

SAN DIEGO ASSOCIATION OF GEOLOGISTS

www.sandiegoeologists.org

SDAG MEETING ANNOUNCEMENT

WEDNESDAY, OCTOBER 20TH, 2010

“The Land-Sea Connection: Sedimentation and Resuspension on Coral Reefs in Coastal Bays on St. John, USVI”

Presented by

Megan Kopulski, USD

- Where:** **Emiliano’s Mexican Restaurant** (Overlooking Admiral Baker Golf Course)
6690 Mission Gorge Road, San Diego, CA 92120
(619) 284-2460
- When:** 5:30 pm – Social Hour
6:30 pm – Dinner
7:15 pm – Program
- Dinner:** Fresh Mexican Buffet. Full 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.sandiegoeologists.org **no later than noon, Monday, October 18th**.

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



2010 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!

November 17	Dr. Norrie Robbins, SDSU: "Dead Oil in the San Diego Subsurface"; Marina Village
December 15	Dr. Tom Deméré, S.D. Natural History Museum: "Dem Bones"; Bali Hai Restaurant
January 19, 2011	TBA

2010 EXECUTIVE COMMITTEE

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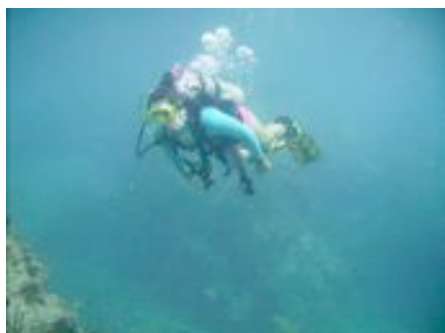
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SPEAKER BIO

Megan Kopulski (I go by Meg though)



I grew up on the east coast in Rochester, NY and attended John Carroll University in Cleveland, OH. During the summer of 2005, I studied abroad in Australia and focused on environmental management of tropical coral reef ecosystems and fell in love with research and marine science! As an undergraduate, I studied the effects of temperature on cranial morphology of toads, and realized I wanted to attend graduate school. I'm currently finishing

up my Master of Science in Marine Science at USD on the impact of coastal development on sedimentation on coral reefs in the Virgin Islands with Dr. Sarah Gray. As part of this project, I've been lucky enough work at a small research station in the Virgin Islands National Park (the Virgin Islands Environmental Resource Station) for almost 5 months. In addition to loving the ocean, I've gotten turned on to geology (became a rock nerd) and I have really enjoyed helping out with SDAG field trips and meetings.

My other activities include teaching laboratory courses at USD in environmental sciences, being a counselor, vice-chair, and then chair of the USD Graduate Student Council, and being the past graduate representative for the Marine Science and Environmental Studies Department. I really enjoy running, completed my first half-marathon this past year, and will run a full marathon in the future.

SPEAKER ABSTRACT

“The Land-Sea Connection: Sedimentation and Resuspension on Coral Reefs in Coastal Bays on St. John, USVI”

Caribbean coral reefs are declining due to multiple natural and anthropogenic stresses. Increased sedimentation from watershed development onto coral reefs in coastal bays can be stressful to corals because it can smother, abrade, or block light necessary for photosynthesis. In the USVI, studies have shown that sedimentation is the most serious threat to corals. However, compared to other environmental stresses such as over-fishing and climate change, sedimentation can be mitigated by local action. This study examined the quantity, quality (type), and texture of sediment affecting corals in bays below developed vs. undeveloped watersheds on St. John, the smallest of the three main US Virgin Islands.

Twenty-four sediment traps were placed in mangrove, shore, bay, and reef environments in three bays: Great Lameshur Bay (undeveloped), Fish Bay (developed), and Coral Bay (developed with sediment mitigation structures currently in place). Sediment accumulated in the traps and was collected and processed every three weeks from August 2008 through March 2009. Sediment composition (organic, carbonate, terrigenous) was determined by loss on ignition. Current meters were placed in two reef locations. Sediment trap accumulation rates were 3-162 times higher on the reefs below the developed watersheds compared to the undeveloped watershed for the majority of the sampling periods (range for all sites in all bays: $0.6-705 \text{ mg cm}^{-2}\text{d}^{-1}$). Compositional trap accumulation rates ranged from 0.1-41, 0.2-270, and $0.1-387 \text{ mg cm}^{-2}\text{d}^{-1}$ for organic, carbonate, and terrigenous components respectively, for all sites in all bays. On the Fish Bay reefs, sediment trap accumulation rates were high enough ($2-548 \text{ mg cm}^{-2}\text{d}^{-1}$) to potentially cause severe to catastrophic stress to corals for almost all of the sampling periods. In Coral Bay, sediment trap accumulation rates on the reefs were comparably lower ($3-18 \text{ mg cm}^{-2}\text{d}^{-1}$).

The highest sediment trap accumulation rates repeatedly occurred at the shore in Coral Bay, and ranged from $8-705 \text{ mg cm}^{-2}\text{d}^{-1}$. Terrigenous trap accumulation rates at the shore were 2-1954 times higher in bays below the developed compared to the undeveloped watershed, and at the reef were 1.4-107 times higher. Mean grain size was coarser at the shore in Great Lameshur Bay and Coral Bay, but finer at the shore in Fish Bay. Resuspension was greatest at the reef in Fish Bay and at the shore in Coral Bay. Although both bays were on the south side of the island, the currents were opposite: NW in Great Lameshur Bay and SE in Fish Bay. These data will be used as baseline data to evaluate the effectiveness of sediment mitigation projects being constructed in the watershed.

PRESIDENTS CORNER, OCTOBER 2010

Well, it is October, and we are well into the fall season. It sure felt like fall today, cool, a bit drizzly (even in El Cajon)! And just think, just a week ago we were baking at 109 degrees! As the earth rotates around its axis, and revolves around the sun, I am reminded that we, meaning all denizens of this planet, live and continue to live, by virtue of geologic consent. That is to say, we are in the "Goldilocks zone" around our Sun, sharing it only with Mars which dwells on the outer edge of that Zone. Unlike Mars, however, we have our bright and friendly Moon just a quarter of a million miles away, keeping our wobbly tendencies in check.

As you may note, I have been watching a lot of cosmology stuff on the Science channel, partly out of my own long standing interest in the field, partly to prepare myself for the occasional pointed and "gee, I've never thought about that" type question from my students. And of course, our speaker for September, Dr. Candace Kohl, was kind enough to remind us yet again of our vulnerability to those fascinating and sneaky, streaky objects, meteoritic rocks. These celestial visitors to our "goldilocks neighborhood" knock on our earthly door with little warning just to remind us to forget our complacency.

OK enough cosmic rambling and wandering, it's a habit of mine.

This month we are privileged to hear from Ms. Megan Kopulski, a student of Dr. Sarah Gray, our erstwhile President. Ms Kopulski will remind us all that some students and researchers are smart enough to choose their areas of interest wisely. When I was in Graduate School, somehow I chose the mossy, saturated slopes of the western Cascades in Oregon, when I could have chosen the U. S. Virgin Islands! Ms. Kopulski is this year's recipient of the SDAG student scholarship. Congrats to Megan!

And of course, October brings our annual field trip. October 15 to 17 are the dates for the trip/campout/big party at Anza Borrego, organized and led by Chuck Houser and Monte Murbach, with plenty of contributions by other members. Unfortunately, obligations won't allow me to attend this year, but I'll be thinking of you all! Be safe and enjoy the trip!

--

Bryan Miller-Hicks
Certified Engineering Geologist

2010 SPONSORS - THANK YOU!!

Note the new nomenclature for 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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David and Jan Steller ("two-fer" - thanks!)

David Bloom, PG

[Dr. Monte Marshall](#), SDSU Prof. of Geology and Geophysics, Emeritus

Sue Tanges, Southland Geotechnical Consultants

ANNOUNCEMENTS



Come explore the Lows and Highs of Anza Borrego!



October 15 through 17, 2010

Please join us on a joint trip with the South Coast Geological Society

One field trip, one publication! The annual SDAG/SCGS field trip will be held October 15th -17th, 2010. The theme of the trip will visit the geological low and high points in Anza Borrego Desert State Park, Eastern San Diego County. Carpooling is necessary. The trip will have an optional Friday night camp.

The trip will start at the Group Camp area Saturday morning at the Borrego Palm Canyon Campground, 200 Palm Canyon Drive, Borrego Springs, CA. We will carpool from this location to our first stop an overview at Fonts Point followed by stops at faults and landslides. After a chuckwagon lunch we will head up Coyote Creek to look at additional faulting. Saturday will end back at the group camp site Borrego Palm Canyon Campground. Here you will be able to hike the local trails, and enjoy a nice dinner with local beer and wine.

After breakfast Sunday morning we will head south to visit prehistoric mammoths, giant raptors, horses and camels, followed by visits to a detachment fault, then head west and

uphill to visit the highs of AB Park. The trip will end after a Sunday lunch at the Menghini Winery in Julian.

Spaces still available! Application here: <http://www.sandiegogeologists.org/FieldTrip2010Req.pdf>.

Coastal Engineering Practice Conference: Next Summer in San Diego



Dear Geologists and Engineers,

I am a practicing civil, coastal, and geotechnical engineer in San Diego and a member of ASCE's Organizing Committee for the Coastal Engineering Practice Conference to be held in San Diego from August 21-24, 2011. I am also the Committee Chair responsible for marketing the conference, responsible for both conference coverage and more urgently, getting out the "Call for Papers" (abstract deadline November 16, 2010). If you need any additional information, please call or e-mail me. Conference specifics follow:

PAPER TOPICS: Abstracts are sought on the following themes: case histories of coastal projects; sustainable coastal development; erosion and shoreline protection; coastal environment, water quality, and wetlands restoration; coastal hazards and risk management; coastal sediment processes; ports, harbors, and marine transportation; and local, state, and federal involvement in the planning, design, and construction of coastal projects.

DEADLINE: Abstracts are to be submitted to the Coastal Engineering Practice Technical Subcommittee by November 16, 2010. The Web site for submission is <http://content.asce.org/conferences/copricoastal2011/call.html>.

CONTACT: The conference Web site is <http://content.asce.org/conferences/copricoastal2011/index.html>

Thanks for your help,

Walt

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Grand Canyon Raft Trip, June 24 - July 1, 2011

Grand Canyon Raft Trip June 10-17, 2011 ---- Spaces still available... more info from Sue Tanges, grcynsue@att.net



Fall Fest - Party on the Playa!

The third annual Fall Fest, set for noon to 4 p.m. on Oct. 24, on Avenida de la Playa in La Jolla Shores will be what the first two have been: a wholesome, neighborhood event. The Halloween-themed event is sponsored by the La Jolla Shores Merchants Microdistrict. This year it will include a children's costume parade. Admission will entitle participants to "passports" redeemable for goodies at participating local shops, including Surf Diva, Rusty Surfboards La Jolla, Yogurt Escape, Osteria Romantica and the Cheese Shop. The open-house style event meant to promote shops and restaurants

along the Shores commercial strip will feature ample food samples from local restaurants, raffles for prizes donated by local businesses and lots of giveaways - candy, pens, magnets and the like. Tickets for the event are \$5 in advance, \$10 the day of the event. (Note: a geologist will be attending!)

OTHER COOL MEETINGS:



South Coast Geological Society: 4 October 2010 (Monday): "Computer Based Stereo Airphoto Analysis & Interpretation" by Woody L. Higdon, Geo-Tech Imagery. Double Tree Club Hotel, Santa Ana. Next meeting is November 1. For more info go to <http://www.southcoastgeo.org/index.html>.

Inland Geological Society: 6 October 2010 (Wednesday): "General Geologic and Tectonic History of the Korean Peninsula," Ken Pitchford, PG, CEG.; 4 November 2010 (Thursday): "Early Warning Seismic Network," Dr. Elizabeth Cochran, UC Riverside. LSA Associates, 1500 Iowa Ave., Riverside. For more info go to <http://www.inlandgeo.org/>.

San Diego Environmental Professionals: 12 October 2010, 12 pm (Monday): Storm Water Update, Scott Taylor, P.E., D.WRE, RBF Consulting. Holiday Inn - Mission Valley Stadium, 3805 Murphy Canyon Road, San Diego. For more info go to <http://sdep.onefireplace.com/>.



The Geological Society of America: **31 October - 3 November, 2010:** "Reaching New Peaks in Geoscience." Colorado Convention Center, Denver, CO. For more info go to <http://www.geosociety.org/meetings/2010/>.

The Geological Society of America: 9-12 October, 2011: "Archean to Anthropocene - the past is the key to the future." Minneapolis Convention Center, Minneapolis, MN. For more info go to <http://www.geosociety.org/meetings/2011/>.



Everything you wanted to know about Plio-Pleistocene vertebrate paleontology but were afraid to ask!

The **Anza-Borrego Desert State Park Paleontology Society** is starting a new training program for volunteers interested in looking for and conserving Park fossils. The first meeting and orientation will

be held 8am to 3pm on Friday, November 12th. Meet at the Anza-Borrego Desert State Park Visitor Center, 200 Palm Canyon Drive, Borrego Springs. The program consists of weekly classes, fossil curation, laboratory preparation workshops and field surveys each Friday through May. Attend the first meeting or contact District Paleontologist George Jefferson at (760) 767- 4974 to register. Visit www.anzaborregopaleo.org for more information. -Linda Gilbert, Paleo Society Volunteer

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>



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November 7, 2010 One Stop Wonder

Save the Date! SDAG is planning another One-Stop Wonder (OSW) field trip on Sunday, November 7. We plan to visit one or two areas of geologic interest, yet to be determined, in the East County area (near Lakeside). We will conclude with lunch at the newly opened Alpine Beer Pub in the hills of Alpine. Stay tuned for details!



NEWS RELEASE

For Immediate Release
September 1, 2010
Las Cruces, NM

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", including:

- A Conference featuring 58 invited platform papers discussing cutting-edge field-based environmental technology presented by the world's leading experts in their fields;
- A special platform paper session featuring an additional 9 papers on the response to the Gulf of Mexico oil spill;
- More than 75 hours of interactive indoor workshops presented by the field's top researchers and practitioners;
- More than 30 hours of hands-on, interactive outdoor workshops and equipment demonstrations featuring the latest environmental field methods and equipment; and
- An educational Exposition featuring 59 indoor and outdoor exhibits of state-of-the-science environmental equipment and services.

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.

Contact:

David M. Nielsen, Event Coordinator
The Nielsen Environmental Field School
9600 Achenbach Canyon Rd.
Las Cruces, NM 88011

Phone: (575) 532-5535, Fax: (575) 532-5978, e-mail: info@envirofieldschool.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.

Jared Warner: I am a graduate of San Diego State where I received both my B.S. and M.S. in geological sciences ('06 and '09). I have experience in multiple fields including production geology, fractured reservoirs, reservoir characterization, basic geologic model building, geophysics, paleontology, sedimentology, oceanography, and teaching. I've recently moved back down to San Diego after working for Occidental Petroleum and looking for immediate employment opportunities. For information on my research, contact information, or a resume please feel free to contact me at jared.j.warner@gmail.com or call me at (858) 692-3789.

JOB OPENINGS!

Sorry, none announced!



Left: At the South Pole.



Ted Wirths, Antarctica, Dec. 1971.

My dad's cousin Theodore Wirths, Ph.D., was with the National Science Foundation from 1966 through 1983. He was the Director of the Office of Small Business Research & Development.

Right: With colleagues at New Zealand's Vanda Research Station (center), with 2,000-year old mummified seal. –Todd Wirths