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April PCAS Speaker

Dr. Vance Holliday

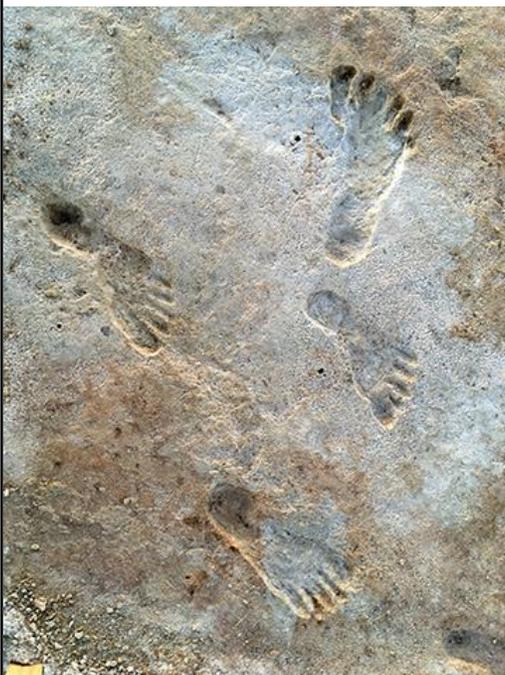
Tracking the First Americans

Free Zoom Meeting

April 14, 7:30 pm

Please see instructions on p. 3

The question of when people first arrived in the Americas, based on scientific evidence, has been argued for decades and even centuries. For many years the conventional answer was about 13,000 years ago with the appearance of people who made distinctive artifacts called Clovis points (named for a famous archaeological site near Clovis, New Mexico). Other sites have been proposed as being older than Clovis. A few early occupations ~14,000 to ~16,000 years old were about the oldest well-documented sites that



were accepted by most (but not all) archaeologists. The White Sands site, located in what is now New Mexico, changed that for many archaeologists. The site provides convincing evidence that humans were present in what is now southern New Mexico between 23,000 and 21,000 years ago. There is solid evidence of human activity in the form of human footprints. At other sites considered older than Clovis, there are often debates over the age or presence of human activity which is usually based on interpretations of broken rocks or bone tools.

The time range for human footprints at White Sands is significant proof that humans were present during the last Ice Age, and it is likely they were also present earlier before the last Ice Age covered essentially all Canada, from coast to coast (maybe >25,000 years ago). Travel to the Americas from Asia would be easiest at the beginning or end of an Ice Age due to a lower sea level and only partial coverage of Canada by the ice. It is important to note that at White Sands the evidence of human presence is based on human tracks. Very few archaeologists encounter human tracks especially where the tracks provide a critical aspect of the argument for the authenticity of human activity in that area.

Dr. Vance Holliday received a BA in Anthropology from the University of Texas at Austin (1972), an MA in Museum Science (with a minor in Soil Science) at Texas Tech University (1977), and a PhD in Geological Sciences at the University of Colorado, Boulder (1982). He was on the Geography faculty at the University of Wisconsin-Madison (1986-2002) and is now in both Anthropology and Geosciences at the University of Arizona. His research career began on the Great Plains of the U.S., focused on reconstructing and

(Continued on p. 2)

**PCAS Scholarship applications
are due by April 30.**

See www.pcas.org.

March Speaker Notes

Archaeology's Deep Time Perspective on Environment and Social Sustainability

By Megan Galway

Allen Dart spoke of interdisciplinary methods of studying the times before written records and what we might learn to aid in dealing with future threats to sustainability and human safety. He noted that in the Americas we have a focus on written records dating from the first European contact, but pointed out that date is difficult to define in that it covers a period from 1021 in Newfoundland to 1539 in the American Southwest. He believes we must develop a deep time perspective to supplement more recent scientific records.

Mr. Dart went on to describe a number of deep time climatic and ecological disasters that have occurred and how the archaeological record shows how they affected the people of those times.

Records show that over the past 7,500 years the average cranial volume of the Chumash people shrank and this was likely due to the use of bitumen. This substance, produced by oil seepage off the California coast, was used as an adhesive and contains polycyclic aromatic hydrocarbons (PAHs), a known toxin. Today we breathe these toxins in automobile exhaust, cigarette smoke, fumes from asphalt roads, etc.

Soil disturbance, such as plowing, is seen to destroy natural habitats and biodiversity. Tilling rotates the top layer but compacts the ground underneath and creates hardpan. This reduces water retention and increases erosion. Native cultures in the American Southwest avoided these problems by building rock piles and terraces so that they were planting on top of and not disturbing the original surface. Crop rotation and allowing ground to lie fallow also encourages biodiversity. Some plants such as *Amaranthus* that are considered weeds actually have nutritional value and should not be eliminated.

Dendrochronology (tree ring dating) offers a long record of environmental and climatic conditions. Wet El Niño and dry La Niña periods can be seen in the rings, and the archaeological record gives an indication of how the people of those times reacted. We know there were periods when large areas of the continent appear to have been abandoned, likely due to drought conditions. The Four Corners area is an example of what happened in the late 1200s when there was an extended drought, and the area was largely depopulated. During good times populations grow and become crowded, causing poorer hygiene and fewer per-capita resources. A poor season can be problematic, but an extended drought is devastating.

People living along the Salt River suffered a disruption when high flood waters caused the levees to



PCAS March speaker, Allen Dart.

fail. This was followed by a period of drought, and various groups handled it in different ways. Some with desirable resources were able to trade; others split into smaller groups or moved frequently to fresh land. By 1539, at first contact, the only group remaining on their traditional land was the Zuni.

Archaeologists are working with environmental specialists to understand ongoing changes and learn what we can from earlier adaptations to prepare for the future. In the period from 1860 to 2000, we have seen a rise in recorded temperatures. Tree ring dates for the last 1,000 years record a dramatic increase in the last 200 years, and assuming this continues, sea level is predicted to rise 2–5 m by 2050. The need to look ahead and prepare for future events was demonstrated by the 2011 Fukushima earthquake in Japan which took 22,000 lives and caused an environmental disaster when the nuclear power station failed and burned. The facility was believed protected by a 17 ft seawall but the 2011 tsunami reached 23–27 ft. Planners disregarded the deep time perspective which included 3,000 years of geological history and written history of the Jōgan tsunami in 869 which reached 26 ft.

April PCAS Speaker (continued from p. 1.)

interpreting the landscapes and environments in which the earliest occupants of North America lived, and how those conditions evolved during the Paleoindian period. Since arriving at the University of Arizona, he became Director of the Argonaut Archaeological Research Fund, which is devoted to research on the archaeology and geoarchaeology of the Paleoindian period in the southwestern U.S. and northwestern Mexico. In addition, he has been part of an international project focused on the Upper Paleolithic archaeology and paleoenvironments of southwestern Russia and central Ukraine.

DIG THIS ...



Lectures

Hurricane Deck: Revisiting the 1935 Santa Barbara Museum of Natural History Expedition, by William D. Hyder. A virtual lecture of the San Diego Rock Art Association, April 3, 4 pm. Free. Information and registration: www.sandiegorockart.org.

Living Room Lecture: Forensic San Diego's Coastal Heritage, by Deirdre Encarnación. An Archaeological Center of San Diego Zoom lecture, April 7, 6:30 pm (registration closes at 4 pm). Free; donations appreciated. Information and required registration: www.sandiegoarchaeology.org. Past lectures are available on YouTube: www.youtube.com/channel/UC1u18jko8JsS19NEicQS2cA/playlists.

The Bradshaw Trail—Gold Road to La Paz, by Britt Wilson. A Coachella Valley Archaeological Society lecture, Portola Community Center, 45-480 Portola Ave, Palm Desert, April 8, 6:30 pm. Free. Information: www.cvarch.org.

ARCE Online or In-Person: Making Millions of Pots: How the Cult in Ancient Egypt Met its Demand for Pottery, by Dr. Meredith Brand (American University of Cairo). An ARCE/Bowers Museum lecture, April 9, 1:30 pm. Recorded lecture available for 24 hours. Fee: \$13 in-person, \$10 online; Bowers and ARCE members free. Information: www.bowers.org.

Archaeological Techniques and Excavating the Indus Civilization, by Dr. Jonathan Mark Kenoyer (University of Wisconsin–Madison). Cotsen Institute, UCLA, Zoom lecture, April 9, 1 pm. Free. Information and registration: <https://ioa.ucla.edu>.

An Evening with Chumash Elder, Julie Tumamait-Stenslie. Zoom lecture of the Ventura County Archaeological Society, April 12, 7 pm. Register to receive link: vcas.arch@gmail.com. Information: www.venturacountyarchaeologicalsociety.com.

Ancient Persia at the Getty Villa, by Dr. Sara Cole (Assistant Curator, J. Paul Getty Museum), will examine the complex relationship among Persia, Greece and Rome from the 6th century BC to the 7th century AD which is reflected in the current exhibit on Persia at the Getty Villa. A Zoom lecture of the AIA, Orange County Chapter, April 24, 2 pm. To request registration, fill-out contact form at www.aia-oc.org.

Lectures (continued)

The Resurrection of Tutankhamun, by Dr. Aidan Dodson (University of Bristol). Bowers Museum online prerecorded lecture viewable for 24 hours, April 30. Fee: \$10; ARCE and Bowers members free. Information: www.bowers.org.

Classes, Meetings, and Events

Malki Museum Agave Roast and Tasting will be held April 9, 10 am–4 pm, Malki Museum, 11795 Malki Road, Morongo Reservation, Banning. Lunch served at noon, \$10 per plate. Native plant survey at 2 pm. Information: www.malkimuseum.org.

San Diego Archaeological Center Annual BBQ will have food, music, atlatl throw and bow-and-arrow stations, archaeology-themed photo booth, and a silent auction. April 30, 12–3 pm. Cost: \$25; members \$20; kids (12 and under) \$5. Information and ticket purchase: sandiegoarchaeology.org/annual-bbq.

Visit 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 Zoom Meeting

- Email a registration request by **noon on Thursday, April 14**, to membership@pcas.org.
- You will receive an email with a link to the Zoom meeting.
- Guests (non-PCAS members) are welcome with registration.
- When the presentation starts, please **mute your microphone and turn off your webcam**.

PCAS host **Steve Dwyer** will open the Zoom meeting at 7 pm to allow time to resolve any technical problems prior to the beginning of the PCAS General Meeting and lecture at 7:30 pm.

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.



Join us for a live PCAS Zoom lecture with **Dr. Vance Holliday** speaking on "Tracking the First Americans."

PCAS Speaker Calendar

May 12, 2022

Dr. Metin I. Eren

Did the Clovis Culture Cause the Extinction of Elephants in Ice Age North America?

June 9, 2022

Dr. Paul G. Chace

Patriotic Footprints: Jose Antonio Ortega, Frontier Diplomat, with Maria Antonia Ortega de Carrillo, Frontier Presidio First Lady

No meetings in July and August

2022 PCAS Board Members and Committee Contacts

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PACIFIC COAST ARCHAEOLOGICAL SOCIETY

2022 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 \$ _____

Join online:

www.pcas.org/membrs.html

Or return with payment to:

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