

Rare Artifact Found on San Clemente Island

Mass Communication Specialist 2nd Class Shawnte Bryan

July 16, 2013

(U.S. Navy Story Number: NNS130716-29)

The Navy discovered a significant prehistoric artifact 90 miles west of San Diego on San Clemente Island (SCI) located mid-island at a newly discovered archeological site. A boat effigy made of submarine volcano lava was spotted at the surface of the site during an archeology survey. The boat effigy represents a type of boat used by the California Indians who occupied the California Channels and adjacent southern California mainland at the time of the Spanish "discovery" in the AD 1500s.



Dr. Andy Yatsko, Senior Archaeologist and Region Southwest Archaeologist for the Naval Facilities Engineering Command Southwest in San Diego, who has over 40 years experience in prehistoric and historic archaeology finds the boat effigy to be an uncommon find.

"Boat effigies like the one found are exceedingly rare in the archaeological record, with this being my first one recovered during my 30 year tenure with SCI," said Dr. Yatsko *[image courtesy U.S. Navy]*.

"Finding artifacts on the surface of archaeological sites at the island is not unusual, but a rare one like this is always exciting to come across." The effigy was created from submarine volcano lava. This lava differs from the lava that flows on the mainland because the vesicles are smaller, making it more brittle and more difficult to handle.

"The vesicle volcanic material used is hard and brittle but somehow they were able to craft a fine little carving out of it to represent an important part of their culture," said Yatsko. "This is something someone made representing a high skill level. This guy wasn't just a technician he was an artist. You can hold it and think about someone from 500 to 1000 years ago."

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Rare Artifact Found on San Clemente Island *Continued...*

As a federal agency, the Navy has responsibilities to understand what it owns, in the way of property; in order to meet their expectations the navy contracts archeologist to survey the land to protect rare gems and parts of history such as the boat effigy. "Naval Base Coronado (NBC) takes great pride in making this discovery that adds to our knowledge of the Native Americans that once called SCI home," said Capt. Gary Mayes, commanding officer, NBC. "Our cultural and natural resource programs are such that we continue to excel in protecting the natural and man-made treasures entrusted to our care while allowing our operational forces to train as they fight on SCI."

"If you were to draw a straight line in any direction on the landscape of SCI you would hit an archaeology site within 100-150 meters," said Yatsko. "But even with the high density of archaeology sites on the island, it's increasingly used for training without any real constraints on how that is done."

SCI has the last remaining shore bombardment range, in and out of the continental U.S., where Navy ships can qualify for naval gunfire support by actually shooting from ships to targets on land. It is also the last place where Marine Corps and Navy fire support forward observers can directly train for naval gunfire support roles making SCI critical because the physical dynamics of high-velocity naval gunfire are significantly different.



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Santa Cruz Archaeological Society: Outreach Committee Announcement

Circle the date! **Monday, October 28th** for staffing activities at the **Santa Cruz Mission State Historic Park (SHP)**. On this day the *Home School History Club* will be visiting the park. Our task as SCAS is to share the archaeological history of the park. If you are interested in participating please contact **Charr Smith** at Charrsmithaacc@gmail.com.

Thank you!

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Late Holocene Dietary Change in the San Francisco Bay Area: Stable Isotope Evidence for an Expansion in Diet Breadth

Eric J. Bartelink, Department of Anthropology, California State University, Chico
California Archaeology, Volume 1, Number 2, December 2009, pp. 227–252.

Abstract

Scholars of California prehistory continue to debate the importance of different food resources to the native diet during the late Holocene.

Resource intensification models for central California predict temporal declines in the abundance of large game relative to smaller fauna, as well as a shift towards greater use of vegetal foods. These changes are commonly linked to human-driven resource depression and overpopulation, although climatic factors may also have played a role.

This study uses data from stable carbon and nitrogen isotopes of human bone to evaluate evidence of paleodietary change among late Holocene human populations (ca. 4950-200 cal B.P.) from the eastern shore of San Francisco Bay, California.

Carbon and nitrogen isotope values of bone collagen demonstrate significant temporal variation and indicate a shift in emphasis from high trophic-level marine protein toward a greater emphasis on terrestrial resources and lower trophic-level marine foods.

Carbon isotope values of bone apatite provide additional information not recorded in bone collagen, and suggest an increased emphasis on vegetal resources during the latter part of the prehistoric sequence (after ca. 2150 cal B.P.). Alternatively, the isotopic data presented here could provide evidence for regionally specific diets or variation due to human population movement throughout the San Francisco Bay area.

If you are not a ***Society for California Archaeology*** member (you should be!) or just misplaced your 2009 journal, the full article above is available until November 2013 courtesy of Maney Publishing on-line. They have many other journals with selected articles for free downloads at http://www.maneypublishing.com/index.php/archaeology_top_articles so be sure to check it out.



To join the ***Society for California Archaeology***, go online to www.scahome.org. Remember, October is California Archaeology Month so get involved and join today!

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Clovis Spear Points likely were All-purpose Tools

Bradley T. Lepper, Curator of Archaeology, Ohio Historical Society
September 8, 2013

Clovis spear points, named for Clovis, New Mexico, where they were found among the bones of mammoths, represent the epitome of North American Stone Age weaponry. They tend to be large, finely crafted and made from high-quality flint. Although they were long thought to be specialized mammoth-killing weapons, new research suggests they were more like general purpose Boy Scout knives.



If Clovis points were specialized tools designed specifically to kill big-game animals such as mammoths and mastodons, then the special kinds of flint used in their manufacture along with the exquisite craftsmanship simply might have been practical necessities for producing a reliable instrument used to kill big game. It also is possible that the special qualities of Clovis points were due to ritual practices the makers believed would help to ensure the success of high-risk hunting ventures.

Clovis points [*image courtesy Smithsonian Institute, left*] certainly were used at times to kill both mammoths and mastodons. In addition to the original site, Clovis points have been found at eleven other sites with mammoth remains and two sites with mastodon bones. Nevertheless, some doubt was cast on the idea that Clovis points were made expressly to kill mammoths and

mastodons a few years ago when Mark Seeman, who was a Kent State University researcher, and colleagues identified blood residue from rabbits on Clovis points from the Nobles Pond site in Stark County. Now Logan Miller, an Ohio State University graduate student studying archaeology, has observed microwear traces on a Clovis point from the Paleo Crossing site in Medina County. His results, which indicate the tool was used to cut soft plants, were recently published in the journal *Lithic Technology*. Using high-power magnification, Miller examined a sample of ten stone tools, including two Clovis points, and identified a variety of polishes that are indicative of different uses. This microwear reveals both the ways in which the tools were used, such as cutting versus scraping, and also the type of material on which they were used, such as meat, hide, bone or soft plant.

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Clovis Spear Points likely were All-purpose Tools *Continued...*

Miller reported that one of the Clovis points exhibited “linear striations near the tip” — the type of microwear pattern you would expect to find on a spearpoint used to kill an animal. Unfortunately, the microwear can’t tell us whether that animal was a mastodon, a rabbit or a deer.

The other Clovis point had two kinds of microwear on its sides and edges — a “dull greasy polish,” which indicates that it was used to cut meat or fresh hide, and an overlay of a “very bright, smooth polish,” which indicates that it was last used to cut soft plant material. Finding evidence that a Clovis point was used to cut soft plants does not necessarily mean that Paleoindian hunters were stalking wild asparagus. The point might have been used to process plant fibers to make cordage or basketry.

Nevertheless, it does suggest that far from being specialized mammoth-hunting weapons, Clovis points were the equivalent of Paleolithic all-purpose utility knives. Such a versatile tool would have been handy for hunter-gatherers, who had to carry all their possessions around with them as they roamed across their Ice Age world.

Santa Cruz Archaeological Society: General Election Results

To the Membership...the election results are in!



Vice President, 2 year term 2013-2015, is Pat Paramoure.
Congratulations Pat!!



Treasurer, 2 year term 2013-2015, is Cathy Phipps.
Congratulations Cathy!!

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That Was The Year That Was...1993!

Rob Edwards, SCAS Archivist and Historian

September 3, 2013

The SCAS Board asked me to write about historic events from the Society's past. I decided to use as a memory supplement, past issues of SCAN. I choose 1993 to begin. Yes, that is twenty years ago (just yesterday). Where to start? How about the leaders of the pack that year? Our Board Members were **Jerry Dudley** President, **Susan Morley** VP, **Hedy Schmidt** Secretary, **David Calleri** Treasurer, **Lyn O Neil** Membership. **Judi Cole** SCAN editor, **Patrick Cave** Survey, **Kevin Hildreth** Public Relations, **Charr Smith** Archivist/Historian and **Joy Grant** Past-President (plus yours truly as Advisor).

Our **Speakers Series** has always been an important part of our Society Public Education effort. This is what it looked and sounded like in '93: **Lynn Dunbar** spoke about the national *Archaeological Conservancy*; **Dan Foster** of California Department of Forestry talked about *Coalinga Rock Art*; **Julia Huddleson** from CalTrans talked about *Public Education and Archaeology*; **Sannie Osborn** of the University of Wisconsin spoke about the *Ft. Ross Russian Cemetery*; **William Heider** of UCSC spoke on *Rock Art and Archaeology of the Chumash* (and we had our annual Potluck dinner with him in attendance); **Andy Galvan** of Ohlone Tribe Inc., talked on "the *Impact of Settlers on the Indian Population*"; and we ended the year with **Kent Lightfoot** of UC Berkeley talking about *Russian Forts of the Pacific*. It's interesting that so many of these topics are still of major interest to Society members.

Archaeology Week: Our major outreach occurred at the *Cabrillo Plant Sale* which was held at Cabrillo's Football Stadium. **CCAT Program students and Society volunteers** assisted the public in screening over six cubic yards of historic archaeological spoils from the Monterey Spanish Presidio. It was a well-received activity with energetic laughter, good questions, excitement...and we sold a lot of archaeological firewood. We also sold lots of coffee donated by the ***Pacific Coffee Roasting Company***. So that may have been why **PCRC** was the first stop on so many field trips.

SCAS's Twenty-First Anniversary Barbeque was attended at the ***Santa Cruz Mission Adobe State Park*** and a good time was by all. **Micki Ryan** (the first SCAS president, 1972-4) was there and **Gary Breschini and Trudy Haversat** gave preliminary findings from their work at *Rancho San Carlos* above Carmel Valley. Many of their workers were either from SCAS or CCATP or both and were also there.

A SCAS Field Trip to Sand Hill Bluff (CA-SCR-7) was well attended and the weather was fine. The view, according to **Judi Cole**, "was breathtaking." It was one of the parcels picked by a state wide environmental group (CalPAW) for saving. The Society **gave funds** and worked to gain signatures on petitions for that goal. The Society also **funded (to \$2,000)** the printing of the **Scotts Valley City Hall report of the excavations** of 1983 (volunteers organized by the Society among others) and 1987 (funded by the City to >\$110K) by **Robert Cartier**.

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... That Was The Year That Was...1993! *Continued...*

Survey: Thanks to **Patrick Cave and the volunteers** who carried out the Santa Cruz County Planning Department Survey **contract** (since 1975) and a healthy sales income, we remained solvent.

Scholarships: Two SCAS/Bickford Scholarships were given that year to **Dawn Hubbs** and **Susan Morley** to use at four year schools. Both Dawn and Susan went on to get M.A.'s and become professional Archaeologists. Dawn is in Arizona working for an Indian group and Susan is working as a consultant in Monterey.

Support: The Society supported the **Anthropology Department at Cabrillo** by funding the reprinting of various articles in **SCAN** (usually archaeological related) for use in introductory classes. Some memberships did result from that outreach. One of those articles reprinted from the local press that caught my eye now was that **Carolyn Swift** was appointed Director of the Capitola Museum. Carol is a wonderful person and was very supportive of local archaeology and history. She reported some burial finds in Capitola over the years.

Activities included arranging for the CYA (California Youth Authority) inmates from the Ben Lomond camp who were "**volunteered**" to clear the **Bonnie Doon site**, (SCR-20) of vegetation, grasses and fast growing hardwoods, which resulted in the beginning of the Archaeological Firewood sales. The sales brought in funds and allowed an opportunity for great public education. And, 1993 was the first official year of the Cabrillo College Archaeological Technology Program (**CCATP**).

Summer Excavation at the site of the original **Santa Cruz Mission** (now Holy Cross Church) resulted in good local Press for archaeology as a "**OPEN PIT**" (rather than an "Open House") was very successful. The southwest corner of the church was found as were the limits of the cemetery on the east side - which was under the parking lot but is now protected by a wall that encloses that edge of the cemetery.

Summer Survey was held along the San Antonio River (*Hidden River Ranch*) not only prehistoric and mission-era ranch sites were found but also cairns and lines of stones from depression era summer camps as were described by several students in articles for **SCAN**. Thank you, **Jessica Drayer, Claire Sherard** and **Anna Calvert**!

A Grant (\$82K) from the Community College Chancellor's office was awarded to Cabrillo's Arch. Tech. Program (in its first official year) for employer based training in G.I.S. at **Bio-systems** in Santa Cruz. The grant included computers, GIS software and funded a Cabrillo instructor, **Charr Simpson Smith** to teach at Bio-systems.

All in all '93 was a good year. It was fun to revisit. If someone would like to choose a year for another column let me know at robedwardsaacc@gmail.com. Coming next issue Winter 2013/2014: The Year that was...1983!

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George Washington's Incredible Garbage Dump

Popular Archaeology
September 6, 2013

Most people wouldn't even think about an eighteenth century refuse pit. But for archaeologists, it can be a veritable goldmine of information about the past. And for archaeological investigators at George Washington's Mount Vernon home and estate near the Virginia banks of the Potomac river in 1990, no pile of garbage was as precious as the one located just south of the famous restored mansion house in the area historically known as the south grove.



Designated the **South Grove Midden** (a "midden" in archaeological parlance is another name for a trash dump), clues of its existence actually first emerged in 1948, when members of the Mount Vernon grounds crew excavated a hole in the area to plant a holly tree. A number of artifacts dating to the eighteenth century were recovered, telltale clues that the south grove area could be the location of midden deposits formed during George Washington's lifetime. This would be no surprise, as the area was near the Washington household kitchen and it was common in the 18th century to dispose of household refuse near where it was generated. Spots not far from the back doors of kitchens were considered prime dumping grounds back then.

But it wasn't until 1990 when archaeologists began to seriously focus on the spot, after a grounds crew again encountered historic deposits while constructing an irrigation system. From 1990 through 1994, full-scale excavations (see image right) recovered nearly 300,000 artifacts; an unprecedented array of household items deposited by the Washington family and enslaved families over several decades in the 18th century.

"The **South Grove Midden** collection represents the largest and most significant collection of artifacts excavated to date associated with the domestic lives of the

Washington households," says Eleanor Breen, Deputy Director of Archaeology at Mount Vernon. "One evocative artifact after another – from the unique to the prosaic – tells the interconnected stories of Mount Vernon plantation's earliest residents: Lawrence and Anne Fairfax Washington; George Washington in his bachelorhood and as a newlywed; and the enslaved Africans and African Americans who labored in the mansion and outbuildings."

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George Washington's Incredible Garbage Dump ...Continued

Thus as any archaeologist would say, the artifacts in themselves are not the real treasure. It is the information that can be gleaned from them. The **South Grove Midden** artifacts have afforded scholars and the public alike with a remarkable window on life on George Washington's estate during the period of its occupation by the Washington family from about 1735 to 1858, and evidence of activities there before and after that period.

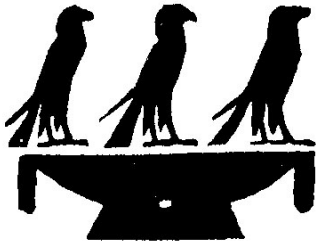


The oval copper alloy plate above, engraved "Gen: Washington," is identical to a plate affixed to a trunk in the Mount Vernon collection which George Washington is known to have purchased secondhand on April 4, 1776, in Boston, soon after he took up his duties as general of the Continental Army.

"The **South Grove Midden** and associated documentary evidence in the form of George Washington's orders for goods from England and inventories of a local store in the town of Colchester provides the opportunity to study a dynamic period in American history," says Breen. "What makes the 40-year period before the American Revolution unique is that access to consumer goods appears to have opened up for larger segments of the colonial population through a more sophisticated and far-reaching system of distribution for imported items – an event described as the consumer revolution. The artifacts and documents associated with the site offer an opportunity to explore this transformation through material culture." Anyone can access and explore the database by going to mountvernonmidden.org.

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UPCOMING GENERAL MEETINGS

Unless otherwise noted, All General Meetings are held at the historic Sesnon House on the campus of Cabrillo College, located at 6500 Soquel Drive, Aptos, CA and begin promptly at 7:30 PM.

November 21, 2013

"Sifting Facts from Fiction: The Lone Woman of San Nicolas Island"

Guest Speaker Steven J. Schwartz



Steve's talk will recap what is known of the true story of the Lone Woman of San Nicolas Island and will present the latest archival and archaeological findings. This is the true story behind the popular novel, *Island of the Blue Dolphins*. Steve has walked where she walked, is one of the leading experts on the story, and has many insights from his 25 years of experience on the island.

December 19, 2013 – Guest Speaker, Institute for Canine Forensics

January 16, 2014 – Guest Speaker, Charles Kieffer (Castro Adobe)

February 20, 2014 – Guest Speaker, Shannon Mahoney, PhD

Please visit our web page at <http://www.santacruzarchsociety.org/> for the latest schedule of upcoming speakers and events.

OTHER EVENTS

Tuesday, November 12, 2013

"The Attacking Ocean: Sea Levels Past and Future" Lecture by Brian Fagan

The Cooper Archaeological and Paleontological Center will host archaeologist Dr. Brian Fagan, PhD, for a special guest lecture at the Old Orange County Courthouse (211 W. Santa Ana Blvd.) in Santa Ana. A social hour begins at 6:00 PM with refreshments and a chance to speak with Dr. Fagan and the lecture will begin at 7:00 PM.

Saturday November 16, 2013

"Continuing Culture Skills" Workshops at the California Indian State Museum

Join the California Indian State Museum State Historic Park for a day of adult-level traditional skills learning. Workshops include soapstone carving, Indian-style beadwork, clapstick making, Native hand games instruction and more. The Workshops are held at the museum located on 2618 K Street, Sacramento, and are held 10:00 AM to 4:00 PM. Contact the Museum at (916) 324-0971 or visit http://www.parks.ca.gov/?page_id=486 for more information about this event and to learn about other activities occurring at the Museum during the month of November.

New Sourcing Technique Detects Obsidian in Seconds

<http://www.redorbit.com/news/science>

September 10, 2013

Obsidian is a naturally occurring volcanic glass with a smooth, hard surface. It is far sharper than a surgical scalpel when fractured, making the glass a highly desirable raw material for crafting stone tools for almost all of human history. Found in East Africa, the earliest obsidian tools are nearly two million years old, and today, doctors still use obsidian scalpels in specialized medical procedures. The chemical composition of obsidian changes from volcano to volcano. Each obsidian has a chemical “fingerprint” that allows researchers to match an obsidian artifact to the volcanic origin of its raw material. The testing for these fingerprints often involve dedicated analytical laboratories, even nuclear reactors, and take place months or years after an archaeological site has been excavated.

A new study from the University of Sheffield, UK, demonstrates a new method of sourcing obsidian artifacts; however, that only takes 10 seconds. The findings, published in [Science Direct](#), reveal that this method — conducted with a handheld instrument that can be used at archaeological excavations — is dozens of times faster than the current methods.

Dr Ellery Frahm from the University of Sheffield’s Department of Archaeology explained, “Obsidian sourcing has, for the last 50 years, involved chemical analysis in a distant laboratory, often taking five minutes per artifact, completely separate from the process of archaeological excavation. We sought to bring new tools for chemical analysis with us into the field, so we can do obsidian sourcing as we excavate or survey an archaeological site, not wait until months or years later to learn the results. We can now analyze an obsidian artifact in the field, and just 10 seconds later, we have an answer for its origin.”

“We carried out the research in Armenia because it has one of the most obsidian-rich natural and cultural landscapes in the world, and the lithic assemblages of numerous Palaeolithic sites are predominantly, if not entirely, composed of obsidian.”

This study is the latest in a series of achievements in the field of obsidian sourcing for Dr. Frahm. Prior to the current conflict situation, which now threatens the country’s heritage, Dr. Frahm’s previous research took place in Syria.

The department’s involvement with the Marie Curie network “New Archaeological Research Network for Integrating Approaches to Ancient Material Studies” (**NARNIA**), gave rise to the current study. The NARNIA research at Sheffield unites archaeological lab work and fieldwork in the field. “We have a broad remit on the project, but we are driven by two goals: work where we couldn’t work before, and answer what we couldn’t answer before,” said Frahm. “Here at Sheffield we’re shifting chemical analysis from the realm of ‘white lab coats’ to ‘muddy boots.’ The more that archaeologists and specialists in various fields can work together on-site the better.”

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