

SAN DIEGO ASSOCIATION OF GEOLOGISTS

www.sandiegogeologists.org

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 americanus*. 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.

~~~~~

## **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

~~~~~

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

PRESIDENT – Todd Wirths; *Brian F. Smith and Associates* Ph: (858) 337-0098; todd@wirths.com

VICE PRESIDENT – Cari Gomes; cg7783@yahoo.com

TREASURER – Brian J. Olson; *FSR Engineering*; Ph: (858) 750-9243; bolson@fsrengineering.com

SECRETARY – Jennifer Bauer Morton; geologyjen@yahoo.com

PUBLICATIONS – Lowell Lindsay; *Sunbelt Publications*; Ph: (619) 258-4911, x111; fax:(619) 258-4916; llindsay@sunbeltpub.com

WEBMASTER – Carolyn Glockhoff; *Caro-Lion Enterprises*, Ph: (858) 549-3396; carolyn@caro-lion.com



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

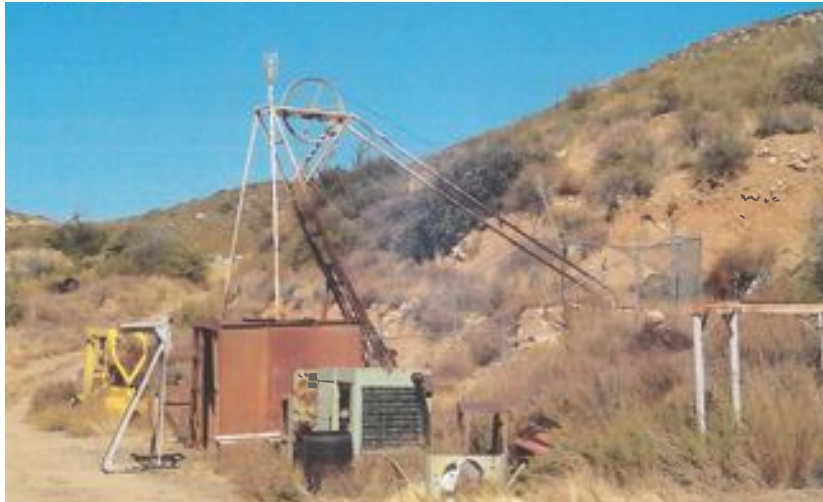
Seventeen people visited the Golden Chariot gold mine on Sunday, October 28. Although shut down since damage from the Pines Fire in 2002, we examined the mining equipment and surface workings on a perfect morning. George Copenhaver provided a brief report on the mine, an update on the description he 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



Headfast 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

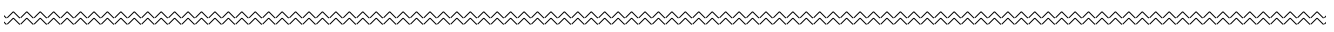
<http://biology.fullerton.edu/dsc/>

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

WAREHOUSE & OFFICE SPACE AVAILABLE in El Cajon, short-term rental or long-term lease. Warehouse from 3125 to 6250 s.f. Two offices. Mix and match to fit your needs. Ideal for geotech operations; best possible rates and we are geology-friendly! Contact Lowell Lindsay (619) 258-4911 x111, LLindsay@Sunbeltpub.com



SEEKING JOB OPPORTUNITIES

Qualifications Summary and Objective: I have 14 years experience directing surface water quality monitoring programs with a proven record of excelling in monitoring plan implementation, quality control, public notification and continuous improvement in operational effectiveness and efficiency. I have built and maintained relationships with key staff in academia, industry, and all levels of government in San Diego and California. I have a widely applicable skill set which includes: analytical thinking, communication and writing skills, data analysis and management, inter and intra-agency project coordination, and staff supervision and training. My objective is to obtain a career position with an industry leader where I can contribute my skills to build the success of my employer as well grow professionally. Detailed work experience, education and more at www.linkedin.com/in/cbclifton2010. Email cbc2006@cox.net or 619-964-1776.

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.

~~~~~

## Request for Sponsors: 2013 SDAG/SDGS and 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 at our San Diego Association of Geologists (SDAG). 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.





## CORPORATE SPONSORS



**HARGIS+ASSOCIATES, INC.**  
HYDROGEOLOGY • ENGINEERING

Hargis + Associates, Inc. is an environmental consulting firm specializing in hydrogeology and engineering. We are headquartered in San Diego, California and have offices in Mesa and Tucson, Arizona. Our practice areas include all aspects of hydrogeology and engineering.

As a client service organization, we pride ourselves in being attentive and efficient in meeting our client's needs and solving their problems. In addition to our technical expertise, communication and responsive coordination are hallmarks of our reputation.

We invite you to explore our website to learn more about our firm and the services we provide. We welcome the opportunity to discuss our consulting expertise directly with you.

*Contact: Dr. David R. Hargis*



H&P Mobile Geochemistry is an industry-leading provider of environmental lab services. With ten mobile labs and five direct push sampling trucks and unparalleled experience, H&P's repertoire of environmental lab services includes many forms of environmental lab sampling techniques all the way to on site field analysis services. H&P has successfully and accurately performed environmental lab services delivering quality results to our clients for over 16 years.

2470 Impala Dr., Carlsbad, CA 92010  
(800) 834-9888

*Contact: Louise Adams or Suzie Reed*



Tetra Tech is a leading provider of consulting, engineering, and technical services worldwide. We are a diverse company, including individuals with expertise in science, research, engineering, construction, and information technology. Our strength is in collectively providing integrated services—delivering the best solutions to meet our clients' needs. <http://www.tetrattech.com>

*Contact: Dave Bloom*



Since 1991, Mission Geoscience has provided consistent and reliable professional services with our dedicated staff of highly credentialed professionals, who are committed to both timeliness and cost-effectiveness as the cornerstones of their work. MISSION's staff remains amongst the most highly respected firms in the environmental and geotechnical industry, which is why many of our clients tend to assign us their most difficult and challenging projects.

<http://www.missiongeoscience.com/>

*Contact: Jim Ashby*



**Shaping the Future**

At Cardno ERI, we're experts at providing safe, high quality, cost-effective solutions to environmental concerns. We're large enough to tackle extensive, complex projects, yet small enough to provide exceptional service in a timely manner while paying close attention to controlling costs. In short, we combine the expertise, technology, and dedicated service you need to receive the best possible solutions to your environmental concerns. <http://www.cardnoeri.com>

Contact: **Steve Zigan**



**Chambers Environmental Services, Inc.**

**Dan Chambers**

President

**Phone/FAX (858) 279-3266**

Cellular: (619) 889-9331

E-Mail: [DWChambers@Hotmail.com](mailto:DWChambers@Hotmail.com)

4510 Mt. Henry Avenue

San Diego, CA 92117

- [Dr. Pat Abbott](#) - SDSU Prof. of Geology, Emeritus
- Sally & Dennis Avery
- [Dr. Richard Berry](#) - SDSU Prof. of Geology and Geophysics, Emeritus
- Curtis Burdett
- Joe Coronas - [City of San Diego](#)
- Greg Cranham - Consulting Geologist
- Dr. Neal Driscoll – UCSD Professor of Geology and Geophysics
- Dr. Margaret R. Eggers, CHG - [Eggers Environmental, Inc.](#)
- William J. Elliott, Engineering Geologist
- Phil Farquharson - [CG-Squared Productions](#)
- Carolyn Glockhoff - [Caro-Lion Enterprises](#)
- Cari Gomes
- [Dr. Sarah Gray](#)
- Rob Hawk [City of San Diego](#)
- Lowell A. Lindsay and Diana Lindsay - [Sunbelt Publications/AESE](#)
- [Dr. Monte Marshall](#) - SDSU Prof. of Geology and Geophysics, Emeritus

- Monte and Diane Murbach - [Murbach Geotech](#)
- [Ninyo & Moore](#) - Jonathan Goodmacher
- Brian J. Olson
- Peets Coffee and Tea, Store No. 342 , Carlsbad [www.peets.com](http://www.peets.com)
- Les Reed – Geotechnical Exploration Inc.
- Rigid Lifelines [www.rigidlifelines.com](http://www.rigidlifelines.com)
- SEALASKA Environmental Services, LLC, Mukesh Mehta, PG, CEG
- Bob Smillie – TerraCosta Consulting Group Inc.
- David and Jan Steller ("two-fer" - thanks!)
- [Dr. Anne Sturz](#)
- Sue Tanges - Southland Geotechnical Consultants
- Terra Costa Consulting Group, Inc.
- David & Jan Steller
- Mary Walke
- Carole L. Ziegler
- Don Wilson Clark and Katy Freese
- Gerald Shiller
- <http://www.youtubedownloadersite.com/>

**Add yourself to this list** - Sponsors, Corporate Sponsors, and Patrons provide a significant portion of SDGS's and SDAG's operating and scholarship budgets. SDGS is a 501(c)3 public benefit nonprofit educational corporation. For more information, please see our Sponsorship Form.

