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PCAS NEWSLETTER

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FEBRUARY PCAS SPEAKER

Dr. James P. Kennett

*Evidence for the Younger Dryas
Boundary (YDB) Cosmic Impact 12,800
Years Ago and Its Environmental, Biotic,
and Human Consequences*

The abrupt onset of the Younger Dryas cooling episode 12,800 years ago involved a complex and linked array of abrupt and enigmatic changes in the Earth's environmental and biotic systems. Especially intriguing is the close and collective association of North American continental-scale ecological reorganization, megafaunal extinctions, and human adaptive shifts and population decline.

Various hypotheses have been proposed to account for these changes, including the Younger Dryas Boundary (YDB) Cosmic Impact Hypothesis.

(Continued on p. 3)



Dr. James P. Kennett.

DINNER WITH THE SPEAKER

Please join this month's speakers, Dr. James P. Kennett, for dinner before the February 12 meeting at 6 pm at Mimi's Café, 4030 Barranca Parkway, Irvine.

PCAS MEETINGS CALENDAR

GENERAL MEETING

Free and Open To the Public

February 12 - 7:30 pm

Speakers: Dr. James P. Kennett

Topic: *Evidence for the Younger Dryas
Boundary (YDB) Cosmic Impact*

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

February 19 - 7:00 pm

Location: Old Orange County Courthouse
PCAS Library, Ground Floor
211 W. Santa Ana Blvd., Santa Ana

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**Have you renewed your membership?
Use the membership form in this Newsletter.**

JANUARY SPEAKER NOTES

Grooving in the Past: A demonstration of the manufacturing of OGR beads and a look at past SRS, Inc. replicative studies

By Megan Galway

Connie ‘Destiny’ Colocho and Andrew Garrison of SRS, Inc. presented a short discussion of the manufacture and distribution of OGR (*Olivella* grooved rectangle) beads before demonstrating how they replicate these beads. OGR beads have been dated to the middle Holocene through correlation with ceramic sequences and were widely traded into the Great Basin. At CA-LAN-43 (Encino Village site), SRS researchers found evidence of manufacture and later experimented with replication based on this evidence and the results of previous studies.

Suggestions that various methods were used to heat treat shells prior to processing were tested. These tests included placing the shell in hot ash or coals for periods of 1 to 10 minutes, boiling, or burying in hot sand for 2 to 9 hours. Shells were found to be destroyed by the hot ash treatment, and the sand bath was most effective. Bead blanks were made by either bipolar percussion using a hammerstone and anvil or by cutting the blank with an obsidian blade. The percussion method provided a number of blanks from each shell while blade cutting took 40–60 minutes and yielded only a single bead. The blanks were ground on sandstone to the final shape. After grooving the convex side of the bead with an obsidian blade, a hole was created in the highest point of the blank. The beads may have been polished after manufacture.

The team’s conclusions from these experiments are that heating is not particularly effective or necessary. Bipolar reduction produces multiple beads which can be created in 10 to 20 minutes per bead, and producing beads by cutting is not time or cost effective.



PCAS Program Co-Chair Joe Hodulik and January speakers, Andrew Garrison and Connie ‘Destiny’ Colocho .

After this presentation and a short question and answer period, Destiny and Andrew set up work stations and actually showed us how they believe these beads were made.



CORRECTION

January Newsletter Speaker Notes: The correct title of Dr. Brian Fagan’s December lecture was “The Intimate Bond: How Animals Changed History.” We apologize for the error.

PCAS 2014 FINANCIAL STATEMENT

INCOME

Donations	
Scholarship	\$1,853.00
Other Donations	\$720.28
Interest	\$143.06
Member Dues	\$8,865.00
Quarterly Sales	\$2,739.08
Subscriptions	\$2,516.00
Misc Income	\$10.00
TOTAL INCOME	\$16,846.42

EXPENSES

Curation	\$1,500.11
General Administration	\$74.98
Holiday Dinner	\$100.00
Lecture Program	\$510.12
Library	\$84.15
Newsletter	\$1,030.02
Outreach	\$65.86
Quarterly	\$8,228.38
Scholarship	\$1,000.00
Web Site	\$100.00
Misc Expenses	\$35.69
TOTAL EXPENSES	\$12,729.31

TOTAL (INCOME - EXPENSES) \$4,117.11

ASSETS 12/31/13 12/31/14

Checking, CD & Money		
Market Accounts	\$9,494.61	\$12,758.14
Reserve for Curation	\$8,000.00	\$8,000.00
C14 Fund	\$4,406.04	\$4,406.04
Scholarship Fund	\$11,020.99	\$11,883.99
Outreach Fund	\$325.29	\$259.43
Postage Account	\$66.03	\$122.47
TOTAL ASSETS	\$33,312.96	\$37,430.07

LIABILITIES

Paid Subscriptions	\$2,975.00	\$4,140.00
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February Speaker *(continued from p. 1)*

Dr. Kennett will review and provide an update on the status of this hypothesis, summarizing evidence consistent with the impact of a comet cloud with Planet Earth resulting in widely distributed, multiple aerial bursts in the atmosphere. This cataclysmic event resulted in the deposition of a thin YDB layer containing peak abundances in a variable assemblage of cosmic impact-related material found at more than 30 sites. These materials include nanodiamonds, high temperature impact spherules, meltglass, and minerals and a peak in platinum. Radiocarbon analysis including the use of bayesian statistics demonstrates that this layer of 12,000 ± 150 years ago is synchronous within dating uncertainties across four continents, consistent with a single major cosmic event.

Dr. Kennett will also review other YDB evidence consistent with the impact hypothesis including widespread biomass burning, continental hydrographic reorganization (plumbing change and outburst floods), the late Pleistocene North American megafauna extinctions (mammoths, ground sloths, sabertooth cats, horses, camels, etc.), and human cultural change (disappearance of Clovis culture) and major human population decline across North America.

Dr. Kennett was born and raised in New Zealand. He earned his Ph.D. (1965) and D.Sc. (1976) from Victoria University of Wellington. He served as the Director of the Marine Science Institute at the University of California, Santa Barbara (1987–1997), and is presently Professor Emeritus and Research Professor at UCSB. His 50-year research career has ranged widely in the earth sciences: marine geology and paleoceanography; Cenozoic and Quaternary climate history; micropaleontology and marine biotic evolution; methane hydrates and climate change; and most recently, the YDB Cosmic Impact Hypothesis. His research was primarily focused on Cenozoic Earth System history using multiple analysis on the marine sediment record. The main purpose has been to better understand the development of the Earth System through time and processes involved in this dynamic evolution. Dr. Kennett has enjoyed the publishing, with multiple colleagues and students, of 264 articles in refereed journals and edited volumes; 4 books including *Marine Geology*; 16 edited volumes; 42 published reports; and more than 300 published abstracts.

FEBRUARY CURATION WORKDAY

When: February 14, 2015, 1 pm

Where: Red Car Building

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

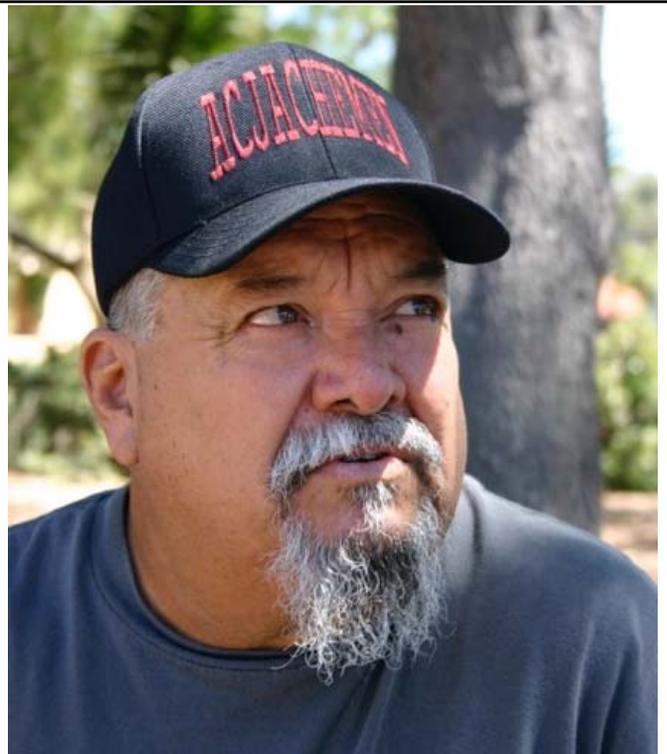
David Belardes 1947–2014

By Stephen O'Neil

David Lee Belardes passed away on December 29, 2014, after an illness of several months.

David Belardes was Tribal Chairman of the Juaneño Band of Mission Indians, Acjachemen Nation, and he served on boards of the San Juan Capistrano Historical Society, California Mission Studies Association, Capistrano Indian Council, and Historical Commission of the City of San Juan Capistrano. Belardes was a leader in seeking federal recognition for his tribe. He promoted language revitalization, gathered John P. Harrington's field notes and recordings about the Juaneño, secured the Alphonso Yorba Collection, engaged in site survey work, and monitored construction projects on sites containing Native cultural resources. He studied under Luiseño and other tribal elders, learning their songs and ceremonies. He shared this knowledge with fellow Juaneños so that they might continue local traditions. His greatest achievement, however, was how he lived his life, taking care of his family and his community.

Belardes grew up with the "old knowledge" of the Acjachemen and of San Juan Capistrano. On both his father's and mother's sides, his ancestry included Acjachemen from the villages of *Putuide o Captivit* (Putuidem and Acjachme) and *Pangenga* (Panhe). From the Hispanic frontier settlers he could claim Cota, Ávila, Lugo, Salgado, Castillo, Belardes, Reyna, Rios, and Yorba ancestry. His father, Mattias H. Belardes, a vaquero and rancher born in 1885, taught him about nineteenth century Native and Hispanic traditions. David's mind retained it all: herbal remedies, meal preparation using what was collected on the



beach, family genealogies and how they interconnected, and proper ceremonies when a family member died.

David married Cha Cha (Aurora) Paramo, whom he had known since kindergarten. He raised a family while working for the school district. They had two sons, Mattias and Domingo, and six grandchildren. But when the needs of the Juaneño community called him, David moved beyond his immediate family. He and cousin Raymond founded the Juaneño Band of Mission Indians to protect ancestral sites, seek federal recognition for the tribe, maintain and spread knowledge of the tribe's traditions, and preserve certain historic properties within San Juan Capistrano. He was designated by the California Native American Heritage Commission as the tribe's "Most Likely Descendant," to be called whenever ancestral remains were uncovered. He cared deeply for the Juaneño people, most of whom he knew personally. Over the years he became a highly respected and successful leader dealing with the politics, ceremonies, and social needs of the tribe. In 1994, with the support of the elders, the Juaneño community invested Belardes with the role of chief.

Belardes directed a Juaneño/Acjachemen interpretive center at the Blas Aguilar Adobe. The adobe was built in 1794 for Mission Capistrano neophyte families, later occupied by his wife's Aguilar great-grandparents in the 1850s, and now belonging to the city. Thanks to David's efforts, this museum and its foundation recently received a preservation grant.



David Belardes (right) and PCAS members, Blas Aguilar Adobe Museum, 2012.

All that David did was not easy, and his tribal work was not salaried. He was away from his family for hours, days, and even weeks. He attended meetings, both tribal and at the municipal, county, state, and federal levels; conducted ceremonies to honor the living and the dead; negotiated with developers and agencies to save a prehistoric site here and a landscape there; and talked to groups in a never-ending effort to communicate to the general public that the Native people of Orange County were “still here” and had never left. He could not win every battle. Sometimes he had to deal with “knuckleheads” in and outside his community. But if something important was threatened, he would do what it took to try to save it. In the end, he knew he did the right thing by both his ancient and present families. He had done the best he could.

During the several months of his illness, many friends from the Capistrano community and beyond came to visit David, reminiscing about past times and learning their assignments to carry on his work. When he died, the mission bells were rung in the traditional manner, an all-night rosary vigil was held in the venerable Serra Chapel, and a funeral Mass was celebrated in a filled-to-capacity Mission Basilica. As is due the elders of San Juan Capistrano’s old families, a large funeral procession walked from the church across the Ortega Highway bridge to the mission hilltop cemetery. Well over 200 people attended the burial, and David was laid to rest next to his wife Cha Cha, who had died five years earlier.

Talking with David a few years ago, I asked him about what it takes to be a leader. His answer was characteristically to the point: “Stick it out. Learn from the elders. Be tough. It won’t ever get easier, so be prepared to work long and hard to the end.” David Belardes was one of those elders to learn from.

Donations in David’s memory can be made to the Blas Aguilar Adobe Foundation.



JANUARY BOARD MEETING SUMMARY

Submitted by Brian Steffensen

President Megan Galway called the meeting to order at 7:00 p.m. at the Old Courthouse in Santa Ana, California. Board members present: **Rene Brace, Gail Cochlin, Scott Findlay, Jane Gotthold, Steve O’Neil, and Brian Steffensen.** New Board members present: **Stephen Dwyer and Hank Koerper.** Member present: **Bob Brace**

The Board approved the November 2014 minutes with corrections and the treasurer’s annual report for 2014.

Old Business

Scott Findlay purchased and set up a new shelf for the library, and the Board authorized the purchase of two more shelves.

New Business

Newly elected Board members **Steve Dwyer, Hank Koerper,** and **Kathleen Shada** were seated on the 2015 PCAS Board. Outgoing members, **Linda Christison, Gail Cochlin,** and **Sherri Gust,** were thanked for their service. The Board unanimously elected **Megan Galway,** president; **Scott Findlay,** vice president; **Brian Steffensen,** secretary; and **Rene Brace,** treasurer. All committee chairmanships will remain the same with the exception that Scott Findlay and Steve Dwyer will be co-chairs for field trips.

The Board approved a \$250 presentation grant to **Mikael Fauvelle,** a Ph.D. candidate at UCSD, who will present a paper on Chumash cross-channel food trade at the SCA Meeting.

Joe Hodulik’s January Donation-Award table raised \$193.20 for the scholarship fund! A February 20–23 field trip is planned to the lower elevation Anza Borrego/Salton Sea area. PCAS Quarterly 50(3&4) and 51(1) were prepared for mailing before the meeting.

The meeting was adjourned at 8:05 pm.

PCAS FIELD TRIP

February 20–23, 2015

Anza-Borrego/Salton Sea Area

For information or to sign up for this field trip, contact Scott Findlay (fieldtrips@pcas.org or 714-342-2534).

DIG THIS...



Lectures

Strangers in a Stolen Land: American Indians in San Diego, by Richard L. Carrico (SDSU Department of Indian Studies). A part of the Anza-Borrego Desert Natural History Association Desert Lecture Series, Borrego Springs Performing Arts Center, January 30, 7:30 pm. Fee: \$10, members free. Information: www.abdnha.org or 760-767-3098.

Kumeyaay Astronomy, by Michael Connolly Miskwish (SDSU). Anza-Borrego Desert Natural History Association Library, February 6, 6:30 pm. Fee: \$16, members \$12. Information and registration: www.abdnha.org or 760-767-3098.

Talking Stone: Rock Art of the Cosos, presentation and discussion with Executive Producer Alan A. Garfinkel. A San Diego Rock Art Association lecture. Kumeyaay-Ipai Interpretive Center, Poway, February 8. Potluck 4 pm; presentations 5 pm. Fee: Donation \$5; members free. Information: www.sandiegorockart.org.

The Gold Throne of King Tutankhamun, by Dr. Jay Xu (University of Arizona Resident Scholar), an ARCE lecture. Bowers Museum, February 14, 1:30 pm. Free. Information: www.bowers.org or 714-567-3677.

Mysterious Creatures, Towering Trees, and Lofty Figures in Sacrifice: The Lost Civilization at Sanxingdui, by Dr. Jay Xu (Asian Art Museum of San Francisco), February 15, 1:30 pm. ***Tusks! Gold! Sacrifice! Unmasking the Lost Kingdom of Jinsha***, by Dr. Agnes Hsu-Tang, February 21, 1:30 pm. Bowers Museum Distinguished Lectures, Fee: \$10, members \$7. Information and to purchase tickets: www.bowers.org or 714-567-3677.

Village Ecodynamics in the American Southwest, by Tim Kohler, Ph.D. (Washington State University), a lecture of the AIA, Orange County Chapter. DeNault Auditorium in Grimm Hall, Concordia University, February 22, 2 pm. Fee: \$5; students and members free. Information: www.aia-oc.org.

Lectures (continued)

Arabian Dreams in the American Desert: How the Date Remade the Coachella Valley, Sarah McCormick Seekatz. A Coachella Valley Archaeological Society lecture, Portola Community Center, 45-480 Portola Ave., Palm Desert, February 19, 6:30 pm. Free. Information: www.cvarch.org.

Amazons: Warrior Women of the Ancient World, by Adrienne Mayor. The Getty Villa, February 26, 7:30 pm. Free, parking \$10. Ticket required. Information and tickets: www.getty.edu or 310-440-7300.

Classes, Meetings, and Events

The Art and Science of Flintknapping, by Dr. Jeanne Day Binning and Charles (Chuck) Bouscaren. California State University Desert Studies Center (ZZYZX), February 20–22. Fee includes lodging and meals: \$325.00 (credit, 2 units) or \$245.00 (non-credit). For questions, contact Dr. Billings, 559-301-7707. To enroll (UCR Extension): 800-442-4990 or www.extension.ucr.edu/enroll/catalog/olr_course_details.php?crsid=15630.

Paddle and Anvil Pottery, by Tony Soares, a 2-day class of the Anza Borrego Foundation, February 28 and March 7, 9 am–4 pm. Fee: \$160; members \$150. Enrollment very limited. Information and to register: www.theabf.org/paddle-anvil-pottery.

The Archaeology of Asian Diasporic Settlements in California, a colloquium of the AIA, Riverside and Inland Southern California Chapter. UCR ARTSBlock, 3824 and 3834 Main St., Riverside, February 28, 2–4 pm. Information: aiariverside.ucr.edu.

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 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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**The Pacific Coast
Archaeological Society**

Get Started

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PCAS SPEAKER CALENDAR

March 12, 2015

Steve Freers

April 9, 2015

Dr. Charles Stanish

The Chincha Lines of Southern Peru

May 14, 2015

Dr. Aharon Sasson

June 11, 2015

George Kline

Archaeology of the Chuckwalla Valley

2015 PCAS BOARD MEMBERS AND COMMITTEE CONTACTS

<u>Office</u>	<u>Name</u>	<u>Email</u>	<u>Phone</u>
*President	Megan Galway	president@pcas.org	714-539-6354
*Vice-President	Scott Findlay	vicepresident@pcas.org	714-342-2534
*Secretary	Brian Steffensen	secretary@pcas.org	714-348-9179
*Treasurer	Rene Brace	treasurer@pcas.org	714-544-6282
*Field Trips Co-Chair	Stephen Dwyer	fieldtrips@pcas.org	714-969-1911
*Historian/Librarian/Archivist	Jane Gothold	librarian-archivist@pcas.org	562-947-6506
*Native American Liaison	Steve O'Neil	nativeamericanliaison@pcas.org	949-677-2391
*Quarterly Editor	Hank Koerper	publications@pcas.org	714-633-9287
*Voting member	Kathleen Shada	kathleenshada@pcas.org	714-381-8182
Curator	Mark Roeder	curator@pcas.org	714-299-4150
Donation-Awards Coordinator	Joe Hodulik	donation-awards@pcas.org	949-300-1864
Field Trips	Scott Findlay	fieldtrips@pcas.org	714-342-2534
Historian/Librarian/Archivist	Jane Gothold	librarian-archivist@pcas.org	562-947-6506
Membership	Megan Galway	membership@pcas.org	714-539-6354
Newsletter Editor	Sherri Gust	newsletter@pcas.org	714-245-0264
Programs Co-Chair	Joe Hodulik	programs@pcas.org	949-300-1864
Programs Co-Chair	Brian Steffensen	programs@pcas.org	714-348-9179
Publicist	Joe Hodulik	publicity@pcas.org	949-300-1864
Refreshments	Gail Cochlin	refreshments@pcas.org	714-745-0815
Scholarship	Megan Galway	scholarship@pcas.org	714-539-6354
Website	Rene Brace	info@pcas.org	714-544-6282

*PCAS Board Member

PACIFIC COAST ARCHAEOLOGICAL SOCIETY

2015 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
- Student Associate - \$10 (email Newsletter only)

Scholarship Fund

- Donation \$ _____

Return form with payment to:

PCAS Membership
PO Box 10926
Costa Mesa, CA 92627-0926

www.pcas.org