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PCAS Newsletter

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Pacific Coast Archaeological Society

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September PCAS Speaker

Dr. Douglas J. Kennett

Maize Domestication and Dispersal in the Americas

In-Person and Zoom Meeting
September 11, 7:30 pm. See p. 5.

Speaker will be present at the in-person meeting.

Maize varieties.

Research during the last four decades has transformed our understanding of maize domestication and dispersal in the Americas. In this talk Dr. Kennett will synthesize current genetic, paleoecological, and archaeological data regarding the development of this globally important crop. Evidence indicates initial domestication from teosinte (*Zea mays,* ssp. *parviglumis*) in the Balsas region of southwestern Mexico before ~9,000 BP. This was followed by early cultivation in this region and rapid dispersal through Central and South America soon afterward. Recent genetic evidence suggests a subsequent wave of expansion after admixture with a second wild teosinte in the highlands of Mexico. The earliest cobs from the highlands of Oaxaca (6,250 BP) and Tehuacan (5,300 BP) are small and aDNA indicates the domestication syndrome was not fixed. Secondary improvement occurred in South America and Mesoamerica by at least ~6,700 BP and ~4,300 BP, respectively, with larger, multi-rowed varieties appearing when isotope studies show consumption as a dietary staple. Genetic data suggests subsequent gene flow between Mesoamerica and South America during this interval. Maize was introduced into the southwestern US from the arid

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Dinner with the Speaker

Please join this month's speaker, Dr. Douglas Kennett, for dinner before the September 11 meeting at 6 pm, Knowlwood Restaurant, 14952 Sand Canyon Ave., Irvine.

This is the combined August/September Newsletter.

PCAS Board Nominations and Election Information! See p. 3.

June Speaker Notes

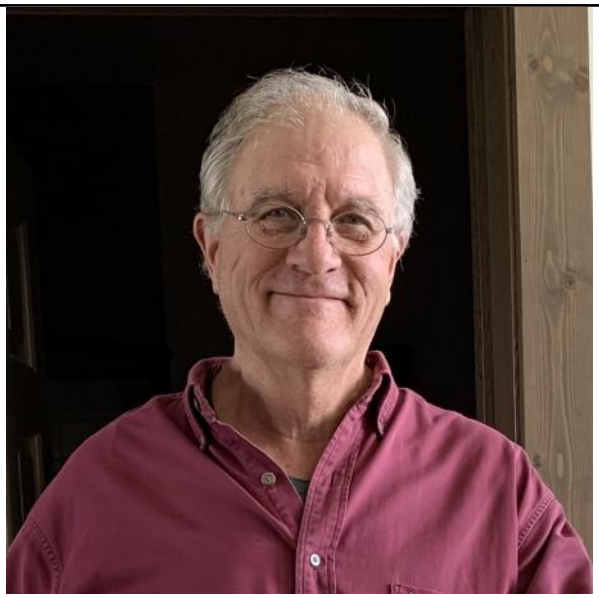
Context Is Everything: Ruppia cirrhosa *and Dating the White Sands Footprints*

By Albert Knight

The PCAS guest speaker for June 2025 was Dr. Robert Dello-Russo, a retired Director of the Office of Contract Archaeology at the University of New Mexico in Albuquerque, which is also where he earned his PhD in anthropology/archaeology. Dr. Dello-Russo had also served as the Deputy Director of the New Mexico Office of Archaeological Studies and the Compliance Archaeologist for the New Mexico Department of Fish and Game. He is the owner and principal archaeologist for the Escondida Research Group and currently lives in Livingston, Montana. His areas of expertise include hunter-gatherer prehistory in western North America, paleoclimate and paleoenvironmental studies, geomorphic processes, and other related subjects.

The area under discussion is in White Sands National Park, south-central New Mexico. The setting is the Tularosa Basin and the portion of the White Sands dune field along the east side of paleolake Otero (i.e., a playa environment). And—of great interest—there are multiple layers of human tracks in the dunes; some are deeper in the sand than others and are therefore older. How old are the tracks, however deep? Briefly, National Park Service (NPS) archaeologists have posited that the footprints range in date from 21,000 to 23,000 calibrated BP; that is, the footprints date to the Last Glacial Maximum. This range of dates is several thousand years older than the currently accepted dates for the presence of human beings in North America (i.e. somewhere in the 14,000 to 16,000 BP range), who are believed to have arrived following the Last Glacial Maximum. If the NPS archaeologists are correct, this finding is a BIG DEAL. And so, the June presentation examined the issue of how the footprints had been dated.

The paleolake Otero footprints are part of "the largest concentration of fossilized late Pleistocene megafauna tracks in North America and perhaps the world." Imagine the critters of La Brea Tar Pits … now imagine finding the tracks of those animals as they came and went (most of them) to/from La Brea springs. Wow! Dr. Dello-Russo noted that there are some 100,000 fossil tracks, including those of mammoths, camelids, giant ground sloths, and people. Think megafauna. So sure, the fossil megafauna tracks could be 21,000 to 23,000 years old, but what about the human tracks?



PCAS June speaker, Dr. Robert Dello-Russo.

According to Dr. Dello-Russo, the NPS archaeologists used the seeds of *Ruppia cirrhosa*, an aquatic plant, to radiocarbon date the human footprints. The seeds originated on plants that grew in paleolake Otero, and the seeds and much sand were blown by the prevailing westerly winds into piles or mats on the east edge of the lake. Sometimes people walked barefoot on the seeds. Both seeds and footprints were subsequently buried by more aeolian sand. Today, the dunes exhibit many distinct and identifiable layers. Some layers include only seeds, some only footprints, and some layers have both seeds and footprints (some layers have neither). The NPS team collected only *Ruppia cirrhosa* seeds that were in direct association with footprints (i.e. the seeds had been lying on the surface of the ground and someone walked on them, thus embedding and incorporating them into the print). Note that the NPS team considered the seeds to have been derived from a freshwater environment. But, in fact, *Ruppia cirrhosa* flourishes in highly mineralized water and is thus subject to what is known as the hard water effect.

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***Ruppia* seed balls and human footprints along a modern lake strandline serve as an analog for the prehistoric White Sands footprints.**

YOU Are Needed!

PCAS needs to fill some vacant positions! PCAS could use helpers of all ages and experiences that can ensure PCAS will prosper and have a healthy future.

Multiple opportunities are open. The tasks that need help include:

- Membership
- *Quarterly* peer reviewers
- *Quarterly* editor
- Newsletter assistance
- Website assistance
- Active members to serve on the Board of Directors

Keeping your membership current is an important part of supporting our Society and is helpful in attracting many world-known speakers to address its monthly FREE zoom and in-person meetings. Unfortunately, membership alone does not meet all the needs of our organization. ***WE COULD REALLY USE YOUR HELP.***

Please include the PCAS within your routine activities and monthly calendar events. No experience is necessary—just that you have an interest in Archaeology and the time to contribute to our continued success. Thank you for reading this and stepping up to join the hard-working group that has been here for those with an interest in Archaeology since the conception of the PCAS in 1961. Please help us be part of the solution for the future.

Thank you!

June Speaker Notes *(Continued from p. 2)*

According to Dr. Dello-Russo, "When aquatic plants absorb dissolved inorganic carbon, the ancient carbon causes radiocarbon dates to be too old. Therefore, *Ruppia cirrhosa* is too unreliable to use for radiocarbon dating." Thus, the NPS team overestimated the age of the *Ruppia* seeds and the associated human footprints by 7,000 or more years.

Dr. Dello-Russo's research team conducted their own research on *Ruppia* seed/human fossil footprint associations and concluded that the Otero footprints date to "only" 16,800 to 12,200 BP, which is well within the range of archaeological and genetic estimates currently agreed upon. This range of dates is still respectably old dating to Folsom, Clovis, or perhaps even pre-Clovis times. Needless to say, the subject is of great interest and research will continue for many more years.

This lecture is available on the PCAS Youtube Chanel: youtube.com/watch?v=5sP-mAx6NNk.

PCAS Board Nominations and Election

Please consider volunteering to be part of the PCAS working Board of Directors! PCAS is requesting nominations for three positions for three-year terms on the PCAS Board of Directors. Members interested in serving may contact any Board member (see emails and phone numbers on p. 6). Board meetings are once a month, normally via Zoom, and consist of decision making and committee progress reporting. A candidate's biography, not to exceed 125 words, must be submitted no later than September 11, 2025, to Megan Galway at secretary@pcas.org. The submitted biographies will be printed in the October *PCAS Newsletter*.

PCAS members will receive ballots for the election of Directors by email in mid-October. These ballots must be returned by November 13, 2025, and can only be returned electronically or by USPS mail. To vote in this election, one must be a 2025 PCAS member by October 9, 2025 (date of record). Newly elected Board members will be announced in the December newsletter and will take office in January 2025.

For membership or election questions, contact Megan Galway at membership@pcas.org.

www.facebook.com/pacificcoastarchaeologicalsoc

Sign Up for Ralphs Community Rewards

PCAS thanks Ralphs and all our participants for this opportunity to earn a donation of at least 1 percent of your Ralphs' purchases. Go to www.ralphs.com and sign in or create an account.

1. On the "My Account" page, scroll to Community Rewards. Link your card by searching for "Pacific Coast Archaeological Society" or inserting the PCAS organization number, QT023.
2. Call 800-576-4377 for assistance.

Thank you for supporting PCAS**!**

DIG THIS ...

Exhibitions

World of the Terracotta Warriors: New Archaeological Discoveries in Shaanxi in the 21st Century presents over 110 newly uncovered treasures including Terracotta Warriors, chariot regalia, jade and gold adornments, bronze vessels, and more. Bowers Museum, through October 19, 2025. Timed ticket price varies. Information and ticket purchase: www.bowers.org.

Lectures

Understanding Imperiled Earth: How Archaeology and Human History Inform a Sustainable Future, by Dr. Todd J. Braje (University of Oregon Museum of Natural and Cultural History). A Zoom lecture of the Ventura County Archaeological Society, September 9, 7 pm. Information: venturacountyarchaeologicalsociety.com. To request Zoom registration email vcas.arch@gmail.com.

Through the Stargate: Receptions of Ancient Egypt in Film, by Dr. Stuart Tyson Smith (UC Santa Barbara). An ARCE/Bowers Museum onsite lecture, September 13, 1:30 pm. Fee: $15; Bowers and ARCE members free. Recorded lecture available one week after onsite event: $10; Bowers and ARCE members free. Ticket purchase and information: www.bowers.org.

From Shimao to the Qin Empire: Tracing Political Evolution Through Shaanxi's Archaeological Discoveries, by Dr. Min Li (UCLA). Bowers Museum, September 14, 1:30 pm. Fee: $20; members $15. Information and ticket purchase: www.bowers.org.

Many past PCAS lectures are available on YouTube: youtube.com/@pcas-pacificcoastarchaeolo9403/videos.

Classes, Meetings, and Events

Moompetam American Indian Festival will celebrate indigenous California maritime cultures with traditional craft demonstrations, storytelling, music, and dance. Aquarium of the Pacific, September 13–14, 9 am–5 pm. Fee: Included with aquarium admission. Advance online reservations required for admission. Information: www.aquariumofpacific.org.

San Manuel Pow Wow will be held at CSU San Bernardino, September 19–21. Free. Information: socalpowwow.com.

The biennial Great Basin Anthropological Conference will be held at the Whitney Peak Hotel, Reno, Nevada, October 15–18. Fee. Information and registration: greatbasinanthropologicalassociation.org.

The SCA Southern Data Sharing Meeting will be held at Los Penasquitos Ranch House, San Diego, October 18. Contact SCA Southern Vice President, Richard Guttenberg, to submit a paper or for additional information: richard@scahome.org. Register online at https://www.scahome.org/event-5777652.
The SCA Northern Data Sharing Meeting will be held at the Maidu Activity Center, 1960 Johnson Ranch Dr, Roseville, October 25. Contact SCA Northern Vice President, Justin Wisely, to submit a paper or for more information: justin@scahome.org. Registration for Northern Data Sharing meeting: https://www.scahome.org/event-6299854. Free for SCA members and students. Additional information and registration for both meetings: www.scahome.org

September Speaker (*Continued from p. 1)*

highlands of Mexico by 4,000 cal. BP and temperate adapted varieties emerged by 1,900 BP promoting the late dispersal into eastern North America.

Dr. Douglas J. Kennett received his PhD from the University of California, Santa Barbara (UCSB), in 1998 and is a Professor of Environmental Archaeology and Chair of the Department of Anthropology at UCSB. He has also held faculty positions in anthropology departments at California State University, Long Beach (1998–2001), the University of Oregon (2001–2011), and Penn State University (2011–2018). He was head of department at Penn State, and at UCSB he is Associate Chair of the Department of Anthropology, Director and Curator of the Repository for Archeological and Ethnographic Collections, and the Director and Coordinator of the Central Coast Information Center. Dr. Kennett has conducted community based environmental archaeological research in Mesoamerica, Polynesia, and California. He is the author of 250 academic papers and three books entitled *The Island Chumash* (University of California Press, 2005), *Behavioral Ecology and the Transition to Agriculture* (University of California Press, 2006) and *Taking the High Ground: The archaeology of Rapa, a fortified island in remote East Polynesia* (Australia National University Press, 2012). His current interests include the origins of agriculture, the study of human sociopolitical dynamics under changing environmental conditions, human impacts on ancient environments, and behavioral response to abrupt climate change in the past

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 nonrenewable 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.

In-Person Meeting

Location: IRWD Community Room
15500 Sand Canyon Ave, Irvine

Irvine Ranch Water District makes its facilities available for use by residents and nonprofit organizations merely as a public service, but does not, by allowing this use, endorse or support the purpose of the event or its sponsor.

Zoom Meeting

- Email a **new** Zoom registration request by **noon on Thursday, September 11** to membership@pcas.org. You will receive an emailed link to the 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 Speaker Calendar

October 9, 2025
Dr. Hector Neff
Fire, Salt, Ceramics, and Commerce on the Pacific Coast of Southern Mesoamerica

November 13, 2025
Dr. Tom D. Dillehay
The Archaeology, Genetics, and Environments of the First South Americans

December 11, 2025
Dr. Ulrike Matthies Green

2025 PCAS Board Members and Committee Contacts

Office	Name	Email	Phone
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*Secretary	Megan Galway	secretary@pcas.org	714-501-3717
*Treasurer	Rene Brace	treasurer@pcas.org	714-544-6282
*Historian/Librarian	Jane Gothold	historian-librarian@pcas.org	562-947-6506
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*Voting Board Member	Patrick Maxon	pmaxon@pcas.org	949-677-2393
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*PCAS Board Member

PACIFIC COAST ARCHAEOLOGICAL SOCIETY

2025 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* – $50

☐ *Newsletter* – $20

Scholarship Fund

☐ Donation $_____

www.pcas.org

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www.pcas.org/membrs.html

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PO Box 10926
Costa Mesa, CA 92627–0926