

SAN DIEGO ASSOCIATION OF GEOLOGISTS

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SDAG HOLIDAY MEETING ANNOUNCEMENT

WEDNESDAY, December 19th, 2012

FOSSIL PROBOSCIDEANS (MASTODONS & MAMMOTHS) FROM THE PLEISTOCENE OF COASTAL SAN DIEGO COUNTY, CALIFORNIA

Presented by

Dr. Tom Démeré
San Diego Natural History Museum

Where: San Diego Natural History Museum

1788 El Prado
San Diego, 92101

When: 5:30 pm – Social Hour

6:30 pm – Dinner

7:30 pm – Program

Dinner: Deluxe Mexican Buffet. Beverage station. Cash bar.

Cost: \$40 per person, \$5 discount for members, STUDENTS: \$20. Add \$5 if you did not make a reservation.

Reservations: Make your reservation online at www.sandiegogeologists.org no later than noon, Monday, December 17th.

**RESERVATIONS CANNOT BE GUARANTEED AFTER MONDAY AT 12 NOON
BUT THEY ARE ALWAYS PREFERRED OVER WALK-INS**



SPEAKER ABSTRACT

Dr. Tom Démeré
San Diego Natural History Museum

Fossil Proboscideans (Mastodons & Mammoths) from the Pleistocene of Coastal San Diego County, California

Over the past 25 years nonmarine Pleistocene sedimentary rocks (Bay Point Formation, *sensu lato*) in the coastal plain of San Diego County have yielded a relatively diverse assemblage of terrestrial vertebrates, which includes both extant and extinct species of squamate reptiles (e.g., lizards and snakes), birds (e.g., ducks, shore birds, pelicans, coots, ground birds, and song birds), and mammals (e.g., rodents, foxes, wolves, horses, tapirs, llamas, camels, bison, deer, ground sloths, mastodons, and mammoths). Fossil remains of mastodons and mammoths (Order Proboscidea) range from partial skeletons to single isolated bones or teeth and have been found in Pleistocene fluvial and lacustrine facies preserved in coastal river valleys from Oceanside to San Diego. Proboscidean trace fossils have also been found and include partial trackways preserved in fluvial mudstone strata. The mastodon fossil remains represent a single species, the widespread American Mastodon, *Mammuthus americanum*. In contrast, the mammoth fossil remains likely represent at least two species separated in time. Fossils (skull with tusks and a partial forelimb) tentatively assigned to the Southern Mammoth, *Mammuthus meridionalis*, were found in downtown San Diego and have a preliminary ²³⁰Th/U age date of ~200 ka. Fossils (crushed skull with fragmentary tusks and molars and ~40% of the postcrania) tentatively assigned to the Columbian Mammoth, *Mammuthus columbi*, were found in the San Luis Rey River Valley and may be younger (~120 ka).

SPEAKER BIO

Tom has worked at the Museum since 1979. As curator of Paleontology, Tom has occupied the Joshua L. Baily, Jr. Chair of Paleontology at the Museum since 1994. His academic history includes: SDSU - B.S. Geology; USC - M.S. Geology; UCLA - Ph.D. Evolutionary Biology. Tom's research focuses on the evolutionary history and paleobiology of pinnipeds and cetaceans. He is also keenly interested in the geology and paleontology of southern California and Baja California and has published numerous scientific and popular articles on these subjects.

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## **Congratulations SDAG Student Award Recipients!**

**Awards will be presented at the December SDAG meeting to the following students:**

**William Lee**, USD Undergraduate Student: Bioavailability and natural pollution of heavy metals in Bahia de Magdalena, Baja California, Mexico. Advisor: Dr. Beth O'Shea

**Robert Harrington**, USD Graduate Student: Ridge to reef assessment of metal concentration and mineralogy in rocks and sediments on St. John, U. S. Virgin Islands. Advisor: Dr. Sarah Gray

**Erik Haaker**, SDSU Graduate Student: Neotectonic uplift of coastal marine terraces, San Diego and Orange Counties, CA: Testing the Oceanside Blind Thrust Model. Advisor: Dr. Thomas Rockwell

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SDAG MEETING SCHEDULE - Mark Your Calendars!

Meetings are usually on the 3rd Wednesday of the month but may change to accommodate speaker and meeting place schedules. Check here for updates!

January 16, 2013	Joint meeting with EERI & SEAOSD Speakers: Christie Hale & Megan Williams, NRC Region IV
February 27, 2013	Al Trujillo, Palomar College
March 20, 2013	Dr. Mario Caputo, SDSU



2012 EXECUTIVE COMMITTEE

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PRESIDENT'S CORNER

As the end of my term as your President draws near, I must say what a privilege and unique experience it has been! What an unforgettable three years (yes, just three!). Being an officer of SDAG is in many ways a team effort, and I would like to recognize those who smoothed out my endeavors.

First, my predecessor Chuck Houser, who suggested Gary Girty as the geologist to dedicate in *Picacho and the Cargo Muchachos* and lined up all the speakers through May of this year. The book team: Carole Ziegler, Lowell Lindsay, Phil Farquharson, and Diane & Monte Murbach. Thanks for making this book a reality, as your individual and team efforts made it happen. I also want to thank the authors for contributing to *Picacho*, especially Bill Elliott.

Several past presidents helped me in many ways and came through when I needed help: Diane Murbach, Monte Murbach, Greg Cranham, and Dave Bloom. Thanks go to our sponsors - they allow us to turn dreams into goals, and goals into reality. And the money helps too!

These people, and many others, assisted me with various duties during the past three years. My hope is that I will make myself available to SDAG and future officers as well as they have. But first, I may take a month or two off and catch a few waves!

Being president of SDAG, leading the field trip and editing the guidebook are among my most valued and proudest accomplishments thus far in my geological life. Looking back to what led me here was a fascination with dinosaurs which took hold at age 6... and never diminished. That interest eventually brought me to geology, and the rest is paleohistory. Full circle: I now have the pleasure of introducing Dr. Tom Deméré at this month's meeting, at the San Diego Natural History Museum. And the talk-mammoths! I'm sure the little boy in all of us eagerly anticipates another rousing, classic Deméré talk.

Finally, to current officers Cari Gomes, Brian Olson, Jen Morton, and the new treasurer, good luck next year!

Lift a pint in celebration of good friends, the holidays, and the New Year!

Todd Wirths
2012 SDAG President



SDAG Visits Golden Chariot Gold Mine for OSW

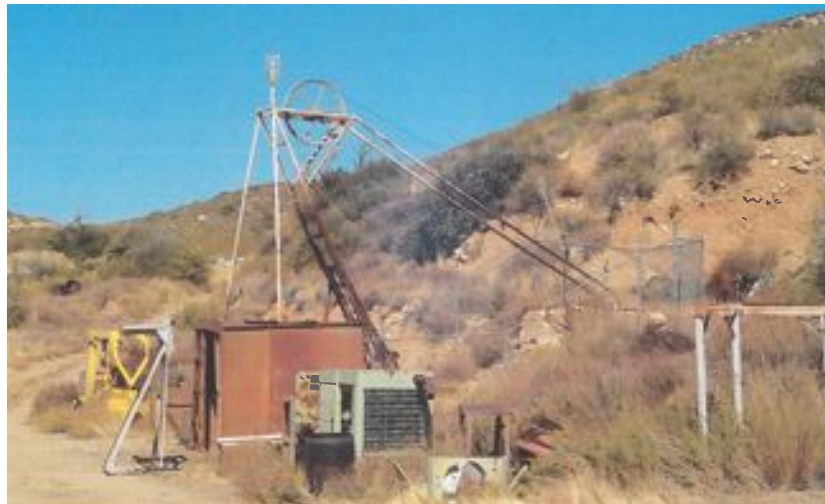
Seventeen people visited the Golden Chariot gold mine on Sunday, October 28. Although shut down since damage from the Pines Fire in 2002, we examined the mining equipment and surface workings on a perfect morning. George Copenhaver provided a brief report on the mine, an update on the description he provided in his SDAG 1987 field trip handout. This underground mine was worked to a depth of 350 feet on the south side of Chariot Canyon within the Chariot Canyon fault zone, a zone up to 600 feet

wide. Granodiorite is located in the hanging wall to the east, and Julian schist is located in the footwall to the west.

Highest grade gold ore was found associated with quartz veins, thickness from a few inches to 10 feet. This mine, founded in 1871, was one of the most productive in the Julian-Banner district, exceeded only by Stonewall Mine, and possibly Ready Relief Mine. Ore grades reportedly up to 47 ounces per ton rival those of the Mother Lode in the Sierra Nevada foothills. After examining the mine, we returned to Julian for lunch and a "bonus stop" at the home of one of our group, where we examined outcrops of granodiorite and Julian schist. We enjoyed views down into Chariot Canyon, southeast to the Coyote Mountains and Mexico, north to Palomar Mountain and Mount San Jacinto, and west to Cuyamaca Peak and Catalina Island. A brilliant sunset closed yet another SDAG "one stop wonder."



Entrance gate to Golden Chariot Mine



Headframe and hoisting equipment

ANNOUNCEMENTS

2013 Desert Symposium

Plan to share your research with a presentation or a poster!

Paper Submission Deadline: January 15, 2013

Presentation Theme: Adaptations to Environmental Extremes

Field Trip: April 21- 22, 2013 Zzyzx, California

Day 1: More Questions Than Constraints: Correlation Challenges Between the Calico Mountains and Mud Hills

Leaders: Dr. Peter Sadler, Dr. David Miller, and Robert Reynolds

Day 2: Valleys on Mountain Tops: Cady and Rodman Mountains

Leaders: Dr. Kevin Schmidt, Dr. David Miller, and Robert Reynolds

Additional information to follow. Please forward this information to other interested individuals and invite them to send their email addresses to wpresch@fullerton.edu. California State University, Fullerton

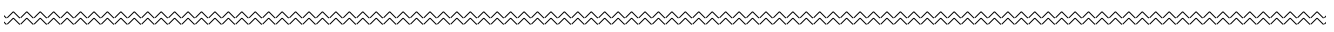
<http://biology.fullerton.edu/dsc/>

NEW SDAG RESEARCH TOOL NOW AVAILABLE! 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 (40 years ago!) to all things Picacho in 2011. 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

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SEEKING JOB OPPORTUNITIES

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Contact: Clay Clifton

ENGINEERING GEOLOGIST- California PG, MS Geology, over 13 years of applied geotechnical experience, proficient in geotechnical investigations, hazard evaluations, geophysical surveys, construction management and quality control, engineering analyses, special interest in earthquake-hazard and seismic design related applications, strong problem-solving and organizational skills. Detailed resume upon request: Anna, 201-407-7461, Afyodorova103@gmail.com

ENTRY-LEVEL ENVIRONMENTAL SCIENTIST - I am a recent UCSB graduate with a double major in Environmental Studies (BS) and Geology (BS, Earth Systems emphasis) who is looking to begin a career in environmental consulting. I have prior lab experience in both professional and academic settings. I am looking to establish myself with a passionate and hard working environmental firm in the San Diego region. For further information about my credentials and work experience please contact Georgi Chertkov at georgichertkov@gmail.com or call me at 505-412-3107.

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