

SAN DIEGO ASSOCIATION OF GEOLOGISTS

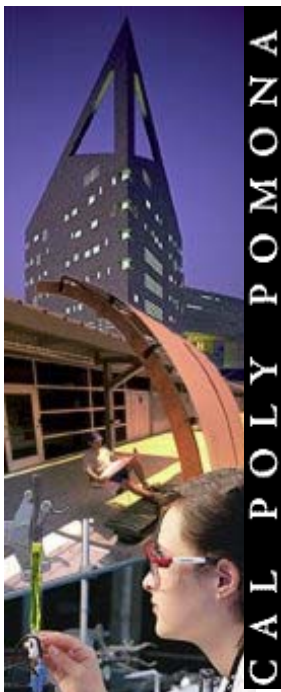
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SDAG MEETING ANNOUNCEMENT JOINT SDAG AND SOUTH COAST GEOLOGICAL SOCIETY MEETING

Wednesday March 12, 2003 – NOTE EARLY MEETING

ACTIVE TECTONICS OF THE COSTA RICAN PACIFIC MARGIN, CENTRAL AMERICA

presented by **DR. JEFFREY S. MARSHALL**



Where: HARPOON Harry's SEAFOOD
RESTAURANT
34555 Street of the Golden Lantern
Dana Point, 92624
(949) 493-2933

When: 6:00 pm – Social Hour
7:00 pm – Dinner
8:00 pm – Program

Directions: North on I-5 from SAN DIEGO towards Dana Point. Travel north of the I-78 intersection on I-5 about 27 miles. Take Highway 1 "Beach Cities" exit into Dana Point. Go about 1.5 miles. Turn LEFT onto Dana Point Harbor Drive. Go about .4 miles and turn RIGHT on Golden Lantern.

Dinner: TBD, should be a seafood dish, an alternative, fixin's and beverages – it'll be good!.

Cost: \$22.00/person, \$10/student

Reservations: Make your reservation online through the SDAG website at www.sandiegogeologists.org or call the SDAG Reservation Line at: (619) 521-0165, ext. 190, **no later than 5PM! Monday, March 10th**. Contact Margaret Eggers at (619) 521-0165, ext. 132 with any questions.

RESERVATIONS CAN NOT BE ACCEPTED AFTER MONDAY AT 5PM.

Jeffrey S. Marshall

Assistant Professor, Geological Sciences Department, Cal Poly Pomona

Jeff Marshall is an Assistant Professor in the Geological Sciences Department at Cal Poly Pomona. He grew up in San Diego's Mission Valley and started his undergraduate education at UCSD in 1980. Jeff transferred to UC Santa Barbara and graduated with a BA in Geological Sciences in 1984. After extensive travel abroad, he joined the Peace Corps in 1987 and served as a fisheries volunteer in Costa Rica. In 1991, Jeff received an MS in Earth Sciences from UC Santa Cruz. His thesis examined Costa Rican subduction earthquakes and marine terraces. During the early 90's, Jeff worked for several Bay Area consulting firms monitoring earthquake induced landslides and ground water contamination. He returned to graduate school at Penn State University and received his Ph.D. in Geosciences in 2000. His dissertation integrated field techniques of geomorphology, structural geology, and volcanic stratigraphy in a study of active tectonics and landscape evolution in southern Central America. While completing his Ph.D., Jeff worked as a visiting professor at Franklin & Marshall College in Lancaster, PA. In 2001, he joined the faculty at Cal Poly Pomona where he now teaches geomorphology, engineering geology, natural disasters, and geoscience education. In addition to teaching, Jeff is also actively engaged in undergraduate research, sponsoring students through the Keck Geology Consortium on projects examining the geomorphology of Florida barrier islands, stream restoration in Pennsylvania, and coastal tectonics in Costa Rica and Australia. Jeff also continues to pursue his tectonics research in Latin America and has been involved with the NSF MARGINS program in Costa Rica and Nicaragua.

PRESENTATION: "ACTIVE TECTONICS OF THE COSTA RICAN PACIFIC MARGIN, CENTRAL AMERICA"

The subduction of hotspot-thickened seafloor profoundly affects convergent margin tectonics, strongly impacting upper plate structure, volcanism, and landscape evolution. In southern Central America, subduction of the Cocos Ridge and seamounts results in pronounced contrasts in upper-plate tectonics along a 500 km trend from central Nicaragua to southern Costa Rica. Field mapping, stratigraphic correlation, and $^{40}\text{Ar}/^{39}\text{Ar}$ geochronology reveal the geomorphic response of the volcanic arc to changes in subduction zone parameters (e.g., slab thickness, roughness, and dip). Arc migration, relocation of the Pacific-Caribbean drainage divide, and formation of new depositional basins resulted from slab shallowing as irregular, hotspot-thickened crust entered the subduction zone. In addition, the correlation of late Quaternary fluvial and marine terraces along the coast provides a framework for evaluating contrasts in fore arc deformation. Terraces are mapped and correlated along the coast based on characteristics of terrace deposits, soil development, tread spacing, and isotopic ages. These terraces form as the product of tidal platform abrasion and valley aggradation during interglacial sea level maxima. Along this tectonic coastline, base level fluctuations are controlled by the interaction between eustatic sea level and spatially variable rock uplift. Differences in coastal uplift rates across segment-bounding faults are attributed to variations in both the pronounced short wavelength roughness associated with seamounts, as well as the background long wavelength bathymetry of the subducting Cocos Ridge.

2003 EXECUTIVE COMMITTEE

PRESIDENT - Patrick Brooks; *Anteon Corp.*; Ph: (619) 532-0930; fax: (619) 532-0995; brooksgp@efds.w.navy.mil

VICE PRESIDENT - Monte Murbach; *Southern California Soil & Testing*; Ph: (619)-280-4321; fax: (619)-280-4717; mmurbach@scst.com

SECRETARY - Margaret Eggers; *Hargis + Associates, Inc.*; Ph: (619)-521-0165; fax: (619) 521-8580; meggers@hargis.com

TREASURER – Phil Farquharson, Ph. 619) 224-8463; fax (619) 255-8380; geoguy@cq-squared.com

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

WEBMASTER - Carolyn Glockhoff; Ph: (858) 549-3396; carolion@znet.com

ANNOUNCEMENTS:

Upcoming 2003 Meetings:

April 16, 2003	Student Scholarship Winner presentations
May 21, 2003	Dr. Monte Marshall, Geology of the Three Rivers Gorge, China
October	Pegmatite Field Trip
December 17 th	Holiday Meeting, San Diego Natural History Museum

DO YOU HAVE AN ANNOUNCEMENT?? Do you have an event, job opening, field trip or other announcement you would like to share with our members?? Just call or email our SDAG Secretary, Margaret Eggers at 619-521-0165 OR meggers@hargis.com.

SDAG NEWSLETTER IS DIGITAL! If we don't have your e-mail address, or your email address changes, or if you have problems with the electronic format please contact Margaret Eggers at meggers@hargis.com, or call at 619-521-0165, ext. 132.

SDAG Wear: - Monte has a variety of shirts, hats, visors and even a nice vest with the SDAG logo. A small selection is available for purchase at the meetings; all SDAG wear can be ordered from Monte.

SDSU Geology Department Seminar Series – Wednesday Afternoons - The seminar announcement page is at: www.geology.sdsu.edu/seminars/

FIELD TRIP

The **Dibblee Geological Foundation** and the **Santa Barbara Museum of Natural History** invite you to participate in A Day In The Field with *living-legend Tom Dibblee*, along with Cal Poly Professor **Jon Nourse**, Northridge Professor **Peter Weigand**, and Dibblee Map Editor **John Minch**. **Tom and John's** San Gabriel map collection will be available and will be featured.

Great views and precipitous canyon and waterfall outcrops reveal processes of extension, intrusion, rotation, and displacement associated with subduction magmatism and a later evolving dextral plate boundary. There will be dramatic geology for every interest.

Proceeds from this fund-raiser will be utilized exclusively for efforts towards the continued publication of Tom Dibblee's maps. Fee: \$150 (includes coffee and doughnuts, BBQ lunch catered by Halliburton, ski lift, and guidebook plus map). Registration deadline is May 10, 2003. For information, e-mail John Powell at dibbleemap@adelphia.net, call (805) 987-5846, write to PO Box 2309, Camarillo, CA 93011, or visit dibblee.geol.ucsb.edu.

Send checks payable to the SBMNH / DGC to PO Box 2309, Camarillo, CA 93011:

Name _____ Address _____

Phone _____ City _____ Zip _____

E-mail _____

2003 CORPORATE SPONSORS

THANK YOU!! to ALL our new and re-newing 2003 Corporate Sponsors.

A significant portion of the SDAG operating and scholarship budget is provided by corporate sponsorship. Please consider becoming a Corporate Sponsor for 2003! In addition to monthly recognition for your contribution, you will be entitled to a free internet "link" from the SDAG Website, and all Corporate Sponsors are listed in the front of the annual SDAG Field Trip Volume.

ROBERT WALTERS Equipment Rentals	PACIFIC SOILS ENGINEERING Inc.
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Carole L. Ziegler	Hargis + Associates, Inc.
Dr. Monte Marshall	Southland Geotechnical Consultants
William J. Elliott	Dr. Margaret R. Eggers, CHG
Kleinfelder	Southland Geotechnical Consultants
Dr. Pat Abbott	Lowell Lindsay, Sunbelt Publications
Carolyn Glockhoff	Rob Hawk

POSITIONS AVAILABLE:

- **HARGIS + ASSOCIATES, Inc.** San Diego: is looking for a **CIVIL ENGINEER**. 10 years minimum experience required in soil and groundwater remediation and regulatory interface. Excellent opportunity for an experienced, registered California Civil Engineer. Strong leadership skills required. Excellent salary/benefits and work atmosphere. Send resume to: Kim Stransky, Hargis + Associates, Inc., 2365 Northside Drive, Suite C-100, San Diego, CA. 92108. EOE M/F/D/V. Hargis + Associates is a SDAG Corporate Sponsor. Visit us at www.hargis.com.
- Engineers, Geologist, and Soil Technicians – **Southern California Soil and Testing, Inc., (SCS&T)** has positions available for all levels of engineers, geologists, and technicians. **SCS&T** offers a comprehensive compensation and benefit package, and the opportunity to work on a wide range of projects. Submit resumes in confidence attention Dan Adler, P.O. Box 600627, San Diego, CA 92160-0627, fax 619-280-4717, email – dadler@scst.com
- **Geocon Consultants, Inc.**, a San Diego-based environmental services firm, is seeking **Senior Staff Geotechnical Engineer** with 2 to 4 years experience. BSCE required, MSCE preferred. Registration desirable. Previous experience in land development a plus. **Project Geotechnical Engineer** with 3 to 5 years experience. BSCE required, MSCE preferred. Registration required. Experience in land development a plus. **Engineering Field Technician** with 2+ years experience desired but not mandatory. Land development and/or hillside experience a plus. E-mail resume to hr@geoconinc.com or fax (858) 558-6159 or mail to Human Resources, 6960 Flanders Drive, San Diego. 92121.

POSITIONS WANTED:

Shana Dreyfuss is looking for an entry-level geology position in San Diego. She recently graduated from the University of California, Davis. She can be reached at: shajspain@yahoo.com

**San Diego Association of Geologists
c/o Margaret R. Eggers, PhD, CHG
Hargis + Associates, Inc.
2365 Northside Drive
Suite C-100
San Diego, CA 92108**