

THE SANTA CRUZ ARCHAEOLOGICAL SOCIETY NEWSLETTER SUMMER 2017

COMMUNITY ARCHAEOLOGY AT RANCHO SAN ANDRÉS CASTRO ADOBE

By Sarah Peelo, Albion Environmental, Inc. and Danielle Dadiego, UCSC

On a rainy Saturday morning in April, UCSC Archaeology students arrived at the Rancho San Andrés Castro Adobe. Enrolled in Archaeological Field Methods (Anth 189), many students didn't know what to expect from the course. Most anticipated some amount of excavation, but many did not foresee the level of scientific detail that goes into preparing for an excavation, as well as the meticulousness of the excavation itself. The Field Methods course has provided the students with an introduction to Cultural Resource Management (CRM) and archaeological field and laboratory techniques, as well as experience making collaborative decisions about the project's archaeological research design. All the while, these gained skills and experiences served a broader purpose: to help the stewards of this site, California State Parks and Friends of Santa Cruz State Parks, restore and preserve this historic resource for the public.



Photo 1: Stakeholder Interview with Rob Edwards

Students started off the project conducting formal interviews with stakeholders, inquiring about their connection to and interest in the Adobe, as well as their knowledge of the history and the archaeology. These discussions elucidated important interests, including the bull and bear fighting ring and housing for indigenous laborers who worked at the Rancho.

With these ideas in hand, the students set out to determine places on the landscape where these resources might be buried. Students reviewed historic photos and reports detailing previous pedestrian survey and pH data collected under the direction of Rob Edwards. Students also conducted their own pedestrian survey of the site, and worked with Scott Byram of UC Berkeley to implement

Ground Penetrating Radar (GPR) of specific site areas. Based on these multiple lines of evidence the students identified three areas of interest.

First, the students identified the potential for a large refuse feature north east of the adobe. A small crew of students, led by crew chief Alec Apodaca (UCSC '17), set up their datum and two meter by two meter excavation unit (Unit #1) in an area that the GPR suggested potentially contained a dense concentration of buried artifacts. Excavating by arbitrary, 10cm levels using trowels and flat-bladed shovels, the students are somewhat disappointed by the findings in the first six levels. Between 0 and 60cm, the



Photo 2: Excavations at Unit #1



Photo 3: GPR Survey

students have recovered only minor amounts of glass, ceramics, metal hardware, and apparel. Students are still hopeful that a data-rich refuse feature lies deeper.

Another area just north of the adobe near the old orchard is also being investigated, and crew chief Tate Paffile (UCSC '17) is leading this team. This area of the site had been identified as having high potential for buried deposits, given the dense concentration of artifacts and pH levels recorded previously by Rob Edwards and his students. Stakeholders also suggested this as an area we target our excavations, given its proximity to the adobe's kitchen. This year's pedestrian survey recorded a high artifact density pattern in this area, and GPR testing suggested the potential for a buried adobe foundation

Excavations in Unit #2 have turned up the highest concentration of artifacts of all units excavated, including numerous fragments of glass, ceramics, metal hardware, faunal remains, flaked stone debitage, leather strips, apparel, construction material, and a metal broach. In addition, the students have found a feature. They have uncovered evidence of melted adobe bricks within the first two levels, as well as dense concentrations of charcoal and reddened, oxidized soils containing large amounts of burned and calcined bone. Currently, the team is interpreting this material evidence as representative of the collapse and deterioration of an adobe wall and the remnants of a hearth. The crew will

continue to remove overburden and define the boundaries of this architectural feature, but will preserve this shallow resource in place.

The last area investigated for this field school is located east of the adobe. GPR testing indicated a semi -circular anomaly approximately 50-70 cm below ground surface, interpreted as a possible ring of posts. Based on historic documents and stakeholder interviews, it is possible that the infamous bull and bear ring was located in the front yard of the adobe so that onlookers could watch from the balcony. A small crew of students, led by crew chief and UCSC graduate student Thomas Banghart, opened up a unit (Unit #3) over the GPR anomaly.



Figure 1: GPR Survey Results

In the first few levels, students recovered only minor amounts of artifacts. However, from 50 to 60cm below their datum the students uncovered a hard-packed living surface, multiple post-molds, and saw an increase in artifact density. Directly embedded within the hardpacked surface was a piece of bottle glass embossed with the date "1858." While our data currently provides only a small window into this feature, it is possible that students have identified an archaeological signature of the bull and bear ring, consisting of a compacted surface bordered by wooden posts. As with the feature identified in Unit #2, we will expose, document, and preserve this important resource in place.

Through this course, the UCSC Anthro-

pology Department has provided their students with a local, economical, hands-on learning experience in Archaeological Field Methods. The land owners (California State Parks and Friends of Santa Cruz State Parks) and the archaeological and historical community, including State Parks Staff, Friends, Codifi Inc., Scott Byram of UC Berkeley, and Albion Environmental Inc., have supported and enriched this experience for students by organizing a "real-world" CRM project within which the students have learned marketable skills. Together, we have worked to identify buried resources within the Castro Adobe State Park property so that Parks and Friends can enrich their public interpretation program and plan for future park development while still preserving the archaeological record.



Photo 4: 2017 UCSC Field Methods Students

MODERN TECHNOLOGY IN ARCHAEOLOGY

By Sarah Luce, AECOM

Most archaeologists have been classically trained to record data in the field using dark leaded pencils, clipboards, compasses and paper records that may stay dirt free for an hour at most. Technology today presents a modern alternative to field recording through the use of hand held devices like the iPad and cellular

devices. The use of contemporary technologies in the field is a way to instantly organize and manage data and field crews from project inception.

Filemaker Go and Fulcrum are two of several software programs available for use by cultural resource management teams and researchers to utilize in the field through the use of handheld devices. These programs not only allow for instant creation and modification of record forms, but also the ability to share data with team members and clients off site in real time. In addition to real time data sharing, photos with GPS locations (AKA "geotagging") can be attached to site



Photo 1: Researcher Using iPad Technology on a Site in Pompeii, Italy

records easily. All recorded data is either linked to existing desktop software (i.e., Filemaker Pro) or to a storage cloud for downloading and later analysis. Digital Dig Team is a project in which researchers at Leiston Abbey, a medieval site in Suffolk, England, are using iPad software to enter data in the field that is instantly accessible online for the public to view as soon as it is excavated. The Digital Dig Team Project allows for instantaneous public archaeology – not only providing the public with site data and photos, but also shares updates on social media to keep the public up to date on the excavation.

The site is accessible here: https://digventures.com/leiston-abbey/ .

While modern technology may be where future data recording is headed, there may be limitations. Reviewers have reported that the iPad software isn't always reliable for precise GPS locations or for drawing maps in the field. Others have said that remote field work is not conducive to utilizing devices requiring electrical grid connection. Another concern was weather damage to the device. Regardless of these limitations, it seems as though the advantage of having all data records integrated in to one system for easy sharing and analysis far outweighs the disadvantages. It is also important to note that the future will undoubtedly mitigate these technological limitations. However, it seems premature for archaeologists to completely abandon traditional methods at this point in time. *#*

REDMAN-HIRAHARA HOUSE HAS A WIKIPEDIA PAGE



Rob Edwards reports that the Redman-Hirahara House, a stylish Queen Anne Victorian designed by William Weeks for James Redman in 1897, now has its own Wikipedia Page.

In 2005, students of the Cabrillo Archaeology Technology Program took part in a field school centered around the house. Although the house was the focus of the field school, the rest of the farmstead buildings were inspected, leading to the discovery of four apartments in the Carriage Barn.

After the death of James Redman, a pioneering farmer in the Pajaro Valley, the house was sold through a somewhat

complicated and unusual process to the Hirahara family. Alien land laws prevented "people ineligible for citizenship", understood to be Asians, from owning land. There must have been a loophole which allowed sixteen-year-old Fumio Hirahara citizenship, and made him the only member of his family eligible to purchase

the house in 1940 from another relative who was a citizen. In 1942, under Executive Order 9066, the Hiraharas and other Japanese were relocated to camps in the inland areas of the United States, returning in 1945. The Hiraharas housed homeless returning Japanese-Americans in the four Carriage House apartments .Be sure to visit the Redman-Hirahara House on Wikipedia!



Photos of the Redman-Hirahara House and the CCATP Field School in 2005. From top: Upper front windows, students dry screening, the 2005 class and staff, fragments of an Imari bowl found near the kitchen door.



What was the real paleo diet? Prehistoric plaque reveals what Neanderthals ate

By Nicola Davis, March 8, 2017, Excerpted from **The Guardian**

A diet of pine nuts, mushrooms and moss might sound like modernist cuisine, but it turns out it was standard fare for Spanish Neanderthals.

Researchers studying the teeth of the heavy-browed hominids have discovered that while Neanderthals in Belgium were chomping on woolly rhinoceros, those further south were surviving on plants and may even have used naturally occurring painkillers to ease toothache. The findings, the researchers say, are yet another blow to the popular misconception of Neanderthals as brutish simpletons.

"Neanderthals, not surprisingly, are doing different things, exploiting different things, in different places," said Keith Dobney, a bioarchaeologist and co-author of the research from the University of Liverpool.

Writing in the journal Nature, Dobney and an international team of colleagues describe how they analysed ancient DNA – from microbes and food debris – preserved in the dental tartar, or calculus, of three Neander-thals dating from 42,000 to 50,000 years ago. Two of the individuals were from the El Sidrón cave in Spain while one was from the Spy Cave in Belgium.

The results reveal that northern Neanderthals had a wide-ranging diet, with evidence of a mushroom known as grey shag in their tartar, together with traces of woolly rhinoceros and wild sheep. By contrast Neanderthals from El Sidrón showed no evidence of meat eating – instead they appear to have survived on a mixture of forest moss, pine nuts and a mushroom known as split gill.

The difference was further backed up by DNA-based analysis of the diversity and make-up of microbial communities that had lived in the Neanderthals' mouths.

The findings support previous studies suggesting that the Neanderthals of El Sidrón ate little meat, although Dobney cautioned against drawing broader conclusions, citing the small sample size of the latest study. "I hesitate to say that we have clear, definitive proof that Neanderthals in Spain were vegetarian," he said.

Indeed, research looking at marks on the bones of Neanderthals from El Sidrón has suggested they might been the victims of cannibalism. While Dobney does not rule out the possibility, he points out that the two Neanderthals in the latest study are unlikely to have been feasting on their relatives.

"You would expect if Neanderthals were eating each other, that the quantity of Neanderthal DNA would be a lot higher in [the tartar] – it would be part of the food debris," he said. "[That] doesn't appear to be the case."

One of the Spanish Neanderthals is known to have had a painful dental abscess, while analysis of the tartar from the same individual yielded evidence of a parasite known to cause diarrhoea in humans.

To cope, the researchers add, the unfortunate individual might have been self-medicating. While previous work has suggested the El Sidrón Neanderthals might have exploited yarrow and chamomile, the tartar of the unwell individual shows evidence of poplar, which contains the active ingredient of aspirin, salicylic acid, and a species of penicillium fungus, suggesting the Neanderthal might have benefited from a natural source of antibiotics.

EARLIEST EVIDENCE OF ABORIGINAL OCCUPATION OF AUSTRALIAN COAST DISCOVERED

by Naaman Zhou, May 19, 2017, Excerpted from **The Guardian**



Boodie cave on Barrow Island, was used as a hunting shelter as early as

50,000 years ago. Photograph by Peter Veth, James Cook University

Australia's earliest known site of human occupation of the Australian coast has been discovered in a remote cave in Western Australia, pushing back the start date of Indigenous occupation to more than 50,000 years ago. Archaeologists led by the University of Western Australia found evidence of inhabitation on Barrow Island in the country's north west, discovering charcoal, animal remains and ancient artefacts that confirmed huntergatherer occupation.

Located 60 kilometres off the Pilbara coast, the Boodie cave on Barrow Island was cut off from the mainland roughly 7,000 years ago due to rising sea

levels. But researchers found the cave had been used as a hunting shelter from as early as 50,000 years ago, before becoming a residential base for groups of families from 10,000 years ago.

Archaeologists found Barrow Island provided rich records of ancient artefacts. "This pushes back the age of occupation from the previous and more conservative limit of 47,000 years ago," said lead archaeologist Peter Veth. "Even older dates are entirely plausible." The researchers said the site contained the longest record of dietary fauna in Australia. "Barrow Island provided rich records of ancient artefacts, gathering and hunting of marine and arid animals, and environmental signatures which show the use of a now-drowned coastal desert landscape," said Veth.

"Particularly in the north west of Barrow Island there were rock shelters and deep chambers and caves where there were excellent and well-preserved remains ... we managed to piece together a picture of this extraordinary adaptation. The first evidence of Australians living on the coastline [and] the first Australians." "The cave was used predominately as a hunting shelter between about 50,000 and 30,000 years ago before becoming a residential base for family groups after 10,000 years ago. It was abandoned by about 7,000 years ago when rising sea levels finally cut it off from the mainland," Veth said.

"Our current research at Barrow Island has provided the earliest evidence of coastal living in Australia. Remarkably the early colonists of the now-submerged North West Shelf did not turn their back on the sea or remain coastally tethered but rapidly adapted to the new marsupial animals and arid zone plants of the extensive maritime deserts of North West Australia."

Published in the *Quarternary Science Review*, the research was assisted by the University of Queensland, the University of Adelaide, the University of Waikato and Oxford University, among others. The team worked with four different international dating laboratories and was supported by the Buurabalayji Thalanyji Aboriginal corporation and Kuruma Marthudunera Aboriginal corporation. *#*

WORLD'S OLDEST BED BUGS FOUND IN OREGON CAVE WHERE ANCIENT AMERICANS SLEPT By Blake De Pastino, April 4, 2017, Excerpted from Western Digs

A network of caves in southern Oregon, thought to be among the earliest known sites of human habitation in the American West, turns out to have hosted other residents, too: bed bugs. Archaeologists have found the remains of several species of bed bugs dating back as much as 11,000 years — the oldest ever found revealing new insights into the distant relatives of the parasitic insects that infest modern mattresses.

The ancient bugs were found in the basalt rock shelters known as Paisley Caves, which have been an object of fascination since archaeologists first reported finding signs of human occupation — including fossilized human feces — said to be as much as 14,300 years old. Among the wealth of material found in the caves are thousands of bones belonging to long-extinct fauna, including mastodons, ancestral horses, and camels. It was amid these remains that two archaeologists searched for some evidence of the cave's smallest animal inhabitants: insects.

Martin Adams, of the Portland-based firm Paleoinsect Research, and Dr. Dennis L. Jenkins of the University of Oregon's Museum of Natural and Cultural History, sifted through the material from the site known as Cave 2 and found 14 specimens of bed bugs, most of which belonged to 3 different species.

Found in layers that have been dated to between 5,100 and 11,000 years old, they're the oldest bed bugs — known to scientists as cimicids — ever reported. However, Martin said in a press statement, these were "not the bed bugs we all know and love from hotel rooms." Instead, these kinds fed on bats. There are two species of bed bugs that parasitize humans, which are thought to have started out as bat parasites, but adapted to eat human blood after humans began living in caves with infected bats. By contrast, the three species discovered in Paisley Caves — *Cimex pilosellus*, *Cimex latipennis*, and *Cimex antennatus* — are distant cousins of those parasites, and none of them today are known to parasitize humans.

The find raises a number of questions for researchers about what life might have been like when humans occupied the caves at the end of the last Ice Age. For example, one of the bed bug species is only known today in warmer regions, suggesting that the climate of southern Oregon was substantially warmer than it is now.

But perhaps more importantly, the scientists want to know why the Paisley Caves bed bugs shared these caves with humans, but failed to fully make the transition to becoming human parasites. Bat-specific species of bed bugs have been known to infest humans, the researchers said, and as they write in their report, "it is probable that similar occurrences befell the human occupants of Paisley Caves."

But the experts are puzzled about why those bugs didn't go on to remain human parasites, and spread throughout the ancient West on the bodies of the earliest Americans. "Were the cimicid populations too small to establish themselves outside the caves, or were the host populations too small?"

In any case, the scientists said, these tiny insect remains may yet produce big insights, given further study. "Even if no intersection between man and bug occurred," the pair writes in their report, "this assemblage is important, for it serves as the earliest record of the genus *Cimex* recorded to date."

Adams and Jenkins report their findings in the Journal of Medical Entomology.

UPCOMING EVENTS

Summer Archaeology Program

at Mission Santa Cruz State Historic Park, Summer 2017!

Santa Clara University and California State Parks are gearing up for the third season and hope that you can join us!

This is an exciting opportunity to volunteer at the Santa Cruz Mission! We are home to the only remaining original building in all of the California Missions that actually housed the Native Americans. Because of this, our park focuses on teaching about the lives of those who lived in the Missions. This is why Mission Santa Cruz State Historic Park has partnered with Santa Clara University in creating our Summer Archaeology Program. Santa Clara University has conducted numerous archaeological excavations on its own local mission, and the most recent excavation was at the site of the Indian Rancheria, which is where the Native Americans lived at Mission Santa Clara. The excavation has yielded numerous new findings on Mission life.

As a volunteer in the Summer Archaeology Program, you will be working with archaeological materials (<u>NO human remains or burial associated artifacts</u>) from the excavation at Mission Santa Clara and learning about Mission life. **The program will be held on Mondays from 10am to 2pm from June 26th to August 21st** and will be held at the Santa Cruz Mission State Historic Park. The program is geared toward adults, although applicants under 18 years of age will be considered on a case by case basis.

If you would like to apply, please fill out the volunteer application at: http://www.parks.ca.gov/?page_id=28339 and send it to Mission Santa Cruz State Historic Park at 144 School Street, Santa Cruz 95060.

If you have any questions please email erik.hylkema@parks.ca.gov or call (831) 425-5849.

ON VIEW

At the de Young Museum, SF: Beyond the Surface, Worldwide Embroidery Traditions, December 3, 2016 through August 31, 2017.

At the Oakland Museum of California: Dorothea Lange: Politics of Seeing, May 13, 2017 through August 13, 2017.

At the Los Angeles County Museum of Art (LACMA): Revealing Creation: The Science and Art of Ancient Maya Ceramics, May 21, 2016-ongoing.

SCAS GENERAL MEETING SCHEDULE

General Meetings take place on the second Thursday of the month, 7:30 p.m., at the Santa Cruz Live Oak Grange Hall at 1900 17th Ave, Santa Cruz, CA 95062.

This building is on 17th Avenue between Capitola Road and Mattison Lane.

June 8, 2017	Theadora Fuerstenberg, Cardno
July 2017	No general meeting.
August 2017	No general meeting.
September, 14, 2017	Al Schwitalla, LSA
October 12, 2017	Jesse Phillips, InContext
November 9, 2017	Sarah Peelo, Albion Environmental

OTHER SOCIETY BUSINESS.....

Committee of Affiliated Societies (CoAS):

By unanimous vote, the board of the Society voted to join the Society for American Archaeology's (SAA) Committee of Affiliated Societies (CoAS). As reported in the last SCAN issue in the Board Meeting report, we heard a presentation from Diane Gifford-Gonzalez (Distinguished Professor Emerita of Anthropology, UCSC) on the need for timely updates on political decisions being made in Washington D.C. which have the potential to undo or cause harm of a cultural heritage or environmental nature. We are joining, at last count, 20 other societies from across the United States. The hope is that by joining and becoming aware of these issues, we will be able to take individual action to contact our representatives and inform our community.

The SCAS board was concerned that our membership would not want to receive frequent issue-oriented emails, so we will endeavor to give you timely updates through our website and newsletter. Some issues are very time-critical, such as the current Request for comments from the Department of Interior about the review of 27 National Monuments it is conducting to determine if "each designation or expansion conforms to the policy stated in the Executive Order and to form recommendation for Presidential actions, legislative proposals or other appropriate actions to carry out that policy." (Federal Register, notice posted by Interior Department on 05/11/2017).

The comment period for the Bears Ears National Monument lasted 11 days—ending May 26, 2017. All other comments about other monuments on the Interior's list must be submitted before July 10, 2017.

(See: https://www.federalregister.gov/documents/2017/05/11/2017-09490/review-of-certain-national-monuments-established-since-1996-notice-of-opportunity-for-public-comment)

If you would like to keep up with issues highlighted by the SAA, or bills in Congress of interest to our community, please visit the SAA.org website. See "About the Society" for "Government Affairs" or "Congressional Action".

SCAS ANNUAL FINANCIAL REPORT FY 2016

Submitted by	Treasurer,	Cathy	Phipps
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Total Bank Accounts as of March 31, 2016	\$14,451.38
Income FY 2016	\$3,985.01
Expenses FY 2016	\$2,843.62
Total Bank Accounts March 31, 2017	\$15,592.77
Income (summarized)	
Grant Income (From SCA)	\$355.00
Interest Income	\$0.85
Membership Income	\$1,100.00

	Merchandise Sales	\$577.00	
	Donations	\$1,898.25	
	Consignment Sales	\$53.91	
Ex	penses (summarized)		
	Business Insurance	\$410.00	
	Equipment Expense	\$497.11	
	Meeting Expenses (v	enue rental e	tc.) \$513.5
	Internet	\$191.75	
	Merchandise Expense	e \$140.82	
	Misc. and Office Exp	ense	\$203.29
	SCA (Ads, Dues etc.)		\$205.00
	Newsletter (printing, postage etc.) \$232.76		
	Grant Expense (for A	rche Month)	\$373.36

MEMBERSHIP: WE HAVE 118 MEMBERS, WITH 45 IN GOOD STANDING AND 54 NOT IN GOOD STANDING (PLEASE RENEW!). THERE ARE 19 LIFE OR COMP MEMBERS.

ELECTIONS: This fall, the Offices of Vice President and Treasurer for the Society are open.

IF YOU WOULD LIKE TO RUN FOR ONE OF THESE POSITIONS, PLEASE CONTACT KEVIN HILDRETH.

SCAS Officers and Contact Info			
Position	Name	Email	Phone
President	Kevin Hildreth	kevinhildreth59@gmail.com	831-431-6905
Vice President	Pat Paramoure	patsunicorn@sbcglobal.net	831-465-9809
Treasurer	Cathy Phipps	archecat@hotmail.com	831-465-1335
Outreach Coordinator	Kären Johansson	johans161@gmail.com	831-316-7127
Secretary	Open		
Membership Coordinator	Kevin Hildreth (acting)	kevinhildreth59@gmail.com	831-431-6905
Professional Advisor	Tsim Schneider	tdschnei@ucsc.edu	
Newsletter Editor	Mary Gerbic	editorscan@gmail.com, mgerbic@yahoo.com	831-331-7173

Santa Cruz Archaeological Society P.O. Box 85 Soquel, CA 95073



Join us in our efforts to study and preserve the Past for the Future ...

O Individual \$20	O Students	\$15	O Seniors \$15	O Family \$25	O Lifetime \$400	O Institution \$30
New Member	□ Renewal □	⊐ Gift	Membership (fr	om)		

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Phone:	
Please share any	v archaeological interests or experience: