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PCAS Newsletter

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March PCAS Speaker

Dr. Edward J. Knell

Paleoindian Land Use at Pluvial Lake Mojave in California's Mojave Desert

In-Person and Zoom Meeting

March 9, 7:30 pm. See p. 3.

Speaker will not be present at the in-person meeting.

Fluctuations in the extent and productivity of wetland habitat around Great Basin/Mojave Desert pluvial lakes influenced Paleoindian land use strategies. Paleoindians responded to resource fluctuations using a "wetland transient" land use strategy represented by frequent moves between pluvial lakes or a "wetland stable" strategy characterized by comparatively long stays at resource hotspots. To assess the optimal Paleoindian land use strategy around pluvial Lake Mojave—today's Silver and Soda Lake playas—I and colleagues created a biotic resource structure-based and optimal foraging theory inspired land use model that predicts the conditions Paleoindians at Lake Mojave optimally should select—a wetland stable land use strategy (when Lake Mojave supported substantial wetland habitat and was thus a high-rank resource patch) versus a wetland transient strategy (when Lake Mojave supported limited wetland habitat and was thus a low-rank resource patch). The model ultimately predicts that Paleoindians occupied Lake Mojave at a time of reduced wetland habitat or low patch rank, resulting in a wetland transient land use strategy being the optimal land use solution; the amount of wetland habitat and thus patch rank increased after Paleoindian times, with Middle Holocene and more recent groups optimally switching to a wetland stable land use strategy. This prediction is preliminarily tested and ultimately supported using multiple lines of archaeological evidence from 30 Paleoindian and recent period sites from Lake Mojave. Implications of this result are assessed in relation to other Great Basin and Mojave Desert pluvial lakes.

Edward J. Knell earned his MA from the University of Wyoming, his PhD from Washington State University, and is currently a Professor of Anthropology (Archaeology Program) at California State University, Fullerton. His Great Basin research focuses on the Mojave Desert of California, with a long-term research project around pluvial Lake Mojave, that has addressed lithic technology and technological organization strategies, land use, settlement patterns, lithic raw material conveyance, and past climate. He addressed similar questions for the Late Paleoindian Cody complex of the Great Plains. Dr. Knell's research is published, among other places, in *American Antiquity, Journal of Archaeological Science, Journal of Field Archaeology, Journal of California and Great Basin Anthropology, PaleoAmerica, Plains Anthropologist,* and a volume he co-edited titled *Paleoindian Lifeways of the Cody Complex* (University of Utah Press).

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February Speaker Notes

Clovis Archaeology Across the Greater Southwest

By Megan Galway

Dr. Vance Holliday began by offering an outline of early cultures and styles as generally defined by projectile points. The Late Paleoindian people from 12,000 to 10,000 years BP were Great Plains bison hunters, as were the Folsom culture people from 13,000 to 12,000 years BP. The Western Stemmed tradition is seen in the Great Basin from 13,500 to 7,000 years BP. The Clovis culture, 13,500 to 13,000 years BP, is known for its finely made fluted points, and Clovis people of that time were the only group to have spread continent-wide. This presentation raises the questions as to whether there is a pattern to Clovis landscape use and were Clovis people, in fact, big game hunters.

Interest in this early period began in 1927 with the discovery of a worked point in association with extinct bison bones at the Folsom site. In 1933 the first Clovis site was identified at Blackwater Draw. For many years Blackwater Draw was considered to be the same culture as the Folsom site, but as the site was quarried for gravel and more bones and artifacts were recovered, a difference was noted between the two. The lower strata, now identified as Clovis, contained the finely worked points associated with mammoth bones, and Folsom points with bison bones were above.

At the Mockingbird Gap site, southeast of Socorro, New Mexico, large numbers of Clovis artifacts have been recorded on the surface. In one area coring has identified habitation 30 feet below current ground level, suggesting an ancient canyon. In one core at the 9.5 m level, Dr. Holliday discovered a bead, but its age suggests that it may be Folsom rather than Clovis. Mockingbird Gap is the most extensive Clovis site in southern New Mexico, and most of the smaller surrounding sites are Folsom with multiple bison kills, suggesting a Great Plains culture.

In 1952 in the Upper San Pedro Valley of southern Arizona, a site was identified at Naco. This was a mammoth kill with nine associated Clovis points. The Murray Springs site near Sierra Vista, Arizona, is unusual in that it contains both mammoth and bison kills. These bones and Clovis artifacts are found below a "black mat" dating from 12,700 to 11,200 years ago. There was a mammoth kill with a single mammoth and one bison kill with 14 individuals. The kills were located in an ancient draw, since covered, and a camp was located in an upland area. Researchers were surprised to be able to match pieces of broken points between the two areas.

PCAS February speaker, Dr. Vance Holliday.

During Dr. Holliday's visits to the sites in Arizona, the question was raised as to what was happening south of the U.S./Mexican border which was visible from Murray Springs. A Mexican grad student spoke of Clovis sites and artifacts that she had seen. A remote site, which became known as El Fin del Mundo (The End of the World), was found to have had a large Clovis occupation. As at Murray Springs, a kill site was found in an eroded arroyo with an extensive habitation area on the uplands. The two individuals killed in this site were identified as gomphotheres, the northernmost ever found and the only ones ever found in a Clovis site, indicating this was a site overlapping Clovis with people farther south.

Returning to the question of whether Clovis were big game hunters who caused the extinction of many species of megafauna, Dr. Holliday believes not. He notes that identified kill sites are actually few and far between with six species identified in approximately 20 sites. Many megafauna were already extinct by this time, and bison, which were most numerous in the sites, actually avoided extinction. The climate was changing rapidly at this time, and habitat and resource change were the most likely cause of megafauna extinction.

Clovis kills are generally found in alluvial or wetland settings, but there are none known adjacent to paleolakes, in contrast to Folsom sites. There are few Clovis sites or artifacts west of the Great Plains.

*This presentation and other PCAS lectures are available on the PCAS YouTube channel: www.youtube.com/@pcas-acificcoastarchaeolo9403. We thank **Stephen Dwyer**, our Zoom host, for establishing and maintaining our YouTube channel.*

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Lectures

Seeing Through the Trees: Lidar, Archaeological Visualization, and the Conservation Crisis at Kuelap, by Parker Van Valkenburgh (Brown University). An online lecture of the UCLA Cotsen Institute, March 3, 12 pm PT. Free. Registration required: ioa.ucla.edu/events/upcoming.

Climate Events and Their Effect on Civilizations, Paleo-environments, and Collapse, by Dr. Tom Levy (archaeologist), March 3; ***Franciscan Frontiersmen: The Perils of Frontier Life,*** by Robert Kittle (historian, author, journalist), March 4. Lectures of the Anza-Borrego Desert Natural History Association, ABDNHA library, 6:30 pm. Fee: $12; members $10. Information and registration: www.abdnha.org/calendar1.

The Artistic Circle of the St. Louis Painter, by Dr. Branko van Oppen, de Ruiter (Tampa Museum of Art). An ARCE/Bowers Museum onsite lecture, March 11, 1:30 pm. Fee: $15; Bowers and ARCE members free. Recorded lecture available one week after onsite event. Fee: $10, Bowers and ARCE members free. Ticket purchase and information: www.bowers.org.

Disability and Infanticide in Ancient Greece, with Debby Sneed (CSU Long Beach). A lecture of the AIA, Orange County Chapter). Concordia University, 1530 Concordia West, Irvine, March 19, 2 pm. Fee: $10, members and students free. Information and ticket purchase: aia-oc.org/dates.

PCAS past lectures are available on YouTube at *www.youtube.com/@pcas-pacificcoastarchaeolo9403*.

Classes, Meetings, and Events

ArchaeoCon 2023, presented by the AIA, will have virtual presentations and on-demand content, March 11. Presentations will include Mike Parker Pearson on Stonehenge and Jo Anne Van Tilburg on Easter Island. On-demand content will include an interview with Heather Hurst, director of the San Bartolo-Xultun Archaeology Project. Cost varies. Information: www.archaeological.org.

Classes, Meetings, and Events *(continued)*

ARARA 2023 Conference will be held at the Sheraton Tucson Hotel and Suites, March 10–13. Fee: $155; members $95; student free. Information: https://arara.wildapricot.org.

Editor's Note: Please confirm time and place of listing prior to the event. Submit items for Dig This to newsletter@pcas.org.

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In-Person Meeting

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.

Zoom Meeting

- Email a **new** Zoom registration request by **noon on Thursday, March 9,** 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 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 PCAS lecture with Dr. Edward J. Knell speaking on "Paleoindian Land Use at Pluvial Lake Mojave in California's Mojave Desert."

PCAS Speaker Calendar

April 13, 2023
Dr. James Snead
Relic Hunters: Archaeology and the Public in 19th Century America

May 11, 2023
Lauren Biltonen, Aimee Montenegro, and Paul Langenwalter
Archaeological Investigations at CA-ORA-423, a Multicomponent Site in the Lower Aliso Creek Drainage, Orange County, California

June 8. 2023
Dr. Nathan Nakatsuka
Genetic Evidence for Ancient Population Shifts and Migrations in Central and Southern California

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