

SAN DIEGO ASSOCIATION OF GEOLOGISTS

<http://www.sandiegogeologists.org>

SDAG MEETING ANNOUNCEMENT

Wednesday, December 13, 2017 *2nd Wednesday*

The Cerruti Mastodon Site: Evidence for Hominons in So. Cal. 130,000 ya

Presented by: *Tom Deméré, Ph.D.*

- Where:** San Diego Natural History Museum
1788 El Prado, San Diego, CA 92101 (See Map)
- When:** 6:00 pm – Social Hour
7:00 pm – Dinner
8:00 pm – Program
- Dinner:** Sirloin Tip Roast, Seared Chicken, or Vegetarian Dish. Cash Bar.
****PLEASE CHOOSE AN ENTRÉE WHEN SIGNING UP****
- Cost:** \$40 Member, \$45 Non-Member, \$25 Students.
Add \$5 if you did not make a reservation.
- Reservations:** Make your reservation **online** at www.sandiegogeologists.org/meetings no later than noon, Monday, December 11th. Reservations cannot be guaranteed after Monday at noon, but are always preferred over walk-ins. **EARLY reservations well before the deadline are MUCH appreciated.**
- Directions:** FROM INTERSTATE 5: Take PERSHING DRIVE exit. Make a left on FLORIDA DRIVE and then another left on ZOO PLACE. At the top of the hill make a left onto PARK BOULEVARD and then turn right on VILLAGE PLACE. The entrance to the Museum is on the north side of the building.
- FROM INTERSTATE 8: Take the 163 SOUTH and exit PARK BOULEVARD. Turn left and head north for 0.9 miles. Turn left on VILLAGE PLACE. The entrance to the Museum is on the north side of the building.

Map:



ABSTRACT

The Cerutti Mastodon (CM) site was discovered and excavated along State Route 54 in San Diego over a 5-month period during the winter of 1992-93 and yielded the partial remains of a single American mastodon (*Mammuth americanum*) in association with evidence indicating that hominins broke the bones 130,000 years ago. The taphonomic evidence for human agency is diverse and includes bone impact features (e.g., cone flakes, bulbs of percussion, and a large arcuate impact notch with associated negative flake scars); stone impact and usewear features (e.g., negative flake scars, Hertzian initiations, deep cracks and angular fractures); bone, tusk, and stone distribution patterns (e.g., femoral diaphysis fragments clustered around a single large cobble, detached femoral heads positioned side-by-side, and vertically oriented tusk); differential bone breakage (e.g., intact fragile ribs vs. sharply broken heavy limb bones); and bone, molar, and stone refits (e.g., 80-cm displacement of 5 pieces of a partial femoral diaphysis, 3-meter displacement of 3 pieces of single molar, 3-meter displacement of 7 pieces of a single large cobble). Significantly, most CM bones and stones were enclosed within crusts of pedogenic carbonate that establish a “chain of evidence” indicating that breakage and positioning of objects at the site occurred many thousands of years ago. No knapped stones or butchery-marked bones were recovered at the CM site, which we propose was a bone-processing site occupied for a very short period of time for a very limited set of activities (expedient stone hammers and anvils used to break mastodon bones for marrow extraction and/or raw materials). Alternative hypotheses (e.g., debris flow, plunge pool, alluvial fan, trampling, carnivore scavenging, and damage by heavy equipment) do not account for the multiple lines of evidence at the CM site.

SPEAKER BIO

Tom Deméré attended San Diego State University (B.S., Geology), University of Southern California (M.S., Geology), and University of California Los Angeles (Ph.D., Evolutionary Biology) and has worked at the San Diego Natural History Museum since 1979, where he is Curator of Paleontology. Dr. Deméré is the author of numerous scientific and popular articles dealing with the paleontological history of southern California and the evolutionary history of marine mammals. Tom also serves as Director of the Museum's Department of PaleoServices, which provides paleontological assessment and mitigation services throughout the greater southern California region. The efforts of PaleoServices have resulted in the discovery and recovery of thousands of fossil specimens that now reside in the Museum's research collections and public displays.

UPCOMING MEETINGS

Meetings are usually held on the 3rd Wednesday of the month may change to accommodate the speaker and meeting place schedules. Check the SDAG website for updates

January 10, 2018 <i>*2nd Wednesday*</i>	Barry Keller <u>Geologic and Climate Factors Affecting Fish Speciation, Lauca River, S. America</u>
February 21, 2018	TBD
March 21, 2018	TBD

2017 SDAG EXECUTIVE COMMITTEE

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SDAG CORNER

Greetings SDAG members!

The San Diego Association of Geologists would like to thank everyone for another great year for the organization. We had great turnout at every meeting, One Stop Wonders, and our annual field trip.

We wanted to thank Rupert Adams for his service to SDAG over the past few years and leading the group in 2017. Chris Livesey will be handed the reins as the 2018 SDAG President at the December meeting on the 13th. The meeting will once again be at the San Diego Natural History Museum with a talk by Tom Deméré. Get your signups in early!

We wish you a safe a happy holiday season and will see everyone for more exciting geology in 2018!

Sincerely,

SDAG

ANNOUNCEMENTS

Thank you to all of the 2017 Field Trip Participants. SDAG enjoyed a wonderful trip to Julian led by our Vice President Chris Livesey whose wife just had twins! Congratulations Chris and thank you for a great trip!



2017 SDAG Field Trip Participants at the Eagle Mine, Julian, CA

A link to more pictures taken by Rob Hawk here: [SDAG 2017 Field Trip Pictures](#)

2018 SDAG Field Trip Preliminary Information

We are always looking ahead to next year's field trip. Ken Haase will be leading the expedition. Our area of focus will be the **San Andreas Fault, Rainbow Basin, and Calico Mountain area**. Our target dates are middle to late October of 2018.

We are looking for anyone who has knowledge or interest in those areas to assist in developing part of a program to lead the trip. Send in your ideas, papers, and opinions to Ken Haase at haase@geoconinc.com.

Geological Society of America Annual Meeting

www.geosociety.org

2018

Field Trip Proposal Deadline: December 1, 2017

Technical Session/Short Course Proposal Deadline: February 1, 2018

Abstract Deadline: August 14, 2018

Meeting: November 4th to 7th 2018, Indianapolis, Indiana

52nd AESE Annual Meeting – Niagara Falls, New York

September 26th to 29th 2018

Mark your calendars! The 52nd annual meeting of the Association of Earth Science Editors will take place in Niagara Falls, New York, September 26 to 29, 2018.

AESE's meetings generally consist of 2 days of technical sessions and a 1-day field trip. Please join us for a fun-filled and educational experience September 2018. Meeting headquarters will be the Conference and Event Center Niagara Falls. The meeting hotel will be the Sheraton at the Falls, on Third Street, where a block of rooms has been set aside for attendees, at a nightly rate of US\$139 (\$129 for room + \$10 facility fee).

Niagara Falls has been a prime tourist destination since the mid-19th century. People come from around the world to see just the falls, themselves. But there is so much more to explore on both the American and Canadian sides of the falls, from world class wineries, Niagara Falls State Park (providing close access to the American and Bridal Veil falls), Niagara Gorge hiking trails, and art galleries to the Schoellkopf Power Plant museum (providing easy access to the bottom of the gorge), Niagara rapids jet boat tours, Old Fort Niagara, Niagara-on-the-Lake and more....so remember to bring your passports if you wish to take in all that the area has to offer!

The meeting is open to anyone interested in earth science editing, publishing and outreach. The program is in the initial planning stage. Watch for meeting updates on AESE's web page www.aese.org. A closed Facebook group has been set up to share information <https://www.facebook.com/groups/123266368358780/>. For more information, please contact host chair, Marg Rutka, marg.rutka@ontario.ca, and technical program chair, Phil Farquharson philfarq@gmail.com.

Yonder Dynamics – UC San Diego Student Robotics Organization



Allison Kubo is the Science lead for Yonder Dynamics a university rover team at UC San Diego and an Earth Science student at Scripps. She reached out to SDAG looking for sponsors for their rover this year. Part of the competition is an analysis of the geologic settings of the area and soil retrieved by the rover which incorporates soil moisture, conductivity, and chemical testing.

She would be happy to partner with SDAG or anyone interested in the project.

Here are links to the team's website and sponsorship package:

[Yonder Dynamics](#)

[Yonder Dynamics Sponsorship Package](#)

SDAG Research Tool

SDAG RESEARCH TOOL - A comprehensive listing of all papers published by SDAG, whether as annual field trip guidebooks or special publications, is now available on our website. Entries are sorted by primary author, or chronologically by date of publication, from our first guidebook in 1972, up the San Luis Rey River in 2013, from Coast to Cactus in 2014, and finally over the edge to the Coyote Mountains in 2015. These can be accessed or downloaded as .pdf files. They are fully searchable in Adobe Reader or Acrobat, so if you are researching a topic, "tsunami" for example, you can search for that keyword. This listing will be updated as new books are published. Thanks to Greg Peterson and Hargis + Associates, Inc., for making this possible. See the links below:

http://www.sandiegogeologists.org/SDAG_Pubs_authors.pdf

http://www.sandiegogeologists.org/SDAG_Pubs_chronological.pdf

Interactive Fault Map for San Diego

As part of the update for the San Diego-Tijuana Earthquake Planning Scenario, Working Group No. 1's "Fault Map Subcommittee" has completed the first publicly available bi-national active and potentially active fault map. This interactive GIS map includes the first publicly available active and potentially active fault map locations from the City of San Diego. The City of San Diego fault locations and activity of faults are based chiefly on interpretation of information contained in geologic reports by private consultants. The City of San Diego identifies active faults as Holocene ($\leq 11,000$ yr) and potentially active as Quaternary (up to 1.6my). City of San Diego fault investigations are ongoing that may require future revision of this map. This map is not a substitute for a site specific fault investigation. The map also includes an updated fault map layer from the State CGS. CGS suggests users defer to the City of San Diego fault data, where marked, for increased accuracy. The map also integrated the faults south of the border for a bi-national cross border view. You can expand the map legend on the left side to see the fault ages and sources for each layer that can be turned on or off for the map view. You can select from 1 of 12 base maps. You can click on the fault line on the map to see the meta-data source. This map includes the yellow dashed SURFACE FAULT RUPTURE location layer that will be used for the infrastructure, social, and economic impacts and emergency response for the update to the Earthquake Scenario. In addition, active and potentially active fault investigation locations from private companies are planned to be added to this map as a resource. This map is an on-going project and resource as our knowledge increases about local active and potentially active faults.

The link is available at: http://www.sandiegogeologists.org/Faults_map.html

I would like to thank Carolyn Glockhoff for her endless GIS work, Jim Quinn and the City for providing their data and time, Jerry Treiman with CGS for his time preparing the Surface Rupture and providing their new State fault data layer, and Luis Mendoza at CICESE for providing the faults south of the border. Please contact Diane Murbach (dianemurbach@gmail.com), Chair for the SD-TJ Earthquake Scenario Working Group #1 - Earth Science, if you have any questions, or see any errors on this new fault map.

Diane Murbach (619) 865-4333

Engineering Geologist, C.E.G.

www.murbachgeotech.com

Request for 2018 SDAG/SDGS Publication Sponsors

On behalf of the San Diego Geological Society, Inc. (SDGS), a public benefit 501(c)3 nonprofit educational corporation, we would like to request tax deductible Donations for our San Diego Association of Geologists (SDAG) group. The list of paid Sponsors and the forms to become a Sponsor are located on the SDAG web site at: <http://www.sandiegogeologists.org/Sponsors.html>.

Your donation will further the SDGS mission to promote geology and related fields in the greater San Diego region, operating through the San Diego Association of Geologists (SDAG), a committee of SDGS. To achieve our primary educational objective, we organize frequent field trips and maintain a program of monthly meetings featuring speakers on current geological topics. We also publish field trip guidebooks and other publications related to geology and natural history. We encourage scholarship and research by awarding scholarships from the elementary through graduate levels. With your \$100 "EMERALD" donation, your name/business will be listed as a sponsor on the SDAG web site (<http://www.sandiegogeologists.org/>) and in the monthly SDAG meeting newsletters. With your \$500 "RUBY" or \$1,000 or more "DIAMOND" level donation, your business card will also be included on the SDAG web site and in the monthly SDAG meeting newsletters. In addition, as a "\$1,000 or more DIAMOND" level donation you will be presented with a thank you plaque.

Should you have any questions regarding a Sponsorship, please contact our non-profit SDGS Secretary (Diane Murbach) at 619-865-4333.

Call for Articles

SDAG invites members to submit articles on their current research or an interesting project they are working on for publication in the monthly newsletter. The article should be no more than 1 page in length. Photos are welcomed; too. Please submit articles to the SDAG secretary via email.

PHOTO OF THE MONTH

If you would like to submit a photo, email them to secretary@sandiegogeologists.org and I will try and put them in the newsletter. Provide a short description of the picture.



Patt Abbott discussing the geologic history of Mission Trails during an OSW. Photo Credit: Rob Hawk



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Contact: **Rupert Adams, CEG**

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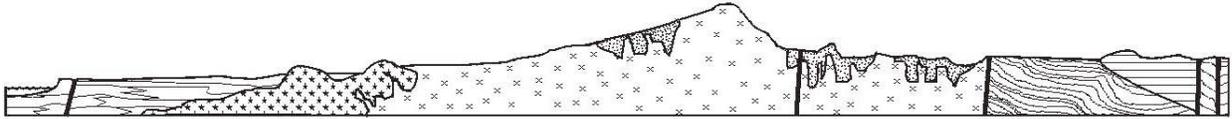


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SAN DIEGO ASSOCIATION OF GEOLOGISTS

www.sandiegoeologists.org

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NOTE: Your membership dues include delivery of the monthly SDAG newsletter and announcements to the email addresses given.

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Are you willing to serve as an **officer**? _____ Are you willing to volunteer as a **guest speaker**? _____

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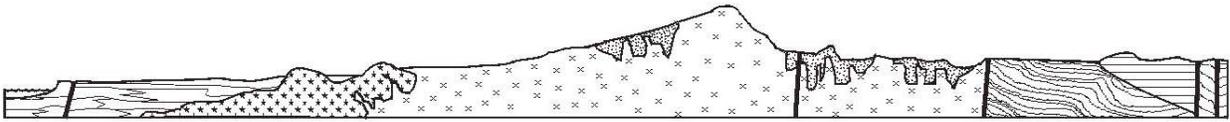
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San Diego Association of Geologists (SDAG)

3130 N Evergreen Street

San Diego, CA 92110



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DIAMOND \$1,000.00 (In addition to the above, you will receive a commemorative plaque in recognition for your most generous support of the organization)

New Member / Donor Continuing Member Change of mailing address:

Are you interested to serve as an officer? _____ Willing to volunteer as a guest speaker? _____

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San Diego, California 92110 **Thank you!**

*Donations may also be made
at monthly meetings.*