DINNER WITH THE SPEAKER

Please join this month’s speakers, Steve Freers, for dinner before the March 12 meeting at 6 pm at Mimi’s Café, 4030 Barranca Parkway, Irvine.

MARCH PCAS SPEAKER
Steve Freers

Ethics and Adventure: Publishing Rock Art of the Grand Canyon Region

Rock Art of the Grand Canyon Region is the culmination of well-over two decades of coordinated field research and professional relationship building with archaeologists and land managing agencies in the region of study. As a result, the primary guiding principle in the book’s

(Continued on p. 3)

PCAS MEETINGS CALENDAR

GENERAL MEETING
Free and Open To the Public
March 12 - 7:30 pm

Speakers: Steve Freers
Topic: Ethics and Adventure: Publishing Rock Art of the Grand Canyon Region
Location: IRWD Community Room
15500 Sand Canyon Ave., Irvine

The Irvine Ranch Water District neither supports nor endorses the causes or activities of organizations that use the District’s meeting rooms which are made available for public use.

BOARD MEETING
All Members Welcome
March 19 - 7:00 pm
Location: Old Orange County Courthouse
PCAS Library, Ground Floor
211 W. Santa Ana Blvd., Santa Ana

INSIDE THIS ISSUE
2 February Speaker Notes
3 PCAS Scholarships Available
3 Membership and Subscription Renewals
4 1953 Boy Scout Jamboree Exhibit
5 March Field Trip
5 February Board Meeting Summary
6 Dig This—Exhibits, Lectures, and more
7 New PCAS Board Members
7 Speaker Schedule

If you have not renewed your membership for 2015, this will be your last Newsletter. Please use the membership form on page 8!
FEBRUARY SPEAKER NOTES

Evidence for the Younger Dryas Boundary (YDB) Cosmic Impact

By Megan Galway

Dr. James Kennett presented his hypothesis of an extraterrestrial impact over North America around 12,800 years ago that caused climatic disruption and widespread extinctions. The onset of this cooling episode has been designated the Younger Dryas Boundary (YDB). The theory has been widely debated but Dr. Kennett and his many colleagues believe ongoing research and a number of other independent studies have provided credible quality data.

At the time of the event, the earth was in a gradual, longterm warming cycle signaling the end of the last ice age. The YDB occurred very abruptly and resulted in the dramatic reversal of the North American ice sheet melt flow from the Gulf of Mexico to the Saint Laurence drainage. Ocean circulation changed direction, and salinity levels dropped in the Arctic Ocean. This was followed by the extinction of megafauna throughout the Americas, originally commented on by Charles Darwin, who noted fully articulated megafauna skeletons in South America. The cause of these extinctions has been debated as resulting from a catastrophic event, climate change, or human overhunting. Dr. Kennett noted that the Clovis culture—but not necessarily the people—disappeared during this same period as did the Magdalenian culture in Europe, which had existed for about 5,000 years.

An extraterrestrial (possibly asteroid) impact 65 million years ago is believed to have caused the extinction of dinosaurs but Dr. Kennett believes the cause of the YDB event was more likely a comet that broke up with fragments entering the earth’s atmosphere over a wide area. Actual impact with the earth would not have been necessary—impact with just the atmosphere would have created forces similar to nuclear explosions. Evidence of the event has been recorded from the Americas across the Northern Hemisphere to as far as Syria.

The iconic evidence of the YDB is the black layer, a thin stratum containing a concentration of nanodiamonds. These are microscopic diamonds created by intense heat and pressure and are believed to have been caused by the cosmic impact with the resulting debris being disbursted in the atmosphere and settling to create the black layer. Above this is a thicker layer referred to as the black mat and consisting of organic material, indicative of environmental degradation.

Nanodiamond sequences have been identified in 22 sites on 3 continents, and dating of these sites falls within the YDB event window. Impact spherules and melt glass have also been identified. These are terrestrial creations, not pieces of comet, and are formed at temperatures of 1700–2000° C. At Abu Hureyra in Syria—which was occupied up to 13,000 years ago—imprints of plant materials and bone have been found in melt materials. This also would require a temperature of 1710–2230° C. A study of a Greenland ice core, looking for iridium, instead found an unusual peak of platinum at YDB. Previously identified sites are now being analyzed for higher amounts of platinum. The ice core also showed evidence of a peak of bio-mass burning during this period. These and other research projects around the world were not designed to identify the YDB impact but have consistently returned findings of an exceptional, unexplained event around 12,800 years ago.

Dr. Kennett noted that some recent findings of his group have not yet been published, so we look forward to seeing more information on this subject.

Black mat at Murray Springs, Arizona.

PCAS Program Co-Chair Joe Hodulik and February speaker, Dr. James Kennett.
March 2015                                                                   PCAS Newsletter                                                                 Vol. 54 No. 3

March Speaker (continued from p. 1)

development was to educate both rock art specialist and layperson audiences alike without compromising the underlying mission of those responsible for managing the very cultural resources elucidated in the narrative. To this end, conservation and preservation concerns expressed by agency representatives were fully incorporated into the publication—a model that we hope becomes common practice. Steve Freers will blend rich photography, video clips, and his own inimitable sense of humor to describe the behind-the-scenes journey in creating the book. Steve hopes to not only reaffirm our collective responsibility to protect rock art, but share a working model for understanding the Grand Canyon region’s enigmatic ancient art.

Federation of Rock Art Organizations (IFRAO) at their annual meeting in Albuquerque, New Mexico. When student interest warrants, he teaches Native American Rock Art academic and field courses for the University of California, Riverside. In May of 2013, the results of an extensive rock art recording project in Grand Canyon National Park, BLM/ Arizona Strip, and the Kaibab National Forest by Don Christensen, Jerry Dickey, and Steve Freers culminated in a 288-page book published by Sunbelt Publications. Their book, Rock Art of the Grand Canyon Region, has been favorably received by professionals and the general public alike. The Arizona Governor’s Archaeology Advisory Commission awarded Steve and his two colleagues the 2014 Arizona Governor’s Award for Special Achievement in Public Archaeology for their book and volunteer work on public lands in Arizona.

PCAS SCHOLARSHIPS AVAILABLE

Applications are now being accepted for the 2015 Myrtle Soderberg Memorial Scholarship and the Gloria Bogdan Memorial Scholarship. Applicants must achieve junior or senior status by fall 2015, live or be attending university in California, and display a proven interest in archaeology. Successful applicants will each receive an award of $1,000 upon enrollment for the fall semester. Complete application guidelines and an application form are available on our website www.pcas.org/scholarship.html. Deadline for applications is April 30, 2015.

In addition to our undergraduate scholarship program, we have research and presentation grants available to graduate students. Guidelines for these awards may also be found on our website.

Should you know any qualified students who may not have heard of our program, please direct them to the website. Questions may also be directed to scholarship@pcas.org or by telephone to 714-539-6354.

MEMBERSHIP AND SUBSCRIPTION RENEWALS

Have you renewed your membership for calendar year 2015? Our March newsletter is the last that will be sent to expired memberships. A renewal form is included in this newsletter or available on the PCAS website. Don’t risk missing what PCAS is planning for this year! For membership questions, contact Megan Galway, 714-539-6354 or membership@pcas.org.

Steve Freers is a secondary AP and IB chemistry teacher at Temescal Canyon High School, Lake Elsinore, California, and a former sports/hand physical therapist. Avocationally, he has spent the past 26 years researching Native American rock in Riverside and San Diego Counties, as well as concentrated studies in the Grand Canyon region. In 1994, he co-authored the book Fading Images on a subset of southern California rock art in the western Riverside County area and served for five years as the senior editor of the annual publication for the American Rock Art Research Association (ARARA). Steve’s specialty is taking a physical anthropological approach to rock art research. Using anthropometric data collected in the late 1800s and early 1900s by the famous anthropologist Franz Boas, he developed a regression equation that assists in predicting the physical stature and gender of the makers of prehistoric hand impressions. The regional results of this research was recently presented at the International
OC ARCHIVES DISPLAY
1953 Boy Scout Jamboree

By Chris Jepsen, OC Archives

Photos and memorabilia from the 1953 Boy Scout Jamboree—held on the Irvine Ranch in July 1953—will be on display for the next several months at the Orange County Archives, just down the hall from the PCAS library in the Old Courthouse, 211 W. Santa Ana Blvd., 1st Floor, Santa Ana, 9:00 a.m. to 4:30 p.m., Monday through Friday. Many of the objects (e.g. souvenir neckerchiefs, commemorative coins) were donated to the Archives by Henry C. Koerper.

The 3rd National Boy Scout Jamboree played host to over 45,000 Boy Scouts and 5,000 adult leaders from all 48 states, three territories, and numerous foreign countries, who gathered for fun, fellowship, and educational experiences on the Irvine Ranch. The 3,000-acre Jamboree site was between MacArthur Blvd. and Upper Newport Bay in what’s now Newport Beach. The central road constructed for this temporary city is still known as Jamboree Road today.

Scouts brought souvenirs from across the country to trade with other Scouts at the Jamboree. Items ranged from painted seashells to live snakes, and from old sports trading cards to dirt from historic sites. Additional “trading materials,” like arrowheads, were actually made by the boys during the Jamboree. This presents a challenge to modern archaeologists, who must differentiate between ancient Indian artifacts and 1950s “boyscoutifacts” while studying sites near Upper Newport Bay.

The Orange County Archives is the county’s official historical repository and is overseen by the Orange County Clerk-Recorder Department. The Archives can be reached at archives@rec.ocgov.com or 714-834-2536.

Editor’s note. Additional information about the National Boy Scout Jamboree and the “boyscoutifacts” recovered from CA-ORA-64 is available in the following paper:


March Curation Workday

When: March 14, 2015, 1 pm
Where: Red Car Building

Everyone is welcome. No experience necessary! Please contact Mark Roeder (714-299-4150, curator@pcas.org) or Scott Findlay (714-342-2534, fieldtrips@pcas.org) for directions and to let us know you will be coming.
PCAS FIELD TRIP

March 20–23, 2015
Joshua Tree National Park

This can be a one-day or multi-day field trip. The PCAS field trip group leaders plan to camp. For information, contact Steve Dwyer (714-969-1911) or Scott Findlay (714-342-2534) or email fieldtrips@pcas.org. Please be aware that you will be required to sign a code of ethics and waiver of liability, which acknowledges that some areas we plan to visit have inherent natural dangers. If you are unable to attend a field trip for which you have signed up, please contact Steve or Scott as soon as possible. For contact the day of the field trip, call cell phone 714-342-2534.

Photos from previous PCAS fieldtrips to Joshua Tree National Park:

FEBRUARY BOARD MEETING SUMMARY

Submitted by Brian Steffensen

President Megan Galway called the meeting to order at 7:00 p.m. at the Old Courthouse in Santa Ana, California. Board members present: Stephen Dwyer, Scott Findlay, Hank Koerper, Steve O’Neil, Kathleen Shada, and Brian Steffensen. Member presents: Bob Brace, Gail Cochlin, and Joe Hodulik.

The Board approved the January 2015 minutes with corrections and the February Treasurer’s report.

Old Business

Scott Findlay purchased three additional shelves and installed them in the library. In addition, he cleared all the library tables and placed the books on the shelves. Thank you, Scott!

New Business

The Board agreed that PCAS should participate in the “From Dinosaurs to People: Reliving Orange County’s Past” sponsored by the Cooper Center and the Heritage Museum of Orange County. The family educational event will be held on July 19 at the Heritage Museum. Dinner with the speaker was discussed and how to encourage members to attend. Rene Brace was authorized to put a “shopping cart” on the PCAS website for the purchase of memberships. This may be expanded for Quarterly purchases. PCAS now has file storage on Microsoft OneDrive. Hank Koerper discussed the new OC Archives’ display of the 1953 Boy Scout Jamboree. The display is located on the ground floor of the Old Courthouse.

Joe Hodulik reported that speakers have been scheduled through October. Megan Galway has sent scholarship information to local schools. Joe Hodulik’s Donation-Award table brought in $285 for the Scholarship fund! Joe also reported he donated a framed duck picture to the Irvine Water District for use at the Duck Club. Steve Dwyer and Scott Findlay discussed the field trip to the lower Anza-Borrego Desert area this coming weekend. A March 20–23 field trip is planned to Joshua Tree National Park. The Publications Committee is editing PCAS Quarterly 51(2), which will contain papers by Don Laylander, Mark Sutton, and Hank Koerper.

The meeting was adjourned at 8:05 pm.
DIG THIS...

Exhibits


Lectures

**In Search of Egypt’s Antiquities along the Nile and the Valley of the Golden Mummies**, by Dr. Zahi Hawass, a Bowers Museum Distinguished Lecture. March 7, 1:30 pm. Fee: $25, members $15, students $10. Information and to purchase tickets: [www.bowers.org](http://www.bowers.org) or 714-567-3677.

**New Excavations at Jaffa, Port of Israel**, by Tim Kohler, Ph.D. (UCLA), a lecture of the AIA, Orange County Chapter. DeNault Auditorium in Grimm Hall, Concordia University, March 15, 2 pm. Fee: $5; students and members free. Information: [www.aia-oc.org](http://www.aia-oc.org).


Classes, Meetings, and Events

**Malki Museum’s Annual Agave Harvest**, led by Daniel McCarthy, will be held April 4, 10 am. Meet at Cahuilla Tewanet Overlook on the Palms to Pines Hwy 74. Fee: $10 donation. The **Agave Roast** will be held at the Malki Museum, April 11. Food tasting will begin at noon. Fee: Free admission, $10 for food tasting. Reservations for both events: 951-849-7289. Information: [www.malkimuseum.org](http://www.malkimuseum.org).

**Geology and Stone Tool Workshop**, by Patrick Abbot, Ph.D. and Jim Bowden, will include lectures and hands-on experience. San Diego Archaeological Center, April 11, 9 am–2:30 pm. Fee includes lunch: $60, members $40. Information: Cara Ratner at [cratner@sandiegoarchaeology.org](mailto:cratner@sandiegoarchaeology.org) or 760-291-0370. To register: [www.sandiegoarchaeology.org](http://www.sandiegoarchaeology.org).

**17th Annual Coachella Valley Archaeological Society Symposium** will be held April 18, College of the Desert’s Pollock Theatre. Respond to call for paper to either Dr. Ellen Hardy (760-776-7449) or Leslie Mouriquand (lmouriquand@collegeofthedesert.edu).

Websites

**Coachella Valley Archaeological Society**: [www.cvarch.org](http://www.cvarch.org).

**San Diego County Archaeological Society**: [www.sandiegoarchaeologicalsociety.com](http://www.sandiegoarchaeologicalsociety.com).

**Ventura County Archaeological Society**: [vcas.homestead.com](http://vcas.homestead.com).

Visit [www.pcas.org](http://www.pcas.org) for all the latest news.

*Editor’s Note: Please confirm time and place of listing prior to the event. Submit items for Dig This to newsletter@pcas.org.*
PCAS CODE OF ETHICS

The Pacific Coast Archaeological Society (PCAS) is a nonprofit group of professional and avocational people dedicated to proper management of our cultural resources, public education, and the protection and preservation of archaeological materials and collections.

The following principles have been adopted by the PCAS:

1. Professional methods and forms will be used on all archaeological field surveys, excavations, and laboratory sessions.
2. A complete record of field and laboratory work will be filed with the PCAS Curator and stored at a facility approved by the Society’s Board of Directors.
3. No archaeological materials will be removed without proper permits, landowner permission, and a field research design.
4. Unless otherwise legally stipulated before activity commences, all materials collected will be deposited for further research with the Curator at a facility approved by the Society's Board of Directors.
5. All generated reports will be the property of the Society and distributed as deemed appropriate.
6. All Society field activities will be performed only under the direction of a qualified field archaeologist (Principal Investigator) and the supervision of field or site directors.
7. The above principles will be observed on both Society approved projects and projects performed under the direction of an authorized institution or organization.
8. The Society and its members will strive to educate the public of the importance and proper management of our non-renewable cultural resources and to discourage the collection and commercial exploitation of archaeological materials.
9. PCAS members shall not benefit from the acquisition, purchase, sale, or trade of archaeological artifacts, materials, or specimens.
10. All members shall adhere to City, County, State, and Federal antiquities laws.

PCAS SPEAKER CALENDAR

April 9, 2015
Dr. Charles Stanish
The Chincha Lines of Southern Peru

May 14, 2015
Dr. Aharon Sasson

June 11, 2015
George Kline
Archaeology of the Chuckwalla Valley

New PCAS Board Members: (from left) Dr. Henry Koerper, Kathleen Shada, and Stephen Dwyer.
PACIFIC COAST ARCHAEOLOGICAL SOCIETY

2015 Calendar Year Membership and Subscription Form

Name(s): ______________________________________________________________________________

Address: ______________________________________________________________________________

City: ____________________________________ State: _________ Zip Code ___________

Phone: __________________________________ Email: _____________________________

Newsletters will be sent by email unless a mailed copy is requested.

I have read and agree to abide by the PCAS Code of Ethics ____________________________

Signature

Membership (Includes Quarterly/Newsletter)

☐ Active Member - $45

☐ Family Membership - $50

☐ Supporting Member* - $55

☐ Donor Member* - $75

☐ Lifetime Member* - $1000

* May be individual or family membership

Subscription Only

☐ Quarterly - $40

☐ Newsletter - $20

Scholarship Fund

☐ Donation $________

☐ Student Associate - $10 (email Newsletter only)

www.pcas.org

Return form with payment to:

PCAS Membership

PO Box 10926

Costa Mesa, CA 92627-0926

*PCAS Board Member