researcher of the Max Planck Institute for Evolutionary Anthropology (Leipzig, Germany). She has been conducting research in the Western Cape of South Africa since 2003, alongside research projects on similarly aged sites in Morocco and France, which allows for a diverse view of human behavioral variation during the Late Pleistocene. Her presentation will feature findings from her excavation in southern Namaqualand, South Africa and she will discuss the implications for modern human origins. The archaeological record of southern Africa documents a critical phase of human evolution: modern human origins. The ancestors of all living humans evolved in Africa sometime during the Middle (781,000-126,000 years ago) to Late (126,000-11,400 years ago) Pleistocene. Because of this, the Middle Stone Age (MSA) has received intense attention; however the MSA is best documented from the coastal and montane zones of the Fynbos. We seek a better understanding of variation during the MSA, and especially of how humans responded to different environments such as a marginal ecological zone in the Western Cape of South Africa.

John Winner will speak on the archaeology involved in identifying the routes of emigrant trails. John is the current past president of the Oregon-California Trails Association (OCTA) and a voting office on the national board. OCTA and its 11 Chapters actively work to preserve historic emigrant trails through trail mapping, trail marking, site identification, archaeology, and trails legislation. John and his wife Susie live in Placerville, CA. Before retiring in 2002, he was the elected County Assessor of El Dorado County, CA. John has studied western history for over 55 years and currently works in the field with the trail mapping teams of the California-Nevada Chapter of OCTA.

Questions? Please contact Jan Johansen at janjohansen@sbcglobal.net

MEMBER ARCHAEOLOGICAL ACTIVITIES

SAS Members Promote Archaeology at the Summer Reading Program at Turner Library

By Roger Peake,

On June 27, 2017, three members of the Sacramento Archeological Society (SAS) participated in a summer reading program at the Turner Library in West Sacramento. Diane Sangster, and Lydia and Roger Peake were invited by Gail Stovall, a Library Associate-East Yolo Region to highlight archaeology. The reading program is focused on kids ages 6 through 12 and their parents or caregivers.

On June 27, the afternoon session was devoted to hands-on archaeology and paleontology and appropriate reading; the kids became assistant archaeologists as they excavated modern-day "artifacts" that were seeded in sand. SAS also provided thirty actual casts of a wide variety of artifacts. These were available for the kid's inspection and investigation. The casts were provided by Mr. Al Schwitalla, a local craftsman whose business is to duplicate artifacts. Also, for the kids' education, there was a separate hands-on display of different kinds of eggs (with a dinosaur motif) provided by library staff imbedded in ice inside balloons! The kids had no difficulty liberating the "eggs" from their frozen environment!

Approximately 40 kids participated in the two-hour session and stayed for the entire event. It was an eye opener for the adults and also a lot of fun for all.



Photos by Diane Sangster and Roger Peake

SAS Member Participates at Rimrock Draw Rockshelter Excavation

At Pat O'Grady's invitation for their last day of excavations on Monday, July 31 and Tuesday's cleanup Dennis Fenwick joined the group. Pat O'Grady had been leading this summer's excavation of Rimrock Draw Rockshelter South of US 20 and about 44 miles West of Burns, Oregon (Rimrock). On Tuesday, August 1 Dennis helped to fill one of the two excavations with sandbags. A total of 11 Rimrock faculty, students, volunteers, and supporters participated in the excavation clean up. Tuesday evening Dennis helped them celebrate their success in Burns with a Mexican dinner.

On Thursday before leaving Burns, Dennis visited the Harney Museum and met President Mildred E Fine and Secretary and Treasurer, Jan Cupernall. <http://www.hchistoricalociety.com/>

On sharing why Dennis was in Burns, Jan, after acknowledging she knew Pat, she added: "Pat was at their Museum six weeks earlier and took seven samples (5 sandals and 2 of textiles, cordage, mats, or other fibrous materials found in caves in the Burns area) with the goal of dating them as soon as he could find a donor to cover the cost." Dennis suggested that he might be able to assist in this process.

ARCHAEOLOGICAL REFERENCES-ORIGINS

"Egyptian mummy DNA, at last"

First mummy genomes show that past conquests left little mark on ancient Egyptian DNA

"A team of ancient DNA specialist has successfully sequenced genomes from 90 Egyptian mummies...The sequencing success, reported in *Nature Communications*, 'finally proves to everyone that there's DNA preserved in ancient Egyptian mummies' says Albert Zink, a biological anthropologist at the Institute for Mummy Studies in Bolzano, Italy: The new study, led by Johannes Krause, a geneticist at the Max Planck Institute for Science of Human History, in Jena, Germany used next-generation sequencing methods to read, at full-length, any DNA fragments present in a sample and fish out those that resembled human DNA...The bones and teeth were full of genetic material. Krause's team compared the ninety mummies' mitochondrial and nuclear DNA to that of ancient and modern populations in the Near East and Africa. They discovered that ancient Egyptians closely resembled ancient and modern Near Eastern populations, especially those in the Levant. Although the mummies contain almost no DNA from sub-Saharan Africa, some 15% to 20% of modern Egyptians' mitochondrial DNA reflects sub-Saharan Africa ancestry. Krause suspects that increased trade along the Nile—including the slave trade—or the spread of Islam in the Middle Ages may have intensified contact between Northern and sub-Saharan Africa." (Wade, Lizzie, *Science*, V. 356, 2017-6-2, p. 894)

"Oldest members of our species discovered in Morocco"

New fossils and dates put a face on early *Homo sapiens*

"Researchers have redated a long-overlooked skull from a cave called Jebel Irhoud to a startling 300,000 years ago, and unearthed new fossils and stone tools. The result is the oldest well-dated evidence of *Homo sapiens* pushing back the appearance of our kind by 100,000 years. The discoveries, reported in *Nature*, suggest that our species came into the world face-first, evolving modern facial traits while the back of the skull remained elongated like those of archaic humans. Back in 1961, miners searching for the mineral barite stumbled on a stunningly complete fossil skull at Jebel Irhoud, 75 kilometers from Morocco's west coast. With its big brain but primitive skull shape, the skull was initially assumed to be an African Neandertal. At Herto, in Ethiopia's Great Rift Valley researchers dated *H. sapiens* skulls to about 160,000 years ago; farther south at Omo Kibish, two skullcaps are

dated to about 195,000 years old, making them the oldest widely accepted members of our species, until now. Geneticists date the split of humans and our closest cousins, the Neandertals, to at least 500,000 years ago. Jean-Jacques Hublin's team began new excavations at Jebel Irhoud in 2004, hoping to date the small chunk of intact sediment layers and tie them to the original discovery layer. 'We didn't just get dates, we got more hominids'. The team now has new partial skulls, jaws, teeth, and leg and arm bones from an at least five individuals, mostly from a single layer that also contained stone tools... Its face tucks under the skull rather than projecting forward, fossils also had an elongated brain case and 'very large' teeth, like more archaic species of *Homo*. The team suggests that these ancient humans were part of large, interbreeding populations that spread across Africa when the Sahara was green about 300,000 to 330,000 years ago; they later evolved as a group toward modern humans". (Gibbons, Ann, *Science*, V. 356, 2017-06-09, p. 993)

"Neandertals mated early with modern humans"

Ancient encounter may have completely replaced Neandertals' mitochondrial DNA

"It now seems that members of our lineage were among the ancestors of Neandertals. Researchers (Johannes Krause and Cosimo Posth of Max Planck Institute for the Science of Human History) sequenced ancient DNA from the mitochondria from a Neandertal who lived about 100,000 years ago in southwest Germany. That found that this DNA resembled that of early modern humans. Researchers reached a conclusion: A female member of the lineage that gave rise to *Homo sapiens* in Africa mated with a Neandertal male more than 220,000 years ago—much earlier than other known encounters between the two groups. Her children spread her genetic legacy through the Neandertal lineage, and in time her African mtDNA completely replaced the ancestral Neandertal mtDNA... Using modern humans' mtDNA mutation rate to calculate the time, the researchers conclude that the HST mtDNA split from that of all other Neandertals at least 220,000 years ago. The ancient *H. sapiens*' mtDNA must have entered the Neandertal lineage before this time, but after 470,000 years ago, the earliest date for when modern human and Neandertal mtDNA diverged. That is early enough for the new form of mtDNA to have spread among Neandertals and replaced all their mtDNA". (Gibbons, Ann, *Science*, V. 356, 2017-07-07, p. 14)

"Homo naledi's age surprises scientists"

Ancient-looking hominid dates to time of humankind's origins

"It now appears that this hominid, call *Homo naledi*, inhabited southern Africa close to 300,000 years ago, around the dawn of *Homo sapiens*. *H. naledi* bodies somehow ended up in Dinaledi Chamber, part of South Africa's Rising Star cave system, between 236,000 and 335,000 years ago, an international team of researchers reported May 9 in one of three papers in *eLife*. In the first paper two methods of measuring the concentration of natural uranium and other radioactive elements, and damage caused by those elements over time provided key age estimates for three *H. naledi* teeth. A thin sheet of rock deposited by flowing water just above the fossils was also dated. In a second new paper, Berger's group—led by paleoanthropologist John Hawks of the University of Wisconsin—Madison—describes 131 newly discovered *H. naledi* fossils from a second cave in the Rising Star system, dubbed Lesedi Chamber. The finds come from at least three individuals and include an adult male's partial skeleton comparable in completeness to the 3.2-million-year-old Lucy's famous remains from East Africa. The researchers named the Lesedi partial skeleton "Neo" which means gift in Sesotho, a language spoken in South Africa... Individuals from both chambers display the same distinctive pattern of skeletal features, signs that they all belong to *H. naledi*, not to *Homo erectus* or any other previously identified *Homo* species. These features include relatively small, orange-sized brains and curved fingers like those of *Homo* species that lived around 2 million years ago, as well as wrist, hands, legs, feet, and body sizes comparable those of Neandertal and humans. In a third new paper Berger and colleagues prose that *H. naledi* originated near the root of *Homo* genus, 2 million years ago or more. Or as another possibility is that *H. naledi* originated a few hundred thousand years

ago and is more closely related to early *H. sapiens* or other *Homo* species that may have inhabited southern Africa at that time.” (Bower, Bruce, *Science News*, 2017-07-10, p. 6)

“Hominid roots may go back to Europe”

Graecopithecus’ teeth suggest it was member of human family

“Europe, not Africa, might have spawned the first members of the human evolutionary family around 7 million years ago...Tooth characteristics of a chimp-sized primate that once lived in southeastern Europe suggest that the primate, known as *Graecopithecus*, may have been a hominid, not an ape... One tooth in particular, the second lower premolar’s roots is partially fused, a trait characteristic of early hominids but not ancient apes. A lower jaw found in Athens with most teeth still in their sockets dates to around 7.175 million years ago. An isolated tooth from Bulgaria, an upper second premolar, dates to about 7.24 million years ago. Although sediment analyses date both finds to around the time of hominid origins, it’s not known whether this creature regularly walked upright, a signature hominid behavior.” (Bower, Bruce, *Science News*, 2017-06-24, p. 9)