



February 2017

LOS ANGELES BASIN GEOLOGICAL SOCIETY MEETING ANNOUNCEMENT

February 23 (Thursday) – 11:30 AM

Raymond (Ray) Ingersoll
UCLA Earth, Planetary, and Space Sciences

NEW DEVELOPMENTS IN RECONSTRUCTING SOUTHERN CALIFORNIA

Abstract

Southern California is a critical component in paleotectonic models for: (1) evolution of the USA-Mexico Cordillera, (2) interaction of continental and oceanic plates, and (3) relations between subduction and transform processes during the Mesozoic and Cenozoic. Detailed palinspastic reconstruction of both offshore and onshore components of the diverse and complex settings of southern California is essential in order to test paleotectonic models for the evolution of the broader region.

The unique geologic history of southern California may be described in terms of distinct phases of tectonic development that resulted in corresponding distinct tectonostratigraphic sequences. Steep-slab subduction of the Farallon plate characterized most of the Cretaceous until flat-slab subduction of the Laramide orogeny occurred (80-40 Ma). As the subducting Farallon plate was rolling back following the Laramide orogeny, the Pacific plate first came into contact with the American plate in southern California (soon after 30 Ma). Two triple junctions then traveled in opposite directions along the continental margin. The southern triple junction had a complex history that included three distinct stages of capture of Farallon microplates and contiguous parts of the North American plate. These three microplate-capture events resulted in transrotation (18-12 Ma), transtension (12-6 Ma) and transpression (6-0 Ma) in the Los Angeles region.

Reconstructing this complex history is an extraordinarily challenging and rewarding endeavor.

New models based on both existing and new data are producing exciting new insights, as we'll learn.

Speaker's Biography

Ray is a New York native. His undergraduate education was at Harvard University, where he obtained his AB in Geological Sciences in 1969. He obtained his MS and PhD from Stanford University in 1974 and 1976, respectively. This was a seminal period for sedimentary tectonics, during which Ray established his research themes involving the sedimentological, compositional, and geochemical fingerprints of magmatic arc evolution in California and across the circum-Pacific.

Ray's academic career as a professor began at the University of New Mexico, where he found himself in the Rio Grande rift and Laramide orogenic belt. His focus there included the geology and rift sedimentation of the Rio Grande. In 1982, he joined the faculty at UCLA, where he delved into the complex history of the extensional basins of the Basin and Range and Transverse Ranges. He has performed many complex stratigraphic and tectonic studies across California and Nevada while at UCLA. He is an established authority in the fields of sedimentation and tectonics, and a prolific writer with over 130 publications that include several about the study of sedimentary basins. He has also supervised more than 40 graduate theses while at UNM and UCLA, and he continues to inspire young geologists to tackle complex problems.

***Come and enjoy this very interesting talk
about the reconstruction of our state!***

Meeting Time, Place, Cost, and Reservations

When:

Thursday, February 23, 2017

Meeting Agenda

Lunch Served: 11:30 AM to 12:00PM
Announcements: 11:45 AM to 12:00 PM
Guest Speaker: 12:00 PM to 12:45 PM
Questions/Close: 12:45 PM to 1:00 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 (I-405), turn west onto Willow Street, and turn right onto Grand Avenue at the sign for the Center. Park for free in the multi-level garage structure.

Cost:

Lunch and Speaker: \$25.00 *with reservations*
\$30.00 *without reservations*
Retired: \$20.00
Student: \$5.00

PAYMENTS IN CASH OR CHECK ONLY

Meeting Reservations:

We encourage you to make your reservations using the LABGS web site, at www.labgs.org

Otherwise, call Ryan Weller at (562) 637-6019, or e-mail ryweller@gmail.com.

Reservations must be made by:

10:00 AM Tuesday February 21st to receive the discount price noted above.

As always, walk-ins are welcome.

Student Sponsorship

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If you or your business/organization would like to become a Student Lunch Sponsor please let us know.

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