

SAN DIEGO ASSOCIATION OF GEOLOGISTS

www.sandiegogeologists.org

SDAG MEETING ANNOUNCEMENT

WEDNESDAY, MAY 20th, 2009

Utilization of Geological Techniques to Help Solve an Archaeological Puzzle: When Did People Arrive in North America?

Presented by

Dr. Eleanora (Norrie) Robbins
Adjunct Faculty, Dept. of Geological Sciences, SDSU

Where: Catalina Room (southern end of MVCC) [SEE MAP](#)
Marina Village Conference Center
1936 Quivira Way, San Diego, CA 92109

When: 5:30 pm – Social Hour
6:30 pm – Dinner
7:00 pm – Program

Directions: FROM INTERSTATE 5: Take the SEA WORLD DRIVE exit. From SEA WORLD DRIVE, take WEST MISSION BAY DRIVE on your right. When you see the large green sign that says QUIVIRA ROAD, get in the farthest left of the two left turn lanes. Turn left, go one very short block and turn left again. Drive about one half mile and MARINA VILLAGE will be on your right.

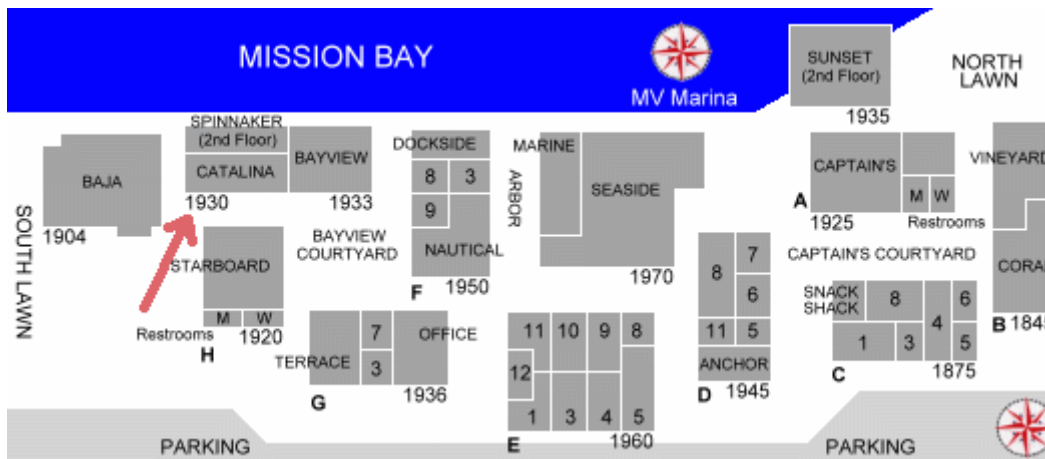
FROM INTERSTATE 8: Take the WEST MISSION BAY DRIVE exit to the right. You will be on INGRAHAM STREET for a short distance from which you will take the next exit marked WEST MISSION BAY DRIVE on your right. When you see the large green sign that says QUIVIRA ROAD, get in the farthest left of the two left turn lanes. Turn left, go one very short block and turn left again. Drive about one half mile and MARINA VILLAGE will be on your right.

Dinner: Mexican “cuisine”. Cash Bar.

Cost: \$30 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, May 18th.

**RESERVATIONS CANNOT BE ACCEPTED AFTER MONDAY AT 12 NOON.
IF YOU DO NOT MAKE A RESERVATION, WE CANNOT GUARANTEE YOU A MEAL.**



2009 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!

June	Joint Meeting with South Coast Geological Society
July	TBD
August	TBD

2009 EXECUTIVE COMMITTEE

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Dr. Eleanora (Norrie) Robbins, Adjunct, Dept. of Geological Sciences, SDSU

Dr. Eleanora (Norrie) Robbins is a paleo-palynologist, former student of Paul S. Martin ("Pleistocene Extinctions"), and retired from the U.S. Geological Survey in Reston after 34 years. She is now adjunct faculty in the Dept. of Geological Sciences at SDSU. She mapped for Louis Leakey in 1965 at the Chelles-Acheulian Olorgesailie site in Kenya, on vacation from a Peace Corps assignment with the Geological Survey of Tanzania.

“Utilization of Geological Techniques to Help Solve an Archaeological Puzzle: When Did People Arrive in North America?”

Knut Fladmark hypothesized that as soon as boat technology was developed 40,000 years ago, people probably traveled the oceans. The 40,000-year-ago shoreline is now below 150-160 ft (50 m) of water and an unknown thickness of sediment. So evidence for boat transport by maritime people would be under the today's oceans. Geological data could provide locations of specific paleoshorelines and general sedimentation rates. Palynological data from cores could provide information about introduction of medicinal and food plants from distant sources. Underwater geophysical techniques such as magnetic mapping, resistivity methods, seismic profiling and ground penetrating radar might be useful too.

An interesting idea about changing shorelines was successfully tested by Thomas Dillehay and Ruth Gruhn at the Monte Verde cave sites in Chile. They suggested searching for onshore caves along narrow continental shelves. Submarine canyons also should be searched because they are often fracture zones; such places not only might have now-submerged caves but are also subjected to periodic sediment removal. So, submarine canyons might be good places for deep SCUBA divers to search for caves and buried artifacts.

It is easy to envision early maritime people, staying by the paleo-shoreline, taking advantage of abundant marine food sources. Through time, descendants would have followed the rise and fall of sea level. At the time of peak glaciation 21,000 years ago, the entire continental shelf was exposed. Then as sea level rose upon glacial melting, village sites would have moved shoreward accordingly. The 8,000-year-ago shoreline is now below 1.5-6 m (5-20 ft) of water. Indeed, large, heavy artifacts from a submerged village of that age are often seen by divers especially near the La Jolla Beach and Tennis Club. Around 7,000 years ago, it is hypothesized that an episode of intense erosion occurred, which would have reduced water clarity, affected marine animal distribution, and forced people toward onshore sources of reliable food.

Other evidence for early marine travel might be in the creation songs of today's coastal indigenous people. Many songs tell of creation from the ocean and mention boats. One even tells of the arrival of the "new people" who hunted big game. The creation songs may help prove that the earliest ancestors arrived here very, very long ago by boat. Geologists are needed to help lead the search.

Presidents Secretary's Corner, MAY 2009

Scott is out in the field right now, so I'm going to fill this space. It will remain to be seen if anyone actually notices...

I particularly enjoyed Brother Guy Consolmagno's talk last month. I'm still amazed that the Vatican has a "Curator of Meteorites" or even an observatory. Many thanks to Drs. Anne Sturz and Sarah Gray for making the arrangements to get him here. I videotaped the talk, and have turned it into a DVD for Greg Cranham (who was sick) and Monte Marshall (who was abroad somewhere, I forget - who can keep track?). If anyone else would like a copy, please let me know.

This month brings us Norrie Robbins, who will enlighten us on the early Holocene history of our local shoreline. Another great speaker, I suspect! Thanks, Scott!

Phil Farquharson - SDAG Ex-President (Scott will resume his regularly-scheduled broadcast next month)

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Corporate sponsors provide a significant portion of SDAG's operating and scholarship budget. In addition to monthly recognition for your contribution, you are entitled to a free Internet link from [SDAG's Website](#). We also list Corporate Sponsors in our annual SDAG Field Trip Volume.

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ANNOUNCEMENTS

CALL FOR PAPERS:

"Mylonitization and associated low angle/detachment faulting in the northern Santa Rosa and southern San Jacinto Mountains, California."

To be published in association with the

**2009 San Diego Association of Geologists Annual Field Trip
November 7th and 8th, 2009**

Co-organizers:

Bryan Miller-Hicks, Vice President, SDAG
Independent engineering geology consultant
bryanmillerhicks@gmail.com 619-733-3724

Dr. Monte Marshall, Ph.D.
Emeritus Professor of Geologic Sciences, SDSU
mmarshall@geology.sdsu.edu 619-795-9871

SCOPE: Papers addressing topics related to mylonites, geology, structural geology, metamorphism, metasediments, faulting, folding, meta-structures, biology, environmental issues, geography, native American culture, and history of the Deep Canyon, northern Santa Rosa Mountains and southern San Jacinto Mountains

TIMELINE: Email a statement of interest & topic to the co-editors as soon as possible

Manuscripts due: April 15th, 2009
Revised manuscripts due: July 1st, 2009
Target publication date: late September, 2009

For further information, contact bryanmillerhicks@gmail.com or mmarshall@geology.sdsu.edu



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immediately. Compensation will depend upon qualifications and ability. Please send or fax a current resume, or vita and references to resumes@bfsa-ca.com or fax to 858-679-9896.

Brian F. Smith and Associates (www.bfsa-ca.com) offers consulting services pertaining to all aspects of paleontology, archaeology, biology, history, air, traffic, noise and investigations throughout the southwest, primarily in southern California. The combined experience of the principal consultants and associates represents over 100 years of involvement in the study of the history and prehistory of this region. BFSA's capabilities are highlighted by the range of current projects, including construction monitoring, data recovery mitigation programs, historical structure assessments, surveys and evaluations for both the California Environmental Quality Act (CEQA) and Section 106 of National Historic Preservation Act (NHPA).

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URS30335 – Geologist/Engineer

Minimum Requirements: Bachelors Degree with 2+ years of experience in the environmental consulting industry or related business. Good written and verbal communication skills, able to work independently and familiar with local regulatory guidelines (DEH, RWQCB, DTSC). Valid drivers license is required due to some travel to/from sites as needed.

Job Description: Assist Project Manager in conducting Phase I and Phase II Site Assessments and oversight of remedial programs. Ability to successfully complete the following:

Manage small projects from start to finish with limited supervision, familiar with a variety of invasive drilling/subsurface investigation techniques, log borings in accordance with USCS, install monitoring wells in accordance with DEH guidelines, provide fieldwork oversight of subcontractors, prepare work plans, familiar with laboratory analyses and waste characterization criteria, familiar with human health screening criteria, interpretation of geologic and chemical data for surface water, soil, soil gas and groundwater and to assist with preparation of reports summarizing field procedures and results.

URS 33917 – Geologist/Engineer

Minimum Requirements: Bachelors Degree with 2+ years of experience in the environmental consulting industry or related business. Good written and verbal communication skills, able to work independently and familiar with local regulatory guidelines (DEH, RWQCB, DTSC). Valid drivers license is required due to some travel to/from sites as needed.

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The San Diego Natural History Museum is run and operated by the San Diego Society of Natural History, a private non-profit scientific organization incorporated in 1874. The Museum's mission is to interpret the natural world through research, education and exhibits; to promote understanding of the evolution and diversity of Southern California and the peninsula of Baja California; and to inspire in all a respect for nature and the environment.

Within the Museum, the Department of PaleoServices (DPS) specializes in paleontological resource management. Our focus is on the recognition, recovery, and preservation of the significant and unique paleontological resources that occur in this region. The activities of DPS are helping to preserve significant fossil assemblages and are directly contributing to the growth of the important paleontological research collections at the Museum. We are currently looking to fill the following position:

Paleontological Field Manager: Position responsibilities include coordination of paleontological field activities (i.e., supervision of field monitors in prospecting for and collection of fossils and the recording of stratigraphic, taphonomic, geographic, and topographic data) and production of final project reports that summarize the methods and preliminary results of paleontological salvage activities. Other duties include generation of initial discovery letter reports for City, County, and/or State agency managers and generation of

paleontological resource assessment technical reports. Opportunities also include paleontological field work in the Southern California region and working with the extensive fossil collections of the San Diego Natural History Museum.

Qualified candidates must have at least a B.S. Degree in Geology or Paleobiology; 2 to 3 years of relevant experience (especially sedimentary geology and paleontology); excellent supervisory/managerial, verbal, written, and interpersonal skills; and a strong work ethic, intense drive, and initiative for quality and customer service. This position is a regular, full-time salaried position with a generous benefits package (e.g., full medical and 401K plan). Compensation will be based on individual qualifications and experience (annual salary range \$40,000 to \$60,000).

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