Discovering a Subterranean World Beneath Chichén Itzá

The Gran Aquífero Maya has worked at Chichén Itzá since 2017 investigating an array of natural and man-made subterranean features including caves and cenotes. Among these is the Cave of Balamkú that Archaeology Magazine named as one of the 10 most significant discoveries 2019. Our findings are building a picture of this massive site being laid out around a subterranean world to a greater extent than previously imagined. The project’s program of radiocarbon dating is finding that many of these features are much earlier than previously suspected. Here is a peek at a new chapter being written on Chichén Itzá. (Continued on p. 6.)

PCAS INFORMATION DURING THE COVID-19 PANDEMIC

By Scott Findlay, PCAS President

The following PCAS activities have been suspended and are not expected to occur in 2020: General meetings at the IRWD Community Center, curation workdays, outreach programs, field trips, election and committee appointments, and the holiday lecture and dinner at the Duck Club.

PCAS News

PCAS board members and committee chairs have held practice Zoom meetings in anticipation of reviving remote General Meetings and lectures with remote technology.

Dr. Alan Garfinkel and Steve O’Neil have been appointed co-editors of the Pacific Coast Archaeological Quarterly. We hope to resume publication in the near future.

Terms of the PCAS Board of Directors have been extended until an election can be held. Our bylaws require in-person elections which are not feasible during this pandemic.

The PCAS Curation containers were found to have been broken into on July 27, 2020. A report was filed with the Santa Ana Police Department. The Santa Ana Unified School District was notified because the containers are on SAUSD property. An estimated $1200-$1300 of equipment is missing. No cultural artifacts seem to be missing or corrupted.

Be safe, Scott

This is the combined August/September Newsletter. No April, May, or June/July 2020 Newsletters were published because of the COVID-19 shutdown.
**MARCH 2020 SPEAKER NOTES**

**Visual Prayer and Breath Bodies: Flower World Metaphor in Pueblo III and IV Rock Art**

By Stephen Dwyer

Bernard Jones and Dr. Christopher Drover presented a summary of their work using cognitive archaeology, specifically using the iconography in pictographs and petroglyphs to attempt to reconstruct and understand the ideology of the prehistoric Pueblo culture. They suggest that certain petroglyphs are used as permanent visual prayers by Pueblo peoples to access the spirit world and encourage the spiritual “Flower World” to benefit mankind. The petroglyphs are metaphors for oral traditions and, just like the complex oral traditions, can be stacked on multiple levels.

As an example of stacked metaphors, Figure 1 shows a petroglyph from El Creston, near Pueblo Blanca, New Mexico. Brides have a “white cloud” bridal robe. When they die, they are buried in it. At Hopi the dead are admonished, “you are changed … into a kachina; you are Cloud. … you will tell the chiefs [of the directions] to hasten the rain clouds here” (Stephen 1936:826, 829). Clouds are venerated ancients, kachinas (rain), and are charged with bringing moisture and fertility to the present generations (Fewkes 1897; Stephen 1936). Likewise, the spiritual essence of the clothing, ornaments, and blankets worn by the departed transmute into rain.

In the petroglyph in Figure 1, the cloud form is anthropomorphized as a visual metaphor depicting a human, or “breath body,” which has undergone transformation in the underworld and has become a kachina (rain). Crooks represent the breath bodies of venerated ancestors of the underworld. The fringe below the stacked cloud is rain. Thus, this one petroglyph brings together the metaphors of the bridal robe, blanket, underworld transformation, white cloud, ancestors, kachina, and rain.

Pueblo tradition suggests that visual and metaphysical associations among serpents, lightning, and arrows are ritually and metaphorically analogous. Arrows are considered metaphoric “lightning bolts.” However, a warrior’s arrows, when used ceremoniously, no longer kill. They become rain-bringing, fertilizing phenomena, phallic devices used to express insemination.

Figure 2 shows a lightning-frame, used to simulate lightning bolts. Figure 3 displays a petroglyph apparently representing a lightning-frame. The petroglyph in Figure 4 shows a warrior shooting an arrow/lightning bolt from the base of a cloud/kachina. The fertilizing projectile pierces and inseminates the earth to bring forth a flowery land.

(Continued on p. 3)
Altars also display the complexity of metaphors. Figure 5 shows a turn of the twentieth century Owakulti altar at Sichomovi, on Hopi’s First Mesa. Altars are assembled with a variety of wimi, ancient sacred objects or effigies said to be endowed with occult power. Each wimi has a spirit or “Breath Body,” a segment of the interconnected eternal soul or essence that flows through all things. Priests manipulate the essence to obtain certain results.

In this altar the Hopi germination spirit, Muy’ingwa, is a conflated image and can be understood in material culture as an ear of corn, a corn plant, flowers, or as an anthropomorphic being in spirit form. Muy’ingwa lives in a cave-like spirit underworld of the deceased. He resides at its center on “Flower Mound,” located directly below the kiva’s sipapu. It is at Muyingwa’s command or hand that the germ/spirit/life-spark of all living things is made and sent through the sipapu into the human world. Figures 6 and 7 show Muy’ingwa lifting flowers into the world of man. The association of the figures with fissures and cracks in the rock may imply alternate sipapus and connections to the spirit realm below.

References


2020 Scholarship Report

While we have had to cancel all meetings and events since March, we have been able to conduct our annual scholarship search as always. We were able to award three scholarships this year, but it was still a challenge to choose among a number of worthy applications. Ultimately these are the students who received PCAS scholarships:

Kathryn Field is a senior at University of California, Berkeley, who was studying child development at Cabrillo Community College when she was encouraged to take an archaeology elective. This led to an increased interest in the discipline and a month-long field school in San Luis Obispo County, where she learned the archaeology basics from initial survey through excavation and laboratory practices. After transferring to UC Berkeley, Kathryn joined the Undergraduate Research Apprenticeship Program and was able to work in the California Archaeology Laboratory under the advisement of Professor Kent Lightfoot. She has also participated in field work at the Elkhorn Slough Preserve and sites on the Santa Cruz coast. After graduation Kathryn plans to apply for an intern position at the San Francisco Presidio or, perhaps, work for a CRM company. Her studies have led to an intense interest in the coastal California area, and she plans to make this the focus of her future research. Kathryn has been awarded the Myrtle Soderberg Memorial Scholarship.

Jean Pickard is a junior, transferring from El Camino College to California State University, Dominguez Hills. As a teenager and young adult, she enjoyed various activities in the California mountain and desert areas, in particular teaching outdoor skills to Girl and Boy Scouts. Initially a fine arts major, she had little or no interest in archaeology until introduced to the petroglyphs in Death Valley. She enrolled in Introduction to Archaeology as a behavioral science elective and decided her future was in archaeology. She has since worked as an anthropology tutor and as a lab assistant for her archaeology professor. At CSU Dominguez Hills Jean plans to major in anthropology and minor in geology. She hopes to gain a certificate in cultural resource management and train in geographic information systems. Her focus is on the history and material culture of the South Bay and the Channel Islands. Jean has been awarded the Gloria Bogdan Memorial Scholarship.

Rachel Heil is a senior at California State University, Fullerton. Like many of us, Rachel began as a child collecting rocks, flowers, leaves, and bugs in her own back yard. Later, as an art student, she developed an interest in skeletal structures and, ultimately, what skeletal remains can tell about an individual and its life. She then realized that her various interests came together in the field of anthropology and decided this was her field of study. Rachel’s osteology and forensic anthropology classes enabled her to be accepted to a National Science Foundation Research Experience for Undergraduates (REU) at the University of South Alabama where she studied 4,500-year-old skeletal remains from tombs in the United Arab Emirates. Rachel plans to continue on to a master’s degree and possibly a doctoral degree. She says her primary focus is human osteological analysis, but she is also considering museum, curation, and bioarchaeological research or positions involving the Native American Graves Protection and Repatriation Act. Rachel has been awarded the Sherri Gust Memorial Scholarship.

The PCAS Scholarship and Grant program is fully supported by donations. The Myrtle Soderberg Memorial Scholarship is named for a founding member and funded by our monthly donation/award table—coordinated by Joe Hodulik—and by other donations from our members. The Gloria Bogdan Memorial Scholarship is named for a passed life member and is fully funded by her husband, Tom. Our third scholarship this year, the Sherri Gust Memorial Scholarship, was funded by her family, friends, and associates. Sherri was a Life Member and past president of PCAS and is sorely missed. Our society is extremely fortunate to have members so dedicated to furthering the archaeological discipline.

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The **PCAS Quarterly** and the California Archaeological Community

By Stephen O’Neil

Early this spring I was notified via the Academia.edu service of an article by Erin M. Smith and Mikael Fauvelle that discussed southern California prehistory in the context of the greater Southwest, and through that situated California within the context of the “North American Continental System.” Their article, “Regional Interaction between California and the Southwest: The Western Edge of the North American Continental System” was published in *American Anthropologist* in 2015. The Academia.edu service notifies people of research that might be of interest to them based on keywords provided when starting the service and subsequently based on the subject of articles you have downloaded in the past. As taken from its abstract, “Regional Interaction ...” explores the view that the first centuries of the second millennium saw drastic changes in coastal California and the American Southwest wherein systems of internal trade intensified and social systems sped on a path of increasing complexity. The authors do not believe that these neighboring developments were coincidental. Rather, they see California and the Southwest as components in a continent-wide intersection system. They argue that prehistoric interaction between the two regions was regular and sustained and that economic or political developments in one area had implications in the other. Rather than seeing each area as a case of autochthonous social development, the authors argue that a regional synthesis of economic interactions and connectivity would build toward a better understanding of social changes in both regions. As such, this work by Smith and Fauvelle is part of the growing body of literature that is drawing California prehistory into the regional and continental realms that it has always deserved. Of course, there has been a history of California “border” studies such as those exploring the connections between southeast California and Arizona concerning the Patayan and research on the Numic expansion through eastern California and the Great Basin. Smith and Fauvelle, however, go beyond just noting trade routes and lists of items to explore international (pan-tribal) connections over time involving California societies and implications of long-term social and political changes that California material played a role in developing and maintaining.

To better follow the authors’ arguments, I tracked the sources of their data. I was pleasantly surprised and gratified to see many of the citations came from *Pacific Coast Archeological Society Quarterly* articles.

The *Pacific Coast Archeological Society Quarterly* has been an outlet for the California archaeological community for 50 years, starting in 1965. This is 10 years before the *Journal of California Anthropology* (and the subsequent *Journal of California and Great Basin Anthropology*), and 23 years prior to the Society for California Archaeology’s *Proceedings* (followed by the SCA’s journal *California Archaeology* in 2008). Throughout these years the range of article types have run the gamut of preparing and publishing otherwise unavailable 1930s WPA reports (Winterbourne 1968), analysis of singular artifacts (Begole 1978), site excavation reports (McCarthy 1987), and regional theoretical studies (Sutton 2010). Presenting this wide range of material that meets the equally broad range of interests and needs of its readers has been one of the Quarterly’s strengths. Another major asset of the Quarterly has been its steadfastness, producing four issues a year, year after year, for fifty years, with articles of substance in every issue. This is a standard that places it in a category with only a handful of anthropological journals in the United States.

Returning to Smith and Fauvelle and their use of the *Pacific Coast Archeological Society Quarterly* articles, I examined their total number of references. I wanted to see the Quarterly’s role among the other archaeological journals by the authors to develop this exploration of the Native California trade material to support the growth of socio-political complexity in the Southwest used in this *American Anthropologist* article. The authors used 89 references in all. The journals that were used more than once were the *Journal of Field Archaeology* (2), *American Anthropologist* (2), *Journal of California and Great Basin Anthropology* (3), *American Antiquity* (6), and the Quarterly six times, the equal to *American Antiquity*. The Quarterly provided 6.74% of the total references used and 31.6% of the articles from the five listed journals.

As mentioned, I was pleasantly surprised on seeing this high use of our Society’s organ in this most prestigious of United States anthropological journals in an article of groundbreaking theoretical work. On further consideration of the nature of this paper, however, I saw that the authors had needed to support their theory with hard evidence of the trade which provided the items used to buttress political authority and to document the multi-millennial nature of this interaction. To demonstrate the existence of the trade from and to California with the Southwest (and the connections beyond), Smith and Fauvelle needed to use the type of research dealing with specific artifact types, where the artifacts came from, where they went, and when. This type of article has always been a major aspect of the Quarterly’s repertoire. Clay figures found in San Diego and Riverside counties (McKinney and Knight 1973, Hedges 1976, 1979).
Dixon 1977, Brown and Freeman 2012) and *Glycymceris* shell bracelets found in Orange County (Koerper 1996, Koerper and Desautels 2002) substantially provided this evidence. The data also came from a range of authors, including talented avocationalists such as McKinney and Knight, a CRM archaeologist such as Desautels, and college faculty researchers like Dixon and Koerper. Also, the articles came from over a five decades run of the *Quarterly* from the 1970s, 1990s, 2000s, and 2010s, showing the sustained relevance of *Quarterly* publications.

Simply put, “Regional Intersection . . .” by Smith and Fauvelle demonstrates the utility of the *Pacific Coast Archeological Society Quarterly* to California archaeological discourse and the need for the *Quarterly* to carry on its valuable work.

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Begole, Robert S.

Brown, Robert S., and T.A. Freeman

Dixon, Keith A.

Hedges, Ken

Koerper, Henry C.

Koerper, Henry C., and Nancy A. Desautels

McCarthy, Daniel F.

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Sutton, Mark Q.

Winterbourne, J.W.

**September Speaker (continued from p. 1)**

* Balamkú Cave at Chichén Itzá.

Dr. James Brady is best known for pioneering the archaeological investigation of Maya caves. He has published over 140 articles on the subject and has edited a half dozen books and monographs. His research has been supported by grants from the National Science Foundation, the Foundation for the Advancement of Mesoamerican Studies and three grants from the National Geographic Society. Dr. Brady has also won two Fulbright Fellowships. He has taught at California State University, Los Angeles, since 1998 and has been named Distinguished Faculty Alumnus (2006), Outstanding Professor (2008), the President’s Distinguished Professor (2014), and his college’s Outstanding Mentor (2019).

**FEBRUARY FIELD TRIP**

In February 2020, PCAS members visited the Mojave National Preserve. The first stop of the weekend was at Rustler Rockshelter, a habitation site that has been excavated and documented by UC Berkeley and CSU Bakersfield. A search for a petroglyph site a few miles away took longer than expected, but was ultimately successful. Numerous petroglyphs decorated the steep cliffsides of a dry wash. Along the way we saw the cutest discovery of the trip, a 5 inch long baby desert tortoise. The next day we visited Council Rocks and nearby Shelter Rock, which have petroglyphs, pictographs, cupules, solstice and equinox alignments, and cultural history.
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.

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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:

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and create an account or sign in (email and password) to your account.

1. Follow direction to link your card to PCAS by searching for “Pacific Coast Archaeological Society.”
2. Or call 800-443-4438 for assistance.

Thank you for supporting PCAS!

Balamkú Cave at Chichén Itzá.

Join our Virtual Meeting on September 10th!
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