



May 2008

Los Angeles Basin Geological Society Newsletter

May 22, 2008 Meeting: Dr. Rick Behl of CSULB

Will speak on . . .

“Sailing through Underseas Fold and Thrust Belts for Fun and Science”

Speaker Synopsis / Abstract

This is a two-part presentation to kick off the summer season.

The first part will be about the use of active tectonics in the Santa Barbara Basin to extend the highest-resolution paleoclimate record ever recovered from the ocean, a million years farther back in time. The second part is a travelog of a sailing adventure through the Dalmatian Coast of the Adriatic Sea, where an extensive fold and thrust belt breaks the sea surface as a thousand sun-drenched islands among the ruins of ancient Roman and Byzantine empires.

Ocean Drilling Program (ODP) Site 893 located in Santa Barbara Basin has provided one of the highest-resolution continuous climate records of the late Quaternary ever recovered from the world's oceans. Isotopes, microfossil and sedimentology of these sediments show a remarkable correlation of climate change between the Pacific Rim and the high-resolution Greenland ice cores. The Santa Barbara record indicates that the atmosphere and oceans responded both rapidly and dynamically to short-term climatic oscillations. Unfortunately, ODP Site 893 was only drilled to a depth of 200 meters below the seafloor, which goes back to ~160 ka.

This spectacular record exists because Santa Barbara Basin is situated in the middle of a young, active fault-and-fold belt. Where most paleoceanographers avoid areas of tectonic disruption, we have embraced them. Detailed mapping of high-resolution multichannel seismic (MCS) reflection data and stratigraphic correlation with existing well data, indicate that continuous Quaternary strata originally deposited in the deep basin were subsequently uplifted, folded, and in places eroded across young, active fault-related fold

structures in the eastern Santa Barbara Channel. These older strata are exposed at or near the seafloor, where they are now accessible to shallow piston coring. In 2005, we were able to systematically recover substantial sections of many of these older late-Quaternary sedimentary sequences back to about 700 ka and found climatic behavior that has not been observed anywhere else in the world. We will use this methodology to extend the spot record back to 1.2 Ma to test the hypothesis that climatic sensitivity intensified at the Mid-Pleistocene Transition (~800 ka) and to make the case for continuous coring by the new Integrated Ocean Drilling Project.

The Dalmatian Islands, located off the coast of Croatia in the eastern Adriatic Sea, are part of the Outer Dinarides fold and thrust belt. This tectonic regime is part of the Alpine-Carpathian-Asian closing of the Tethys Sea and involves deformation of predominantly Cretaceous miogeoclinal carbonate sediments over incompetent Jurassic-Cretaceous evaporites. The folded and faulted limestones have been uplifted out of the Adriatic foreland to form the golden Dalmatian Islands. These islands and the adjacent Dalmatian coast of Croatia (across from Italy) have been the provinces over which the Illyrian, Greek, Roman, Byzantine, Venetian, Ottoman, Hungarian, Austrian and other empires waxed and waned. After collapse of communist Yugoslavia, and recovery from the Bosnian-Serbian war, the Dalmatian coast has become the favorite sailing playground of Europe, with beautiful islands, perfect winds, enchanting ancient villages, and excellent food and wines. Just like Santa Barbara, none of this would exist without active tectonics.

Hurray for geology!!!!

Richard J. (Rick) Behl is Professor of Geological Sciences at California State

University Long Beach, where he is also on the faculty of the Environmental Sciences and Policy program, and a founding member of the Institute for Integrated Research in Materials, Environment, and Society (IIRMES), a teaching and research consortium of geologists, archaeologists, and biologists. Behl earned his Bachelors degree from UC San Diego, his PhD at UC Santa Cruz, and was a Post-Doctoral Fellow at UC Santa Barbara. He has participated in numerous international ocean coring expeditions, consults for the petroleum industry, and was an AAPG Distinguished Lecturer. His expertise is in sedimentary geology, particularly as it relates to the climatic, oceanographic, and tectonic evolution of the California margin and the Pacific Ocean. Behl's research focuses on the Quaternary Santa Barbara Basin and the Miocene Monterey Formation. Rick is also active in the development of educational resources and docent training in parks and facilities throughout the Los Angeles-Orange County region.

A GREAT TALK TO FIND OUT ABOUT GEOLOGY, SUMMER TRIPS AND MORE !!!

Meeting Time, Place, Cost and Reservations

Time:

Thursday, May 22, 2008

Typical Meeting Agenda

Lunch Served: 11:30 AM to 12:00PM

Announcements: 11:50 AM to 12:15 PM

Guest Speaker: 12:15 PM to 12:45 PM

Place:

The Grand at Willow Street Conference Center located at 4101 East Willow Street, Long Beach, CA. (562-426-0555). Take Lakewood Boulevard south from the San Diego Freeway (405), turn west onto Willow Street and turn right onto Grand Avenue at the sign for the Center. Park free in the garage structure.

Cost:

Lunch and Speaker: \$20.00 with reservations

\$25.00 without reservations

Student:

FREE (Lunch and Speaker)

Meeting Reservations:

Make your reservations using our web site at www.labgs.org, by calling Marieke at (562) 624-3364., or emailing Marieke_Gaudet@Oxy.com. **Reservations must be made prior to Tuesday** before the meeting, but walk-ons are always welcome.

Upcoming 2008 Speaker/ Event Schedule

May 22, 2008 – Dr. Rick Behl of CSUIB will talk about "*Sailing through Underseas Fold and Thrust Belts for Fun and Science*".

Summer break

Sept 25, 2008 – To be announced

If you have a speaker suggestion, please mention it to a Board member !!

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The LABGS Don Clarke Award

The Don Clarke Brunton Award is given to a qualified student attending a LA Basin community college with the goal of getting an Associate degree, and enrolled with plans to pursue a baccalaureate degree in Geology or the Earth Sciences.

The Society is currently looking for a qualified applicant for the 2008 award. Check our website.

SELECTION PROCESS

The award winner is selected from candidates nominated by a faculty member at their original school. The winner is selected based on the following criteria:

- Grade point average in earth science classes.
- An enthusiastic or special recommendation from the advisor, department chair, or mentor professor

The LABGS Brunton Award

The LABGS Brunton Award is given to a qualified undergraduate student attending a four-year LA Basin College or University currently pursuing a baccalaureate degree in Geology or the Earth Sciences.

The Society is currently looking for qualified applicants for the 2008 award. Check our website.

SELECTION PROCESS


The award winner is selected from candidates nominated by a faculty member. The winner is selected based on the following criteria:

- Grade point average in earth science classes.
- An enthusiastic or special recommendation from the college advisor, department chair, or mentor professor

SEE THE WEBSITE FOR FORMS

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WE'LL BE THERE



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 www.epochwellservices.com • www.mywells.com

Student Sponsorship

Both Halliburton and Schlumberger are defraying the cost to the Society of our students-at-the-monthly meetings program. *Students are free at all meetings.* Thank you.

TOTY

The LABGS Teacher of the Year (TOTY) Award nominations are closed and the winner is Karla Tucker. The TOTY is a \$250 award for a teacher with 3+ years experience in K-12, who teaches at least one unit per year in the natural resources.

Please see this newsletter, or our website www.LABGS.org, for more details.

Congrats Karla !!

LABGS Elections

It is time again for the LABGS elections. Member involvement in this process is very important. Volunteers are crucial to this non-profit organization. Please contact a Board member today. The ballot is out in this newsletter so please respond now. We will hold a handcount at the May meeting and include the ballots received to date.

And by-the-way Marieke is staying with OXY-THUMs and will be able to finish her first year term as LABGS secretary/website guru.

Renew Your Annual Dues and Address Changes

The Pacific Section AAPG and LABGS operate on a fiscal year from July 1 to June 30. If you are a current member, you will receive a PSAAPG membership renewal notice this month in the mail. Please note, when you renew you are renewing for both LABGS and PSAAPG (for one low price of \$12).

If you haven't done so, take this opportunity to send in a check *and* update your mailing information. New PSAAPG directories are now available and will be included in your dues for the next fiscal year (the directory is one of the key benefits of joining the LABGS through PSAAPG).

Contact Us – The LABGS Board

President: Jon Kuespert (213) 225-5900 x 224
jkuespert@breitburn.com

Program Chair: Bill Long (213) 225-5900 x 205
William.long@breitburn.com

Treasurer: Jean Kulla (949) 500-3095
k2mobile@MSN.com

Secretary: Marieke Gaudet (562) 624-3364
marieke_gaudet@oxy.com

OUR WEB SITE ADDRESS IS:
www.labgs.org



President's Note

To all our members,

The National AAPG Convention in San Antonio, TX was great. The turnout was high (more than 7000), the talks were great, and many new people were there.

At the April meeting Dr. Joann Stock of CalTech gave us a talk on "*Plate Tectonics and related Boundaries*". We had a great turnout and lots of questions!

And LABGS, PSAAPG and National AAPG Elections are now!! Please vote.

At the May meeting we will have a hand vote for the election. These will be combined with the paper votes for a total result.

Thanks!

Jon

**Election for LABGS positions
2008- 2009**

**Talk Topics
(choose 4)**

For the position of President

Jon Kuespert

Other _____

For the position of VP/ Program Chair

Bill Long

Other _____

For the position of Treasurer

Jean Kulla

Other _____

For the position of Secretary/ Web Guru

Marieke Gaudet

Other _____

Astronomy

Atmospheric Science

Basic Geology

Environmental Geology

Missions to Jupiter/Mars/Saturn

Ocean Exploration

Planetary Geology

Physical Oceanography

Remote Sensing

Seismic Acquisition/Interpretation

Solid Earth Geology

Vendor Technology

Other Choice . . .

Fold, stamp (*thank you*) and mail to:
Jon Kuespert, c/o BreitBurn Energy,
515 So. Flower St., Los Angeles, CA 90071

Or

Please bring to the May meeting



Los Angeles Basin Geological Society Membership Form

Join the LABGS and become a member of the Pacific Section AAPG all for one low price of \$12.00 per year - 2 West Coast Geoscience Organizations for the price of one



Membership Benefits

- LABGS Membership
- Monthly Luncheon Meetings with Strong Technical Programs
- Pacific Section AAPG Membership
- Pacific Section AAPG Bi-Monthly Newsletter
- Discounts for PSAAPG Bookstore Publications
- Bi-Annual West Coast Geoscience Directory - *next edition 6/03*
- Networking and Social Opportunities with Fellow Geoscientists

Current Annual LABGS/PSAAPG Dues

1 Year Option = \$12.00 \$ _____
3 Year Option = \$36.00 \$ _____

Extended E-Mail Announcement List Fees

To receive meeting notices from SJGS and CGS
1 Year Option = \$12.00 \$ _____
3 Year Option = \$36.00 \$ _____

PSAAPG Foundation Contributions

B. Hacker Publication Fund \$ _____
Martin Van Couvering Fund \$ _____
Dibble Map Foundation \$ _____
California Well Sample Repository \$ _____
John Kilkenny Scholarship Fund \$ _____
PSAAPG Foundation Trust Fund \$ _____

TOTAL PAYMENT

Total Amount Enclosed \$ _____

Essential Member Information

Last Name _____
First Name _____
Middle Initial _____
E-Mail Address _____
Mail Address _____
Res or Bus ? _____

Additional Directory Information

Employer _____
Position / Title _____
Bus Phone # _____
Res Phone # _____
Fax Phone # _____
Spouse's Name _____
Education *Highest Degree* _____ *Year* _____
School _____

Signature _____

Annual membership is handled through PSAAPG and runs from July 1, through June 30. If you are already a current member of PSAAPG and you selected LABGS affiliation you are already a member of the LABGS.

**Please Make Checks out to PSAAPG and mail along with member form to:
PSAAPG P.O. Box 1072, Bakersfield, CA 93302**