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SDAG Announcements

SDAG MEETING ANNOUNCEMENT

Wednesday, August 20th, 2025

6:00 pm - Social Hour | 7:00 pm - Dinner | 8:00 pm – Program

LOCATION:

[Sunbelt Publications, Inc.](#)

664 Marsat Ct., Suite A
Chula Vista, CA 91911

SPEAKER:

Dr. Mario Caputo

TOPIC: "Newly Discovered Tetrapod Bones, Insect Trace Fossils, & Eolian Adhesion Structures- Upper Pennsylvanian Wescogame Formation, Supai Group, Grand Canyon, Arizona"

DINNER: Wood-Fired Pizza by San Diego Mobile Pizza with vegetarian and vegan options

COST: Member \$50.00 | Non-Member \$60.00 | Student \$25.00

RESERVATIONS:

Make & Pay your reservation online through the SDAG website, before **6PM WEDNESDAY, AUGUST 13th**



[DIRECTIONS HERE](#)



[REGISTER HERE](#)

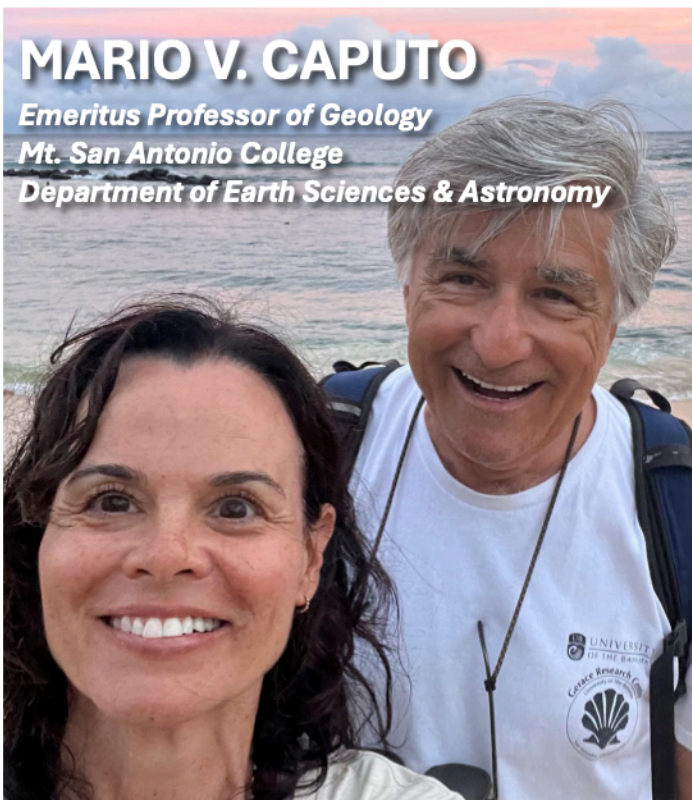
Please note, all meeting reservations require online pre-payment due to venue costs, venue contracts, and loss of money due to no shows. Refunds cannot be processed after the registration deadline.



Meet Our | Speaker & Topic

MARIO V. CAPUTO

*Emeritus Professor of Geology
Mt. San Antonio College
Department of Earth Sciences & Astronomy*



My geologic training from the Department of Geology, San Diego State University (BS geology, 1976) sustained me through a graduate program at Northern Arizona University (MS, 1980), petroleum exploration with Mobil Oil Corporation (1979-1983), two semesters at the Colorado School of Mines, and 3 years at the University of Cincinnati (PhD, 1988). With tenure and promotion at Mississippi State University (Department of Geosciences), I coupled advising undergraduates, teaching soft-rock and general education courses, and overseeing graduate theses on the northern Gulf of Mexico and on San Salvador Island, the Bahamas with adjunct teaching appointments at Mississippi University for Women and at private Millsaps College in Jackson, MS. I returned to California in 1993 to accept a teaching post at Mt. San Antonio College (Walnut, CA) (Mt. SAC), where I met Janelle and 30 years later, we were married splendidly by Pat Abbott as officiant. Retiring from full-time teaching at Mt. SAC in 2010 allowed me to happily accept invitations to teach sedimentary geology at CalPoly Pomona and at San Diego State until 2015. I remain active in the geoscience community as managing editor for Pacific Section, Society for Sedimentary Geology (PS-SEPM); with field work in southern Utah, southern Nevada, the Bahamas, and Grand Canyon; leading field trips for the Utah Geological Association, GSA, PS-SEPM, SDAG, and the SDSU Geo-alums; and presenting research at meetings of SDAG, GSA, Desert Symposium in Zzyzx, and Gerace Research Institute on San Salvador Island, the Bahamas.

Newly Discovered Tetrapod Bones, Insect Trace Fossils, & Eolian Adhesion Structures- Upper Pennsylvanian Wescogame Formation, Supai Group, Grand Canyon, Arizona

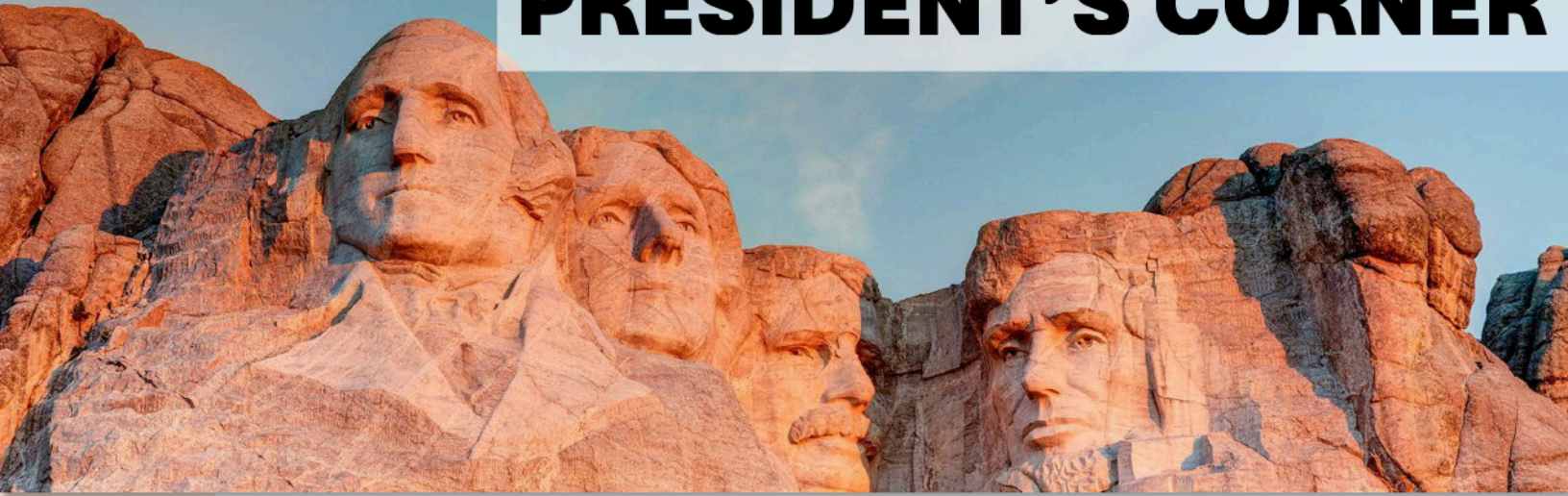
My ongoing sedimentologic field studies have yielded additional information on the Upper Pennsylvanian Wescogame Formation, one of four lithostratigraphic units that comprise the Pennsylvanian-Permian Supai Group in the Grand Canyon. A detailed stratigraphic section of the Wescogame Formation, measured and described along the South Kaibab Trail, revealed tetrapod limb bones, new invertebrate trace fossils, and eolian adhesion structures. The Wescogame is mainly a ledge- and slope-forming succession of reddish-brown, plane- and ripple-laminated mudstones and silty, very fine- to fine-grained sandstones of fluvial origin. Interlayered with fluvial strata are two cliff-forming intervals, several meters thick, of tan, very fine- to medium-grained eolian sandstones. Cross-bed sets therein are no more than 4 m thick and are composed of ripple and grainfall foresets. Distinct eolian ripple laminations form cross-bed bottomsets and possible interdune strata of variable thicknesses. Conspicuous vertebrate footprints have long been recognized in eolian sedimentary rocks in the Supai Group and in the Permian Coconino Sandstone in the Grand Canyon. Silicified limb bones reported here in the Wescogame Formation are likely the first body fossils of terrestrial vertebrates noted from Paleozoic rocks in the Grand Canyon. They are preserved in a lenticular, silty, very fine-grained fluvial sandstone.

Wavy, intersecting ridges, < 1.0 cm high, trend consistently down-dip on and parallel to eolian grainfall foresets and are epirelief

structures made just below the sandy dune surface. Their physical form and resemblance to trace fossils of the ichnogenus, *Entradichnus*, described by others from the Middle Jurassic Entrada Sandstone of eolian origin in east-central Utah. They have been interpreted as tunnels burrowed by crane-fly larvae that are known to inhabit modern eolian dune sand.

Common eolian ripple laminations in the Wescogame are interrupted by strata formed by uncommon eolian adhesion ripples. Modern eolian adhesion ripples form when loose dry sand is blown across a wet sandy surface and is trapped by and adheres to wet sand by capillary attraction. Ripple-like bedforms, a few mm tall, build up with steep "stoss slopes" facing upwind, in the direction of ripple movement, and with gentle "lee slopes" facing downwind. Such a configuration is in contrast to that of normal wind (and water) ripples, of which gentle stoss slopes face upcurrent and steep lee slopes face downcurrent in the direction of ripple movement. As eolian adhesion ripples migrate and climb against the wind, they deposit faint laminations, which mark the angle of climb into the wind. Because the faint laminations dip downwind, they deceptively appear as normal cross-strata deposited by dunes or larger ripples and are therefore classified as pseudo-crosslaminations. In the Wescogame Formation, steep "stoss slopes" of eolian adhesion ripples face north-northeast and pseudo-crosslaminations dip south-southwest in directions that are consistent with north-northeast winds that blew across this part of proto-North America during Pennsylvanian time.

PRESIDENT'S CORNER



Hello SDAG Members!

In June, we had another great meeting held at Marina Village in our favorite Catalina Room! Filled with sunset views over the marina and great conversations, while enjoying a Hawaiian buffet! Thank you again, Rachel Maxwell, for coming down from Oakland and educating us on the importance of understanding spring-aquifer connectivity in the Mojave-Sonoran Desert using different forensic tools, which in turn assists in making better informed groundwater management decisions. Special shout out to John Teasley for recording the presentation, which is now available on our website!

Next, I have some exciting and important updates for the Annual SDAG Field Trip held this **September 26th to 28th**! First, there are only 2 spots remaining! If you're interested in attending or would like more information, either reach out to me or check out the Announcements on the SDAG website. Once we reach 50 paid attendees, I will send out an email to let you all know that registration is full. Second, the field trip guidebook has been designed and is going to the printer any day now!! Exciting times!

Up next is our August 20th meeting at Sunbelt Publications down in Chula Vista, where we will indulge in delicious fresh wood-fired pizzas!! Our speaker will be Dr. Mario Caputo, who will give a presentation on "*Newly Discovered Tetrapod Bones, Insect Trace Fossils, & Eolian Adhesion Structures- Upper Pennsylvanian Wescogame Formation, Supai Group, Grand Canyon, Arizona.*" You're not going to want to miss his presentation!

Also, anyone who attends this meeting at Sunbelt will have an opportunity to stock up on any SDAG books and receive a 40% discount, all other new books receive a 20% discount, and they will have a 50% off Bargain Gem area with a variety of books available!! If that wasn't enough, there will also be a sign-up for Pat Abbott's *Rise and Fall of San Diego 2nd edition* and a 20% discount will apply to pre-orders!

Just a friendly reminder Wednesday August 13th is the last day to sign up!

Thanks, and see you all at the August 20th Meeting!!

-Heather Reynolds
2025 SDAG President



2025 Upcoming Meetings

DATE	SPEAKER & TOPICS
September 26-28	SDAG Annual Field Trip, San Andreas Fault in the Wrightwood area, Transverse Ranges (no meeting this month)
October 15	Todd Wirth on "First report of marine invertebrate megafossils from the Eocene Mount Soledad Fm at Tourmaline Surfing Park" Held at the Marina Village – Catalina Room.
November 20 <i>Thursday</i> SDAG/AEG-IE Joint Meeting	Eldon Gath on "San Joaquin Hills, Santa Ana Mountains, Puente Hills, and the Whittier fault: The final(?) grand theory of Orange County's tectonic geomorphic evolution" to be held at The Old Spaghetti Factory in San Marcos.
December 17	Traditional Holiday Celebration at the San Diego Natural History Museum with Tom Deméré

VOLUNTEER OPPORTUNITIES

If you are interested in the structure of SDAG/SDGS, serving as a SDAG Officer, or serving as a Director, please see attachment at the end of the newsletter.

Current SDAG Officer Opening 2025 Vice President

If you are interested in serving as the 2025 SDAG Vice President, please contact the current

SDAG President

Heather Reynolds

heather@sandiegogeologicalsociety.org



SAVE THE DATE

UPCOMING FIELD TRIPS

2025 SDAG Field Trip Sept 26–28

Don't miss your chance to explore the **San Andreas Fault** with expert geologists in the beautiful **Transverse Ranges!**

Deadline to register:

Friday, September 5 (or when full!)

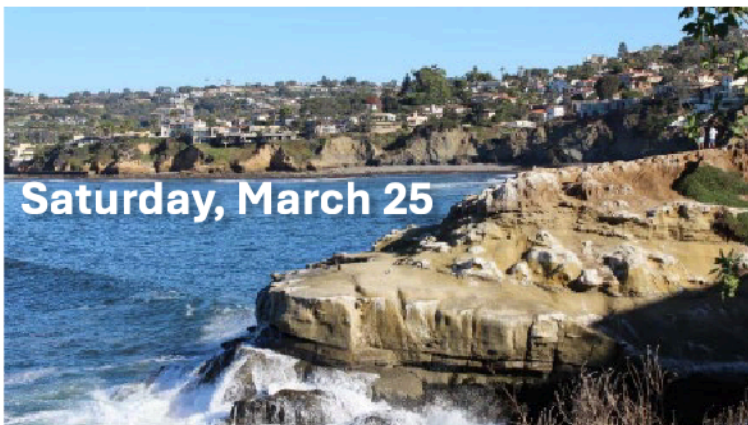
Registration form attached with full details

Pay via PayPal (QR code on form, pg 3)

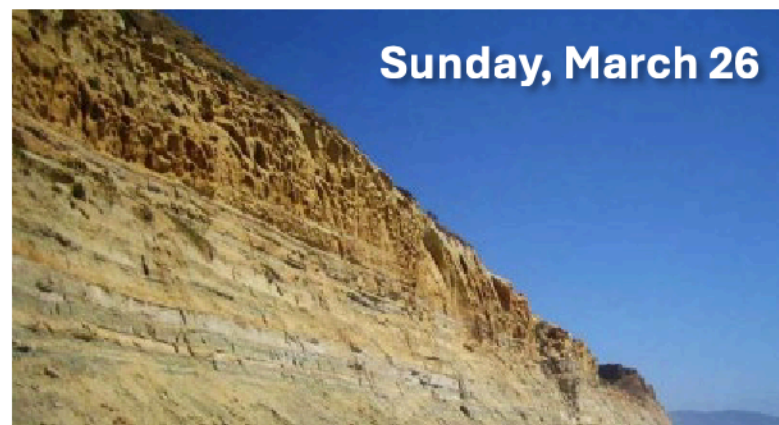
Email your completed form, signed waiver & payment confirmation.

PACIFIC SECTION SEPM FIELD TRIP | March 25-26, 2026

Trip leaders: Pat Abbott with co-leaders Ron Kies & Bill Bartling



Examine all phases of a SUBMARINE FAN in beach cliff exposures of Late Cretaceous (Campanian) strata in La Jolla and Pacific Beach, California. We will "wade through" Cretaceous 1) tidal-channel deposits, 2) see dramatic deepening from 1m to 1km deep water, then take close-up looks at 3) basin plain, 4) outer submarine fan, 5) mid-fan, and 6) inner-fan valley strata.



Walk below 100m high cliffs along Torrey Pines Beach in La Jolla. Examine Eocene lagoonal and tidal-flat deposits that are cut by the north wall of an Eocene SUBMARINE CANYON. Continue walking south and see the lateral coarsening of sediment infill as a prograding alluvial fan delivered ever-coarser sediments into a widening submarine canyon. Added bonus of Paleocene/Eocene Thermal Maximum strata.



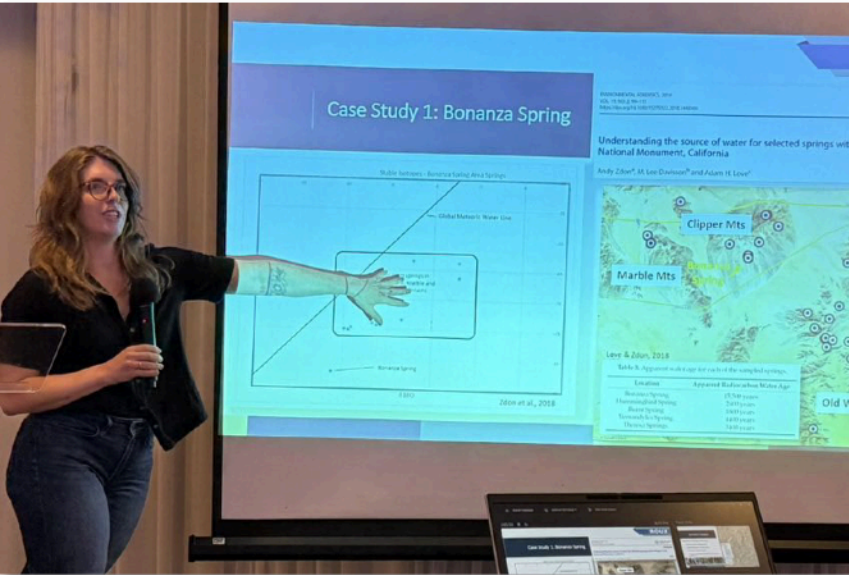
SDAG | July Meeting Recap

What An Exciting Night!

What a perfect venue for a Hawaiian-themed event!

Thank you to Norrie Robins for donating the books and maps—it was so much fun digging through all those treasures. And thank you, Ms. Rachel Maxwell, for such an *insightful* talk about the importance of spring monitoring and data collection in regions like the Mojave–Sonoran Desert.

Our members had so many questions! We look forward to seeing you at our next meeting!

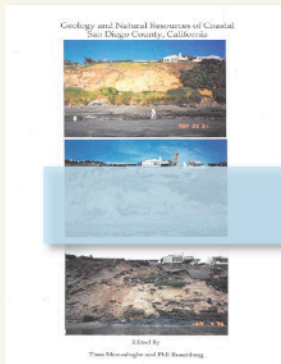




SDAG | Publications

The SDAG publication page includes links to in stock books we sell thru Sunbelt Publications, out of stock books we sell thru Google Play Books, and out of stock books that we provide free as scanned copies to download.

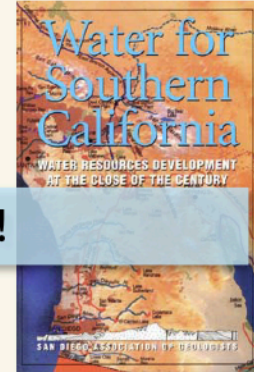
FIELD TRIP GUIDES & RESEARCH REPORTS



Geology And Natural Resources Of Coastal San Diego County, CA (1996)

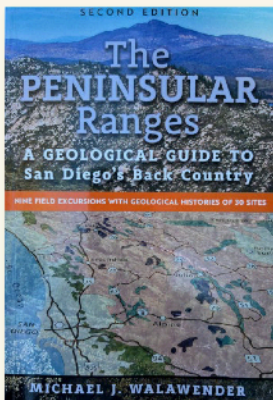


Geology And Geothermal Resources Of The Imperial And Mexicali Valleys (1998)

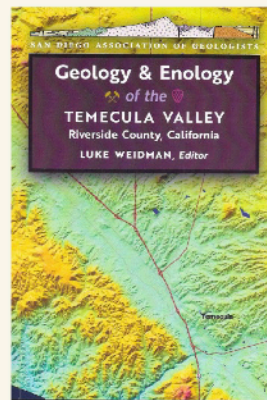


WATER FOR SOUTHERN CALIFORNIA: Water Resources Development (1999)

Now available as eBooks!



The Peninsular Ranges: A Geological Guide to San Diego's Back Country 2nd Edition



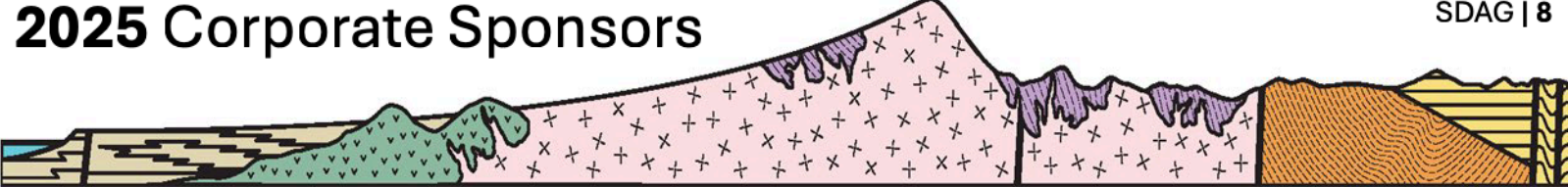
Geology & Enology of the Temecula Valley Riverside County, California 2nd Edition



On the Manner of Deposition of the Eocene Strata in Northern San Diego

FREE GUIDES AVAILABLE FOR DOWNLOAD

- [1972 Otay Mesa](#)
- [1977 SW San Diego](#)
- [1978 Coronado Islands, BC](#)
- [1979 San Diego Region](#)
- [1987 Julian Gold](#)
- [1981 Geologic Investigations of the San Diego Coastal Plain](#)
- [1982 Geologic Studies in San Diego](#)
- [1985 Eocene in San Diego](#)
- [1989 Fault Features: La Jolla - Ensenada](#)



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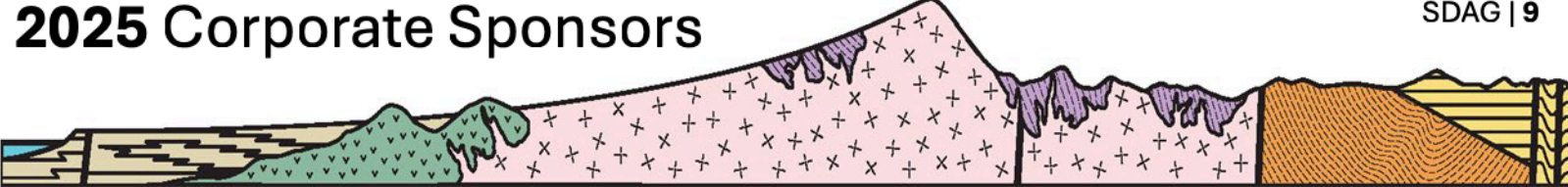
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