

SAN DIEGO ASSOCIATION OF GEOLOGISTS

www.sandiegogeologists.org

SDAG MEETING ANNOUNCEMENT

[WEDNESDAY, JANUARY 19TH, 2011](#)

“LiDAR and Field Observations of Earthquake Slip Distribution for the Central San Jacinto Fault”

Presented by

Barrett Salisbury, M.S.

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
7:15 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.

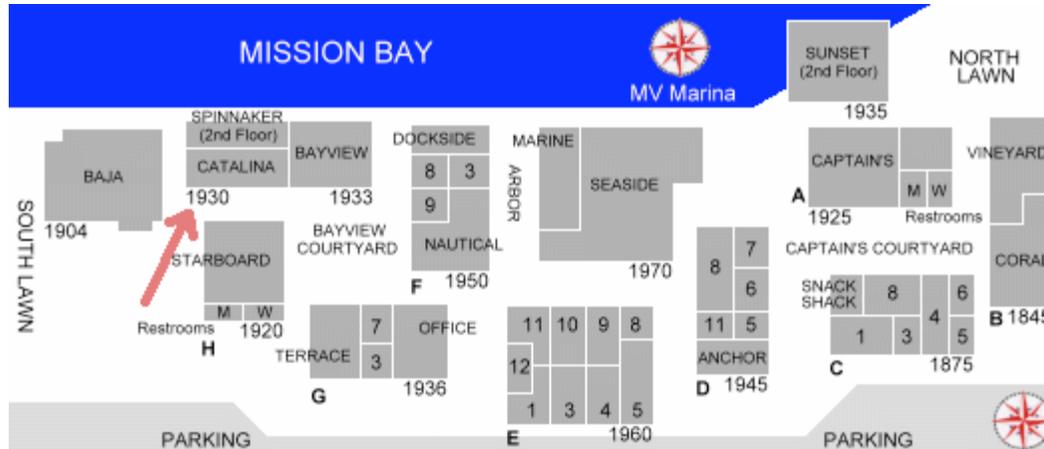
FROM INTERSTATE 8: Take the WEST MISSION BAY DRIVE exit to the right. You will be on INGRAHAM STREET for a short distance from which you will take the next exit marked WEST MISSION BAY DRIVE on your right. When you see the large green sign that says QUIVIRA ROAD, get in the farthest left of the two left 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: Hawaiian Buffet. Beverage station, dessert, 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, January 17th.**

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



2011 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!

February 16, 2011	TBA
March 2011	TBA
April 2011	TBA

2011 EXECUTIVE COMMITTEE

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SPEAKER BIO

Barrett Salisbury

I grew up in the foothills of the Blue Ridge Mountains in Morganton, NC. In 2007 I graduated with a B.S. in Geological Sciences from Washington and Lee University in Lexington, Virginia. While there, I studied the knickpoint dynamics of Appalachian river reaches using low-altitude balloon aerial photography and photogrammetric techniques. After graduation, I worked as the Geology Department technician for a year. This past September, I completed my M.S. in Geological Sciences at San Diego State University, working with Prof. Thomas Rockwell on neotectonic and paleoseismic projects throughout southern California. In addition to geology in the US, I have had the opportunity to work on projects in Hawaii, New Zealand, Panama, and Mexico and hope to continue international work. I am interested in working as a consulting geologist wherever there is work to be

done. Eventually, I'd like to become a professor and am currently looking for a Ph.D. program to start in the future.

SPEAKER ABSTRACT

“LiDAR and Field Observations of Earthquake Slip Distribution for the Central San Jacinto Fault”

We mapped the tectonic geomorphology of 80 km of the Clark strand of the San Jacinto fault to determine slip per event for the past several surface ruptures. From the southeastern end of Clark Valley (east of Borrego Springs) northwest to the mouth of Blackburn Canyon (near Hemet), we identify 203 offset geomorphic features from which we make over 560 measurements on channel margins, channel thalwegs, ridge noses, and bar crests using filtered B4 LiDAR imagery, aerial photography, and field observations. Displacement estimates show that the most recent large event (MRE) produced an average of 2.5-2.9 m of right-lateral slip, with maximum slip of 3.5 to 4 m at Anza. Double-event offsets for the same 80 km section average ~5.5 m of right-lateral slip. Maximum values near Anza are estimated to be close to 3 m for the penultimate event, suggesting that the penultimate event was similar in size to the MRE. The third event is also similar in size, with cumulative displacement of 9-10 m through Anza for the past three events. Magnitude estimates for the MRE range from Mw 7.2 to Mw 7.5, depending on how far north the rupture continued. Historically, no earthquakes reported along the Clark fault are large enough to have produced the offset geomorphology we observe. However, recent paleoseismic work at Hog Lake dates the most recent surface rupture event at ca. 1790, potentially placing this event in the historic period. A poorly located, large earthquake occurred on November 22, 1800, and is reported to have caused extensive damage (MMI VII) at the San Diego and San Juan Capistrano missions. We infer slightly lower intensity values for the two missions (MMI VI-VII instead of VII) and relocate this event on the Clark fault based on dating of the MRE at Hog Lake. We also recognize the occurrence of a younger offset along ~15-20 km of the fault in Blackburn Canyon, apparently due to lower slip in that area in the November 22, 1800 event. With average displacement of ~1.25 m, we attribute these offsets to the M6.9 April 21, 1918 event. These data argue that much or all of the Clark fault, and possibly also the Casa Loma fault fail together in large earthquakes, but that shorter sections may also fail in smaller events.

***** Notes *****

SDAG would like to thank Bryan Miller-Hicks for his four years of service and dedication to the SDAG Executive Committee. Thanks Bryan, well done!

Please welcome Brian Olson as the new SDAG secretary, your link to announcements and membership.

Lastly- we need speakers! Anyone interested in presenting a talk for the monthly dinner meetings should contact our new prez Chuck Houser.

PRESIDENTS CORNER, JANUARY 2011

Welcome to 2011! I hope this year finds you all well. I'd like once more to thank Bryan for his service to SDAG over the past four years. Anyone who has been down the "conveyor belt" of SDAG officership knows the work, as well as rewards, that come with the job. I look forward to working closely with Todd, Cari, and Brian over the coming year.

A couple of things to note. If you haven't yet picked it up, be sure to get a copy of the 2010 field trip guidebook. Diana Lindsay's article on the Galleta Meadows Sky Art itself is worth the price of the volume! It is an excellent volume with great papers by Rebecca Dorsey, Kim Blisniuk, and Paul Remeika, to name a few. If you have a hankering to become an expert on all things Borrego, this publication will take you well down that road!

Finally, be sure to come to our meeting on January 19th at the Catalina Room. If you were on the 2010 field trip, you will remember the excellent presentation Barrett Salisbury made to the group on Lute Ridge, along with Tom Rockwell and Miles Kenney. We are looking forward to more excellent information from Barrett this month!

One more note, if you haven't yet done so, please be sure to get your membership renewals in to us soon. Happy New Year and may this year be happy and prosperous to you and yours!

Chuck Houser

2010 SPONSORS - THANK YOU!!

Note the new nomenclature since 2010: Sponsors, Corporate Sponsors, and Patrons provide a significant portion of SDGS's and SDAG's operating and scholarship budgets. By making your payments to SDGS (a 501(c)3 public benefit nonprofit educational corporation) you may be able to claim a tax deduction. In addition to monthly recognition for your contribution, you are entitled to additional benefits as listed on the Sponsorship Form included in this newsletter.



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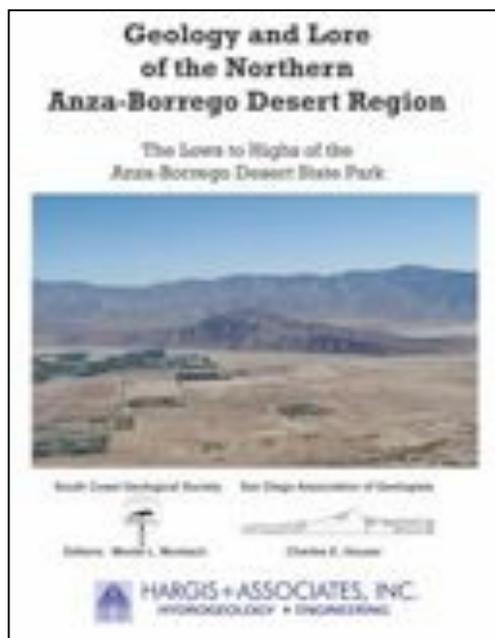
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Joe Coronas, SDSU Geo-Alumni Assn.	David and Jan Steller ("two-fer" - thanks!)
Greg Cranham, Consulting Geologist	Stone Brewing Company
Phil Farquharson - CG-Squared Productions	Sue Tanges, Southland Geotechnical Consultants
Carolyn Glockhoff , Caro-Lion Enterprises	Terra Costa Consulting Group, Inc.
	Carole L. Ziegler

ANNOUNCEMENTS

Request for Sponsors/Year End Tax Donation - 2010 Publication and 2011 SDAG/SDGS 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) meeting on November 17th. If you or your firm provides a donation to SDGS by Nov. 26th, your name will be listed in the 2nd printing for the 2010 "Geology and Lore of the Northern Anza-Borrego Desert Region" and you will also be listed in all 2011 Sponsorships. The entire amount of your gift of \$100/\$500/\$1,000/\$3,000 is tax deductible to the extent permitted by law. In addition, we are specifically looking for:

1. One \$1,000 donation to be listed as the 2010 Field Trip Sponsor in the Publication.



2. One \$3,000 donation to be on the cover of the 2010 Publication. An example of a cover publication sponsor is shown below, such as with the company name Hargis and Assoc. The first \$3,000 donation will be shown on this cover at left.

The 2010 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.

Reminder: Annual Membership Dues for 2011!

SDAG Membership dues are due! If you have not done so, please complete the form at the end of the newsletter and send to the stated PO Box with a check for \$25, to keep yourself in good standing. That's \$2.08 per month, what a bargain!

TOM ROCKWELL-GUIDED FIELD TRIP and EVENING LECTURE at BORREGO SPRINGS, JANUARY 8

Field Trip: Coyote Creek Fault, January 8, 12 - 4 pm

San Diego State University seismologist Tom Rockwell will lead a field trip to Coyote Creek Fault to discuss the geology of the area and its recent activity. The hike will be a short off-trail walk. If time and weather permit, participants will also visit the site of the Clark Fault Excavation Project to discuss what they're hoping to uncover. 4WD / high clearance required. Participants should meet at Anza-Borrego Desert State Park Visitor Center's back parking lot to carpool. Please bring water, sun protection and a snack. Advance registration required. Visit www.theabf.org or call 760-767-4063 for more info.

Lecture: The Easter Earthquake, January 8, 7:30 pm

The Easter Day earthquake of April 4th, 2010... what can we expect from faults near Borrego Springs? SDSU professor Tom Rockwell gives us the scoop on what recent earthquake activity means for the Borrego Valley and its residents. \$5 suggested donation. No registration required. At Borrego Springs Performing Arts Center, 590 Palm Canyon Drive, Borrego Springs. Visit www.theabf.org or call 760-767-4063 for more info.

MEETINGS AROUND THE REGION:

Inland Geological Society: 6 January 2011 (Thursday): "SCE El Casco Substation: Construction Excavation Monitoring Salvages an Early Irvingtonian (middle Pleistocene) Fauna and Flora," Bob Reynolds and Lloyd Sample; and 2 February 2011 (Wednesday): "CEQA Basics or CEQA Q + A Relative to Geotechnical Issues," Kent Norton, The Planning Center. LSA Associates, 1500 Iowa Ave., Riverside. For more info go to <http://www.inlandgeo.org/>.



The Earthquake Engineering Research Institute's (EERI) Annual Meeting will be held February 9-12, 2011 in San Diego at the Hyatt Regency Hotel, La Jolla, CA. The meeting theme "Earthquakes without Borders" combines emergency response professionals, geologists, geotechnical engineers, structural engineers and students.

The program will highlight cross-border issues, the regions' tsunami risk, integration of research and practice, application of strong motion records, and lessons learned from the major earthquakes in 2010. Meeting information and registration is available at <http://www.eeri.org/site/2011-annual-meeting>.

2011 Desert Symposium: "Southern Exposure: A Trip through Southern California Outcrops"

Plan to share your research with a presentation or a poster at the fabulous Zzyzx, California Desert Studies Center. The event is being held on April 22-23, 2011, with an accompanying field trip on April 23-25, 2011. Interested parties should contact William Presch Ph.D., Director of Desert Studies, Department Biological Sciences, California State University, Fullerton, at 657-278 2215 wpresch@fullerton.edu. For more info go to the Desert Studies Center website at <http://biology.fullerton.edu/dsc>



The 2011 North American Environmental Field Conference & Exposition, San Diego: January 10-13

The Nielsen Environmental Field School is very pleased to announce that the complete schedule of presentations for the **2011 North American Environmental Field Conference & Exposition** is now posted on the event web site at www.envirofieldconference.com. This annual Conference, which will be held in San Diego, CA for the first time, is presented by The Nielsen Environmental Field School and sponsored by the American Institute of Hydrology, the American Institute of Professional Geologists, ASTM International, the Groundwater Resources Association of California, H & P Mobile Geochemistry, Schlumberger Water Services, Princeton Groundwater, and CRC Press/Taylor & Francis Publishers. Past events have attracted more than 1700 environmental professionals from around the world. Representatives from 19 different countries attended the 2010 Conference in Tampa, Florida.

- The Conference, which will be held **January 10-13, 2011** at the **Hilton San Diego Resort & Spa** on Mission Bay in San Diego, California, features a unique combination of presentations focused on the theme of the meeting, "Advances and Innovations in Environmental Site Characterization, Sampling, Monitoring and Remediation Technology."

Detailed information on the Conference schedule, event registration and hotel accommodations can be found at the event web site or by e-mailing The Nielsen Environmental Field School at info@envirofieldschool.com.

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Convenient to Freeways 1-8, Hwys 52 and 128. 6250 sq. ft. warehouse with two remodeled offices in front. Contact Terry Cochran at Sunbelt Publications 619-258-4911 x110 for details.

Spreading the Love: San Diego Union-Tribune Columnist Reports on Article from our 2010 Field Trip Guidebook

In her column from December 17, 2010, San Diego Union-Tribune columnist Diane Bell offers a lively account and interview of Dennis Avery and his "sky art" prehistoric animal sculptures in Borrego Springs, referencing one of the papers presented in the upcoming SDAG/SCGS field trip guidebook, "Geology and Lore of Northern Anza-Borrego Desert Region." Read it here:

<http://www.signonsandiego.com/news/2010/dec/17/menagerie-of-prehistoric-creatures-lives-in/>.

New Exhibit Open at the San Diego Maritime Museum: "Mapping the Pacific Coast"

Mapping the Pacific Coast: Coronado to Lewis and Clark. This world-class exhibition showcases 45 magnificent maps, books and illustrations dated 1544 through 1802, the very first explorations of our West Coast by Europeans. Many of the documents included in the exhibition tell dramatic stories with references to explorers such as Juan Rodriguez Cabrillo, Sir Francis Drake and Captain James Cook; all of whom left their mark on the Pacific Coast. These historic stories are told through original maps of the time, and illustrations (the earliest being woodcuts and the majority being copperplate engravings, many in original hand-coloring). This exhibit is enhanced by an audio tour and catalog, and is on display on the Berkley now through March 30, 2011. More information regarding this and other exhibits can be found on the museum's website at: www.sdmaritime.org.

The museum is located at 1492 North Harbor Dr., downtown San Diego. For more details, call: (619) 234-9153. Thanks to Greg Cranham for finding this, he highly recommends it!

Call for papers: 43d Symposium on Engineering Geology and Geotechnical Engineering, March 23-25, 2011, Las Vegas

The **43d Symposium on Engineering Geology and Geotechnical Engineering** will be held March 23-25, 2011 on the campus of University of Nevada Las Vegas. Please visit the conference website at <http://2011.eggesymposium.com/> for more information and to register.

Call for abstracts: Conference attendees are encouraged to present their research and work with regard to the conference theme, "Water, Soils and Sustainability in the Intermountain West". We are now accepting abstracts summarizing potential presentations. Presentations will be considered on any topic relevant to engineering geology and geotechnical engineering. University students, in particular, are encouraged to participate. The abstract should include title, authors' names and affiliations, and preference for oral or poster presentation. No specific formatting is required for the initial abstract submission. The deadline for abstract submission is January 10, 2011. The abstracts will be technically reviewed, and notification of acceptance will be made by January 24, 2011.

Final abstract or paper: Every presentation at the conference must be accompanied by either an abstract or full paper that will be published in the conference proceedings. Papers and abstracts submitted for inclusion in the proceedings must follow the formatting guidelines of the Nevada Water Resources Association (NVWRA), provided at the website: <http://www.nvwra.org/journal/>.

Submittal dates:

Jan 10 2011 Abstracts due

Jan 24 2011 Paper acceptance notification

Feb 11 2011 Final papers due

Feb 25 2011 Final corrections, if any, due

These are hard deadlines; we have not allowed for any slack in the schedule.

Submit to:

Submit abstracts in pdf format to Ms. Norma Biggar, proceedings lead editor, at: 2011egge@gmail.com

SEEKING JOB OPPORTUNITIES!

Brian J. Olson, PG, CEG: Registered engineering geologist with 13+ years of experience in the geotechnical consulting business is seeking a new opportunity. Excellent in the office and even better in the field. Too many skills to list here. B.S. in Hydrologic Science/ Geology from UCSB, 1996. Detailed work experience, resume, and references available upon request. brianjolson@att.net (858) 750-9243.

JOB OPENINGS!

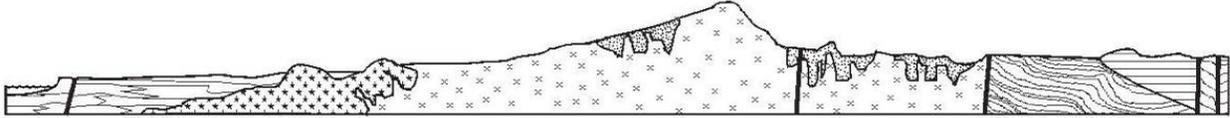
Paleontological Field Monitor Position: The Department of Paleontology at the San Diego Natural History Museum has openings for paleontological field monitors. Both a full time position with benefits and part time temporary positions (without benefits) are available. All work is funded through contracts. Work will include field monitoring of construction-related exposures of potentially fossiliferous sedimentary rocks (Cenozoic and upper Mesozoic marine and/or non-marine rock units) in the Southern California region. Field monitors will be expected to collect exposed fossils and record relevant stratigraphic and taphonomic data. Opportunities for fossil preparation are also possible. Depending on experience, the field monitor may also be involved in preparing final reports of findings. Must be able to lift at least 50 lbs and have a valid Driver's License. Start date: 15 January 2011.

Requirements: A minimum of a B.S. in geology or a related discipline with an emphasis in paleontology. Experience in field paleontology and stratigraphy is preferred. Salary is dependent upon the applicant's experience. For general information about our paleontology mitigation program, please visit <http://www.paleoservices.org>.

Please mail or email resumes to:
Melissa Soetaert (paleo@sdnhm.org; 619-255-0309)
Department of Paleontology
San Diego Natural History Museum
P.O. Box 121390
San Diego, CA 92112-1390



Seen at October's field trip.... Any plate with "GEODUDE"?



SAN DIEGO ASSOCIATION OF GEOLOGISTS

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(check choice)

_____ Regular Member (email delivery only) \$ 25.00

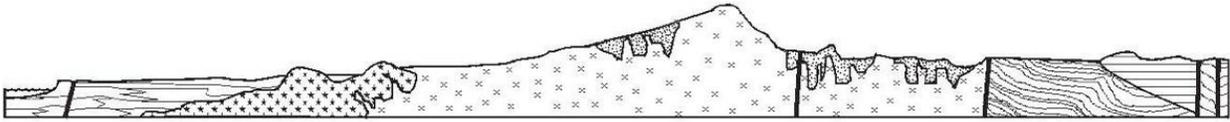
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San Diego, CA 92108



SAN DIEGO ASSOCIATION OF GEOLOGISTS

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Donation Level and Consideration: _____ EMERALD \$100.00
(In addition to monthly recognition for your contribution, you are entitled to a free Internet "link" from SDAG Website. We also list all Sponsors in any publications printed this year)

_____ RUBY \$500.00
(In addition to the above, you are entitled to an image of your business card in the monthly newsletter and SDAG Website)

_____ DIAMOND \$1,000.00
(In addition to the above, you will receive a commemorative plaque in recognition for your most generous support of the organization)

New Member / Donor

Continuing Member

Date: _____

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Please make check payable to San Diego Geological Society, Inc., a 501(c)3 public benefit nonprofit educational corporation (in order to claim a tax deduction), and mail to:

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*Donations may also be made
at monthly meetings.*