



SAN DIEGO ASSOCIATION OF GEOLOGISTS

1998 EXECUTIVE COMMITTEE

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MEETING ANNOUNCEMENT

Wednesday, November 18, 1998

Place: Bali Hai
2230 Shelter Island Drive
Shelter Island, San Diego
Phone: (619) 222-1181

Time: 6:00 - Social Hour
7:00 - Dinner
8:00 - Program

Dinner: Kapahulu steak (12-ounce grilled New York steak), or "Island Sampler" (seared ahi, salmon, and mahi-mahi), vegetables, soup, salad, coffee, tea, dessert. Please specify meal preference when calling in for reservations.

Cost: \$ 20.00 per person (Students \$ 10.00 with ID)

Reservations Required by 5:00 pm Monday, November 16. To reserve a space at this month's meeting, call the SDAG Reservation Line at Hargis + Associates, Inc.: (619) 454-0165, Extension 190. Please specify meal preference. Contact Greg Cranham with any questions.

Speaker: **Anders Rindell, Coastal Consultants, Inc., La Jolla, California**

Program: **Geologic Characterization of the Fisheries Building Landslide**

The Southwest Fisheries Science Center (SWFSC) is located about 500 yards north of the Scripps Institution of Oceanography (SIO) pier, at the edge of a 200 foot high sea cliff. The cliff is experiencing complex failures along several planes of weakness, and surface landsliding has encroached to within less than 6 meters (20 feet) of the southwest corners of two of the buildings.

In the past, the hypothesis that the SWFSC is underlain by an ancient, deep-seated translational landslide has been popular (see CDMG Bulletin 200 and the City of San Diego's Geologic Hazards and Faults map). However, the ongoing investigations have failed to produce indications of such a mechanism. Instead, this talk will present evidence that numerous northeast-striking minor faults are responsible for the many vertical offsets and lateral translocations seen along the base of the sea cliff. The data suggests that these faults are secondary structural features associated with the Rose Canyon fault zone.

In addition to these zones of northeast-striking faults, a system of three intersecting sets of master joints and a number of bedding planes in shale have weakened the cliff. Landslide failure mechanisms encountered include:

- Pop-out failures of the lower talus slope during winter storms and erosion of the upper slope via shrink/swell, creep, and shallow slumping;
- Rockfalls and detachment of large, joint and fault-controlled topple blocks in the conglomerate/sandstone units of the middle cliff; and
- Subsurface block translations with components of rotation along several northwest-dipping (out of cliff) clay bedding planes in shales of the upper third of the cliff.

These mechanisms have led to the development of a complex, multi-storied landslide accompanied by numerous scarps, rotational slides, and a small graben.

The talk will also present the various field and technical methods including the use of ropes and technical climbing equipment, limited-access drill rigs, down-hole logging, digital orthophotography, mapping software, detailed topographic surveying, and the development of a geologic map and cross-sections. Presentation of site geomorphology and erosion rates will include the use of digitized and computer-enhanced enlargements of historical photographs from the SIO Library Archives.

Andy Rindell graduated from the SDSU Department of Geological Sciences with a Master's Degree in 1991. Since the Fall of 1997 he has worked with NOAA and a number of engineering and geotechnical firms to characterize landslide activity threatening SWFSC.

NOTE: The November meeting also includes the annual **poster session** and **raffle**. You are encouraged to bring and present a Poster Exhibit describing recent or ongoing research. In addition, any items to be raffled (publications, maps, interesting mineral specimens, etc., to benefit SDAG) are most welcome!

Upcoming 1998/1999 Meetings:

December 15: Tom Deméré, *San Diego Natural History Museum Paleontology Update*

NOTE THE DATE CHANGE TO TUESDAY NIGHT, DECEMBER 15!

HIGHLIGHTS: At the December meeting, SDAG will elect its **new officers** for 1999. Ballots will be provided in the December newsletter; you can vote by mail or at the meeting. We are looking for enthusiastic **candidates** to serve as **Treasurer** in 1999; typically followed by three additional years on the Executive Committee. If you are interested or would like additional information, please contact Werner Landry.

January: Eric Riggs, *Indigenous Earth Sciences Project (IESP)*

SDAG Election Update:

As of November 3, declared candidates for the SDAG Executive Committee are as follows:

President:	Lowell Lindsay
Vice President:	Greg Cranham
Secretary:	Barbara Birnbaum
Treasurer:	<i>New candidate(s):</i> Monte Marshall

SDAG typically elects its Treasurer at-large, with other officers advancing by one position each year. This rotation requires at least one new candidate for Treasurer each year. If you are interested in standing for election as Treasurer (or even another office), please submit your name to Werner Landry for inclusion in the ballot.

1998 Corporate Sponsors:

Thanks to our Corporate Sponsors for 1998! Their generosity allows us to plan the annual field trip and produce field guides, to host the SDAG/SDSU picnic on Mission Bay, and to provide scholarship funds to local geology students. Our Corporate Sponsors are:

- Larry Cann
- Catlin Engineering Assoc., Inc.
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- Carol Ziegler

Newsletter:

Please submit information, announcements, ads or suggestions to the Secretary, Greg Cranham, for inclusion in the next newsletter. Any news regarding upcoming events that may be of interest to the Association or news of your business can be submitted. The deadline for the next newsletter is November 30, 1998.

ANNOUNCEMENTS:

We regret to announce that SDAG member **Edwin R. Browne** passed away in May of 1998, survived by his wife of nearly fifty years.

THANKS! to the 1998 SDAG Field Trip Committee for their hard work on the Geothermal Resources trip to the Imperial and Mexicali Valleys in October. All who attended reported having a great time!

Grand Canyon Raft Trip is scheduled for June 25 - July 2, 1999. Call Sue Tanges at (619) 442-8022 for additional information, or e-mail Sue at s.tanges@worldnet.att.net.

Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP) will be held at the Oakland Marriott City Center on March 14-17, 1999. For information, call (303) 771-2000 or visit the Symposium's website at: www.sageep.com.

The Gordon Gastil Endowed Scholarship Fund continues to seek donations of any amount. Gifts of \$ 500.00 or more will be recognized on a plaque to be placed in the remodeled Geology Building. Donations can be sent through SDAG, or contact Sharon Milligan, Geology Department Development Coordinator, at (619) 594-1937.

Check out the SDAG website at <http://www.znet.com/~sdag>. Also, send the URLs of your favorite geology sites to our website manager, Carolyn Glockhoff (carolion@aznet.net) for listing on the Geologic Links page.

Positions Available:

- **ENGINEERING GEOLOGIST:** Cotton, Shires & Associates seeks a Certified Engineering Geologist with minimum 10 years professional experience. Master's degree in geology preferred. Position requires strong technical, writing and business development skills and experience in the Southern California area. Excellent salary and benefits package. EOE. Mail resume in confidence to: Cotton, Shires & Associates, 5245 Avenida Encinas, Suite A, Carlsbad, CA 92008; Attn.: Stan Helenschmidt.
- **IMMEDIATE OPENINGS** for a Geologist with experience in environmental remediation and UST site assessments. Candidates must be OSHA certified with extensive field experience. Excellent compensation and advancement opportunities available. Fax resumé to Onsite Environmental, a consulting firm, at: (619) 874-5587, or by phone at: (619) 503-1035.



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