

CGS Monthly Meeting
(NEW LOCATION)

Tuesday November 20, 2007, beginning at 6:00 PM

Biedermann Hall at Sacred Heart Church - 10800 Henderson Road, Ventura, CA 93004

**"Evolution of the Colorado River: Culmination of a Major Cenozoic
Transformation of SW North American Drainage Patterns"**

presented by:

Marty Grove, UCLA



MEETING INFO: 3RD TUESDAY OF EVERY MONTH (DARK IN JULY & AUGUST)

BIEDERMANN HALL AT SACRED HEART CHURCH

10800 Henderson Road, Ventura, CA 93004 - Location is off Hwy 126 at Wells Road/Route 118 Exit

(See the MAP at the end of this Newsletter for directions.)

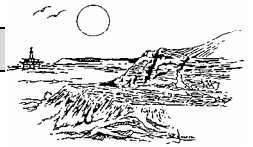
Reservation Deadline: 4:00 PM on THURSDAY before the meeting.

E-mail Reservations to: Christine White at cwhite@dcorllc.com or visit the CGS website

*****Please specify your dinner choice: Tri-Tip, BBQ Chicken or Vegetarian Lasagna,**

Social Happy Hour - 6:00 p.m., Dinner - 7:00 p.m., Speaker – 8:00 p.m.

\$18 – With Reservation, \$20 - Without Reservation, \$ 10 - For Students and K-12 Teachers

**Abstract:**

The Colorado River is a large, youthful, unequilibrated continental drainage system that was established abruptly between 5 and 6 million years ago in conjunction with Gulf of California rifting and establishment of the modern river course through the western Grand Canyon and lower Colorado river region. New detrital zircon U-Pb analyses provide insight into details relating to the cause, timing and consequences of river inception. These samples encompass (1) the modern Colorado River delta, (2) major tributaries including the Green, "Grand", San Juan, Little Colorado and Gila rivers (3) late Miocene to Pliocene sediments along the lower Colorado (4) late Miocene to Pleistocene deltaic and fluvial sediments of the Imperial and Palm Spring Groups in the western Salton Trough, and (5) late Miocene- early Pliocene Bidahochi Formation of eastern Arizona. Data from the western Salton Trough and modern delta yield strata yield remarkably homogeneous age distributions that indicate there was little evolution in Colorado River sediment composition since 5.3 Ma. Detrital zircon is dominated by a mix of local southwest US cratonal basement (1.7 and 1.4 Ga) plus reworked supracrustal sequences of the Colorado Plateau that provide Neoproterozoic, 1.1 Ga, and early Paleozoic zircons. The strong homogeneity of the detrital zircon record from late Miocene to the present combined with the fact that the most easterly tributaries most strongly resemble the delta is consistent with the 'lake spillover model' for inception and integration of the modern Colorado River drainage. Abrupt integration of the lower Colorado River after 5.6 Ma is clearly recorded by detrital zircon ages from the laucustrine Bouse Formation and Bullhead alluvium aggradational package. Fluvial-lauustrine deposits of the Bidahochi Formation may represent a lake that overtopped the Kaibab upwarp to initiate western Grand Canyon incision.

Biographical

Marty Grove is a southern California native who earned his PhD from UCLA in 1993 by developing and applying thermochronologic approaches to better constrain the tectonic and thermal evolution of mid-Cretaceous accretionary and batholithic rocks of southwestern North America. He currently manages the national ion microprobe and noble gas facilities at UCLA and is involved in solving tectonic problems worldwide.

RESERVATIONS: E-mail Christine White at cwhite@dcorllc.com or visit the CGS website by the Thursday before the meeting at 4 pm. Please include name and menu choice (Tri Tip, Chicken, or Vegetarian Lasagna) for each person attending. If you don't make a reservation, it's possible there will not be a meal available for you the day of the meeting.

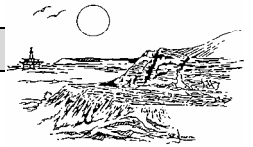
MARK YOUR CALENDAR:**• Upcoming CGS meetings:**

December 18, 2007: Tom Rockwell - TBA

January 15, 2008: Jonathan (Yonni) Schwartz - Geomorphic Processes along the Coastal Cliff, Central Coastline – Israel

UPCOMING EVENTS:

- **Santa Barbara Geologists Monthly Luncheon:** November 8, 2007 11:00 am for Social Hour, 12:00 noon for Lunch. "Our Energy Future" will be presented by Bill Korchini. Contact Laura at 805-684-1638 by 12:00 Noon on the Wednesday before the meeting to RSVP.
- **Oxnard Gem & Mineral** presents its 38th Annual Gem, Mineral & Jewelry show on November 17-18, 2007 at the Oxnard Performing Arts center, 800 Hobson Way, Oxnard. http://www.ogms.net/OGMS_2007_Show.htm. API-Coastal Chapter has sponsored the Rock Box Project in 2006 & 2007. Volunteers from the Oxnard, Conejo, & Ventura Gem & Mineral Societies have collected & prepared mineral samples, and constructed the cases and documentation for these collections. For the past 8 months members of the Rock Box committee have delivered these, free of charge, to local schools and libraries. A Rock Box collection will be on display at the show. http://www.ogms.net/Rock_Box.html
- **API Christmas Dinner & Dance,** December 7, 2007 6pm, The Pierpont Inn, 550 Sanjon Rd, Ventura. Get your reservations in early to reserve a spot. <http://www.api-coastal.org>.



• SPE Western Regional and Pacific Section AAPG Joint Meeting: “Adding Reserves Through Collaboration, Innovation and Technology Transfer” March 31-April 2, 2008 in Bakersfield, CA. Abstract Deadline is November 30, 2007. Contact Allen Waggoner at jwaggnr@wziinc.com or www.PSAAPG.org for more information.

• 2008 Desert Symposium Field Trip: April 19-21, 2008, “Development of the Colorado River and its entry into the Salton Trough.” The field trip will explore geographic extent of the Bouse Formation and contrast fresh water deposits with deposits containing marine fossils. Examine sediments at Anza-Borrego that indicate when the Colorado River entered the Salton Trough. Drive from eastern Mojave Desert pinon-juniper plateaus to the Sonoran vegetation of the Colorado Desert. Contact wpresch@fullerton.edu more information.

ANNOUNCEMENTS:

Woolley Golf Tournament Summary: There were a record 132 golfers on a beautiful Fall Day and approximately \$7,000 was raised for CGS Scholarships. Imelda Cragin won the Special Raffle for a trip to Santa Rosa Island! Big thanks are in order for the event volunteers:

- **Donnalee Simmons** (awesome job with the raffle!)
- **Leni Field** (who stuffed carts and helped Muriel stay sane at the check-in counter)
- **Muriel Norton** (who has counted and recounted the money too many times!)
- **Patti Davis** (ran the putting contest with a smile!)
- **Karen & Bob Phipps** (greeted and processed players at check-in—thanks again mom & dad!)
- **Joanna Nygren** (who told everyone how good they looked with those Sundogs on)
- **Maia Davis** (cart stuffer)
- **And many others....thank you!**

NOTE: If you're a college instructor with publishers' sample textbooks and lab books stacking up in your office, here's a wonderful solution for recycling them. **Debbie Bereki**, who is the Museum Educator at the California Oil Museum, is doing outreach work with teachers. She has found that giving sample college textbooks to K-12 teachers can make an immediate positive impact on the quality their teaching. She has started a program called '**Textbooks For Teachers**' and asks for your help. Please bring your basic sample textbooks (published since 2000) and lab books to the CGS meeting and Debbie will make sure they get to K-12 teachers. For info, contact her at dbereki@ci.santa-paula.ca.us

Interesting Website: A geological perspective on Climate change / Global warming: <http://www.scotese.com/climate.htm>

CGS MEMBERSHIP: CGS membership is through Pacific Section AAPG.

Be sure to select **Coast Geological Society** as your local affiliated society.

To join CGS, please go to: www.psaapg.org/member.html

CGS OFFICERS DIRECTORY:

President: **Bob Ballog**, Hueneme High School 805.498.6294/805-402-1173, president@coastgeologicalsociety.org

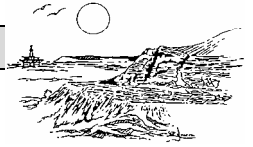
PastPres: **John Minch**, Santa Barbara Museum of Natural History. 805.682.4711 x137,
ppresident@coastgeologicalsociety.org

Vice-Pres: **Bill Bilodeau**, California Lutheran University, 805.493.3264, vpresident@coastgeologicalsociety.org

Treasurer: **Muriel Norton**, Subsea Systems USA 805.658.1550, treasurer@coastgeologicalsociety.org

Secretary: **Christine White**, DCOR, LLC 805.535-2074, secretary@coastgeologicalsociety.org

Webmaster: **Geoff Faneros**, Geoloabs 805.320.3973, webmaster@coastgeologicalsociety.org



NOTICES

1. *No-Cost* Employment Announcements (Help Wanted & Job Wanted) are available on our website! Also, business card ads and employment ads available in the newsletter! Contact secretary@coastgeologicalsociety.org
2. Do you have current announcements or are you looking for general information on the local geological community? Check out CGS' new Electronic Bulletin Board on the website. Submit your announcements and contact information to the secretary@coastgeologicalsociety.org
3. If you forward the email notice to another party, cc: secretary@coastgeologicalsociety.org in the email, we will put your party on the monthly notification list. There is no cost to receive CGS email notifications.
4. Buy your raffle tickets! Money generated goes toward scholarships, field trips, etc., to promote the advancement of Geosciences. Check the CGS supported activities on our website (3 Tickets for \$1).
5. Always needed: **Sponsors for our meetings!** Sponsors get a beautiful colored banner hung at the meeting, and the opportunity to distribute their literature and introduce their businesses, as well as the satisfaction of having supported a great organization! Sponsorships are \$300 per meeting and may be shared between two individual sources. Contact vicepresident@coastgeologicalsociety.org for info.

MEETING PLACE: MAP AND DRIVING DIRECTIONS

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