



JANUARY 2017

# PCAS NEWSLETTER

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PACIFIC COAST ARCHAEOLOGICAL SOCIETY

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## JANUARY PCAS SPEAKER

**Dr. Anabel Ford**

*Using Cutting-Edge LiDAR Technology at El Pilar, Belize/Guatemala, in Discovering Ancient Maya Sites—Magic Wand or Fabulous Tool?*

LiDAR (light detection and ranging) is a remote sensing method capable of penetrating overlying vegetation and forest canopies, imaging at very high spatial resolutions and with extraordinary accuracy. It has been touted as a revolution in archaeology with implications for mapping all over the world. This is especially important for

*(Continued on p. 4)*



Dr. Anabel Ford.

## PCAS MEETINGS CALENDAR

### GENERAL MEETING

*Free and Open To the Public*

**January 12 - 7:30 pm**

**Speakers:** Dr. Anabel Ford

**Topic:** *Using Cutting-Edge LiDAR Technology at El Pilar*

**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*

**January 14 - 12 noon**

**Location:** PCAS Curation Facility  
Contact Scott Findlay for directions:  
714-342-2534 or [vicepresident@pcas.org](mailto:vicepresident@pcas.org).

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## DINNER WITH THE SPEAKER

Please join this month's speaker, Dr. Anabel Ford, for dinner before the January 12 meeting at 6 pm at Mimi's Café, 4030 Barranca Parkway, Irvine.

***Happy New Year!***

***Please remember to renew your  
PCAS membership.***

## DECEMBER SPEAKER NOTES

### *Moving through Time: The Archaeology of Paths, Trails, and Roads*

By Megan Galway

In recent months we have heard several presentations relating to cultural landscapes, the analysis of man's relationship to his environment. Dr. Snead brought us his study of travel within and between these landscapes by way of paths, trails, and roads. His interest began during a project in Peru when his group set up camp on a level area just off and below the modern road, and he learned this was the Inca Road. Since then, he has visited ancient and historic roads in various countries and studied their origins and purposes.

He notes that travel today—down a particular road—will remind us of previous trips and evoke good or bad memories. Travel may be a way to get from A to B, but experiences along the way are also important. He spoke of walking the Roman Appian Way and envisioning historical events, but also noted these events are translated through subsequent cultural views. The Camino Real may be the route taken in Spanish mission days, but it has also been used to promote California history. We take roads for granted, but they exist in a complicated variety, from today's highly engineered highways to the Chaco stairs and barely visible worn paths.

Roads and highways are associated with various landmarks, rest stops, toll booths, roadside stands, and shrines. All these hint at the traveler's association with the road. The town of Buttonwillow in the California Central Valley is named for a single buttonwillow tree which was a landmark on an ancient trail and is now designated California Historical Landmark No. 492. Shrines, in particular, are seen in great variety. In earlier times they were often temple-like structures; today they likely honor the victim of a highway accident and may consist of a simple wooden cross or a collection of candles, toys, flowers, and notes. These may be cleared away by highway workers but will likely be rebuilt. A recent incarnation has been the appearance of "ghost bikes," a white painted bicycle frame to denote a cyclist was killed at this location.

Many routes change over time; stage coach routes may follow Native trails or seek out an easier pass through or around mountain ranges, and modern engineered highways may go a completely different way. Each of them relate to the needs and abilities of their current users. Between 1995 and 2003 Dr. Snead worked on the Pajarito Trails Project, documenting and analyzing a trail complex in northern



**Dr. James Snead and PCAS Program Co-Chair Brian Steffensen at the December meeting.**

New Mexico. This trail network consists of deep trails worn into volcanic rock with pecked stairs leading up to a hilltop pueblo. While actual dating of these trails was not possible, analysis of their locations indicated some were likely used by pueblo residents to access their water and agricultural resources while others were likely more recent and worn by tourists hiking from the parking lot and around the base of the butte.

A more recent and ongoing project is taking place on the island of Yap in the Federated States of Micronesia. While Yap is often noted for production and use of large doughnut shaped stones as currency, the Yapese have also created an extensive network of stone pathways throughout the island. These generally have a center row of large slabs bordered by smaller stones and have plantings along both sides. They are highly constructed and may be up to a meter above the surrounding area. Alongside there may be stone rest platforms with backrests. The society has a strong caste structure and some pathways may be restricted to high caste residents with parallel women's paths. Women clean and weed the paths.

The purpose of various paths was described in relation to the village of Gagil. This was an administrative center to the south of a large bay. People wishing to petition the administration would cross the bay by canoe and take a trail from the shore to the village. Those wishing to just visit or trade would take a different trail around the bay. Approaching the village directly by canoe would be seen as an act of war. This variation of purpose is also seen in upstate New York where Native trails are identified as war paths or peace paths depending on their use.

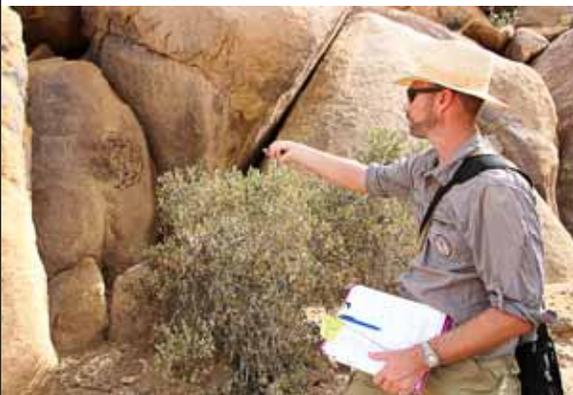
Dr. Snead is planning a project to study stagecoach routes in southern California but has been delayed by the process of obtaining permits and permissions to follow these routes.

## AN INTERPRETIVE TOUR OF COYOTE HOLE ROCK ART SITE

by *Jim and Ellen LaMotte*

During October 2016, Joshua Tree National Park (JTNP) celebrated Archaeology Month to commemorate nearly 100 years of archaeology at the Park. One celebration event included a tour of Coyote Hole. Twenty-three individuals gathered in the morning of October 16 to tour Coyote Hole, a culturally rich area adjacent to JTNP. The sandy wash is lined on both sides with piles of boulders displaying scores of petroglyphs, a few pictographs, and numerous bedrock metates. The tour was led by Jeremy Freeman and Mary Oster, Great Basin Institute archaeologists currently working at JTNP.

Coyote Hole, within the town of Joshua Tree, is continually being defaced with graffiti. On July 16 graffiti remediation was conducted at the site by Mojave Desert Land Trust volunteers. Signs have been installed to educate the public and cut down on graffiti, but defacement persists. Jeremy pointed out a graffiti removal area that is near a petroglyph (Figure 1).



**Figure 1. Jeremy Freeman pointing out graffiti.**

To enhance viewing of a pictograph, Jeremy took out his tablet to see if it could be made more visible with *DStretch*, a computer color enhancement program. *DStretch* is now available as a mobile app which often times makes pictograph-viewing not only instant but quite amazing.

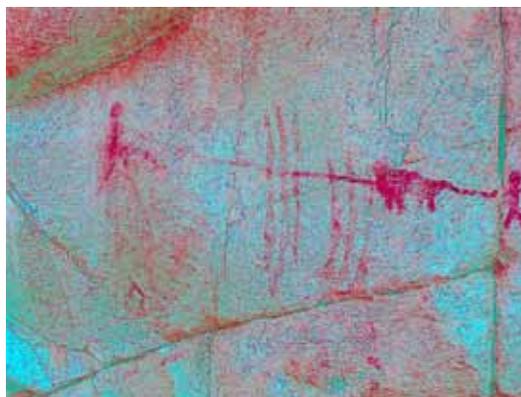
Jeremy provided definitions and explanations relating to the various rock art panels being viewed. For instance, he explained that petroglyphs come in two forms: **sgraffito**, defined by the contrast of petroglyph and surrounding rock, and **relief** which is defined by the depth of the petroglyph. Both forms can be made either by percussion or abrasion with a tool. An example of sgraffito is a petroglyph created by scraping away desert varnish to reveal the rock color underneath. Desert varnish forms a coating on rocks in arid environments and is made up of minerals, oxides, dust, and moisture. These petroglyphs last only as long as it takes the desert varnish to reform on the rock over the petroglyph. Relief petroglyph imagery is created by removing part of the rock surface and is more long-lasting.

Other definitions and explanations were provided to the group. **Mur-e** is a tool that has been used in fashioning a petroglyph. A mur-e is typically stone and can be either a percussion tool or an abrasion tool. **Parietal art** is any art, either petroglyph or pictograph, that is found on the walls of a cave or rock shelter; **anthropomorphic, zoomorphic, enigmatic, and remnant pigment** are the four classifications of rock art.

Jeremy saved the most elaborate pictograph for the end of the tour. This pictograph is at the head of the wash near a seasonal waterfall. As can be seen, the pictograph is no longer completely visible (Figure 2). However, *DStretch* brought out considerably more of the original image (Figure 3). We took this photo while on the tour but enhanced it with *DStretch* at a later time.



**Figure 2. Faded pictograph.**



**Figure 3. Pictograph above enhanced with *DStretch*.**

Jeremy noted that interpreting the meaning of any petroglyph or pictograph is problematic. Some images are entopic shapes possibly related to visual experiences during an altered state of consciousness created by hallucinogens. Some of these images may have been created by shamans for religious purposes or coming of age ceremonies. Others may have had utilitarian purposes such as providing directions from one locale to another. Another purpose may have been to mark an area as belonging to a particular group of people. Jeremy concluded that petroglyphs and pictographs are meaningful but that meaning is relative to the culture in which they were made.

What could be better than a nice warm day, petroglyphs and pictographs up and down the rock walls, and a tour guide with a wealth of information.

## January Speaker *(continued from p. 1)*

archaeology in areas with lots of trees. No wonder we are enthusiastic about it for the Maya forest. I have been conducting surveys under the forest canopy for more than forty years, so I was excited about the prospects, suspicious about the claims, and concerned about the impacts. When I got the chance to get coverage for El Pilar (a gift from Anfield Nickel in 2013), I was thrilled. I would be able to see for myself the value of LiDAR. It would challenge my own experiences—how would my own maps hold up? LiDAR proved fantastic for revealing the imposing structures and good for identifying most small houses, but all potential site locations must be validated in the field. Our experience at El Pilar shows the good and the bad! As it turns out, LiDAR provides distinct advantages, for example for topography, but field surveys are required and the results need the archaeologist for the final interpretation of the data.

Dr. Ford's focus on understanding the ancient Maya landscape has grown and branched into several areas of research: How did the Maya interact with the rain forest? How did climate change and geography affect settlement patterns? And how were population expansions and contractions related to the environment? Dr. Ford has been able to address these diverse yet interrelated themes from detailed investigation of architecture to artifacts. She has tracked the economic and spatial patterns of the Maya of El Pilar, a major center she discovered and mapped in 1983 and now a binational park in Belize and Guatemala. Her current fieldwork is the LiDAR validation and archaeological survey of El Pilar. Most relevant to our challenges of the twenty-first century, Dr. Ford's work demonstrates that the Maya were able to prosper over millennia with a distinctly local relationship to the tropical environment she calls the Maya forest garden, showcased at El Pilar.

## JANUARY CURATION WORKDAY

**When:** January 14, 2017, 1 pm

**Where:** Red Car Building

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

## HOLIDAY GATHERING

PCAS members and guests enjoyed the annual Holiday Potluck Gathering on December 8th at the Duck Club. Our speaker, Dr. James Snead, engaged us with his talk on the cultural landscapes of roads, paths, and trails. He described his past work on the Pajarito Plateau in northern New Mexico and his current project on the island of Yap in the Federated States of Micronesia.

We thank **Joe Hodulik** for coordinating the reservations for the Duck Club. **Bob and Rene Brace, Gail Cochlin, Dorothy DeGennaro, Steve and Dalva Dwyer, Scott Findlay, Megan Galway, and Greg Ziak** set up and festively decorated the facility. Members and guests brought an assortment of delicious dishes. Everyone pitched in and made clean up a breeze. Thank you all for making the evening so enjoyable!

*Thanks to our  
Holiday Dinner sponsor  
for supplying the hams*

*Joe Hodulik  
A Source of Pride*





## DIG THIS...



### Exhibits

**Woven Stories: Baskets of the Cahuilla.** Agua Caliente Cultural Museum, through January 2017. Free. Information: [www.accmuseum.org](http://www.accmuseum.org).

### Lectures

**Ancestral Marks at Torqua Cave: Image Revelation and Condition Assessment,** by Tom McClintock (UCLA). A Santa Barbara County Archaeological Society lecture, Santa Barbara Museum of Natural History, Farrand Hall, January 4, 7:30 pm. Free. Information: [www.sbnature.org/education/918.html](http://www.sbnature.org/education/918.html) or [tkennedy@sbnature2.org](mailto:tkennedy@sbnature2.org).

**Results of a summer's work in the Chincha Valley of Peru**, by Jacob Bongers, a lecture of the AIA, Orange County Chapter. DeNault Auditorium in Grimm Hall, Concordia University, January 8, 2–4 pm. Fee: \$5; students and members free. Information: [www.aia-oc.org](http://www.aia-oc.org).

**Ancient Technology: The People Who Made the Artifacts,** by Dr. Willeke Wendrich and UCLA undergraduate and graduate students. ARCE talks, Bowers Museum, January 14, 1:30 pm. Fee: \$12; Bowers and ARCE members free. Information: [www.bowers.org](http://www.bowers.org) or 714-567-3677.

**Trade as Power in Native North America,** with Joshua Reid, David J. Silverman, and Natale Zappia. The Wells Fargo Theater, The Autry, January 15, 2 pm. Free with museum admission. Reservations recommended. Information: <https://theautry.org>.

**Zanja Madre,** by Sherri Gust (Paleontologist/Archaeologist). The Zanja Madre (Mother Ditch) is the original aqueduct that brought water to the Pueblo de Los Angeles from the Rio Porciuncula (Los Angeles River). A lecture of the Coachella Valley Archaeological Society, Portola Center, 45480 Portola, Palm Desert, January 19, 6:30 pm. Free. Information: [www.cvarch.org](http://www.cvarch.org).

### Lectures (continued)

**Beads and Trade in Ancient Southeast Asia,** by Alison Carter. Bowers Museum, January 28, 11am–noon. Free. Information: [www.bowers.org](http://www.bowers.org).

### Classes, Meetings, and Events

**Singing the Birds (Wikitmallem Tahmuwhae): Bird Song & Dance Festival** celebrates traditional Cahuilla bird singing and dancing. Palm Springs High School Gymnasium, 2301 East Baristo Road, Palm Springs, February 4, 12:00 pm–7:00 pm. Admission and parking free. Information: [www.accmuseum.org](http://www.accmuseum.org).

**Intaglios Along the Colorado River,** March 4, 7:30 am–6 pm and **Native American Plant Uses,** March 19, 9 am–4 pm. Both by Daniel McCarthy. Classes of the Joshua Tree National Park Desert Institute. Fee for each class: \$70; members \$60. Information and registration: [www.joshuatree.org](http://www.joshuatree.org).

**The Annual Meeting of the Society for California Archaeology** will be held March 9–12 at the Tenaya Lodge, Fish Camp. Information and registration: [www.scahome.org](http://www.scahome.org).

**The 82nd Annual Meeting of the Society for American Archaeology** will be held March 29–April 2 at the Hyatt Regency Vancouver, Vancouver, British Columbia, Canada. Information and registration: [www.saa.org](http://www.saa.org).

**The American Rock Art Research Association (ARARA)** will hold its 44th Annual Conference June 1–5, at the Lodge at Eagle Crest, Redmond, Oregon. Paper submission by February 1. Information: [www.arara.org](http://www.arara.org).

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](mailto: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.



El Pilar Archaeological Reserve for Maya Flora and Fauna 1:2,500 0 250 500 Meters

El Pilar Archaeological Reserve.

**Come to the January presentation!**

*Using Cutting-Edge LiDAR  
Technology at El Pilar*

## PCAS SPEAKER CALENDAR

**February 9, 2017**

**Clayton Lebow**  
*Swordfish Cave*

**March 9, 2017**

**Dr. Thomas E. Levy**

**April 13, 2017**

**Stephen O'Neil**

## 2016 PCAS BOARD MEMBERS AND COMMITTEE CONTACTS

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\*PCAS Board Member

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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
- Student Associate - \$10 (email Newsletter only)

**Scholarship Fund**

- Donation \$ \_\_\_\_\_

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Costa Mesa, CA 92627-0926**

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