

Inland Geological Society

April 2009

Newsletter of the Inland Geological Society

Volume 25 No. 4

This Meeting:
Wednesday,
April 1st

Time:
Social: 6:00pm
Dinner: 6:30pm
Lecture: 7:00pm

Location:
LSA Associates
1500 Iowa Ave
Suite 200
Riverside, CA
92507
(Map on Pg.4)

Coming to
Dinner?
Please RSVP:
By Friday 3/27
(951) 782-3295
dlass@
waterboards.ca.gov

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April Speaker:

Dr. Kim Bishop

California State University, Los Angeles



Re-interpretation of the 1872 Owens Valley Fault Rupture and a New Model for the Neotectonics of the Northern Owens Valley

Abstract

The 1872 Owens Valley earthquake is inferred as one of California's three largest historic earthquakes. Rupture of the Owens Valley fault (OVF), a predominantly right-lateral fault with lesser component of east-side down slip, created the event. All previous studies have stated that the OVF rupture extended from Owens dry lake on the south to a point north of the city of Big Pine. However, I propose from two lines of evidence that these studies are wrong and that the Big Pine segment, which forms the northernmost 20 km of the OVF, was not involved in the event. The evidence consists of the segment's geomorphic condition along with the presence of a thick rock varnish coating developed on basalt across the scarp at Crater Mountain. Lack of 1872 rupture, as well as the fact that the Big Pine segment does not connect to the OVF and may not have right-lateral displacement, suggests the possibility that the Big Pine fault is a separate structure from the OVF. This, in turn, allows for a new interpretation of the active tectonics in the area. It is proposed that right-lateral slip of the OVF is transferred to the White Mountains fault at a right-step near the Poverty Hills, rather than at the north end of the Big Pine fault as previously proposed. This new model is consistent with the notion

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that rock exposed as the Poverty Hills in the center of Owens Valley is a landslide deposit rather than a transpressional uplift.

Biography:

Dr. Bishop earned his Bachelor of Science degree in Engineering Geology from UCLA (1979), after which he earned Master's degrees in Civil Engineering from CSU Northridge (1985) and in Geology from CSU Los Angeles (1989). During the time he was working on his Master's degrees, he was employed full-time in engineering geology consulting, first with GeoSoils, Inc. in Van Nuys and then with Pacific Soils Engineering, Inc. in Harbor City. In 1993, Dr. Bishop earned a Ph.D. from USC, where his dissertation involved mapping and analysis to determine the tectonic history of the Poverty Hills/Silurian Hills area near Baker, California. In fall 1993, he joined the faculty at CSU Los Angeles and since then has been specializing in teaching structural geology, tectonics, and engineering geology. He is licensed as a Professional Geologist, Certified Engineering Geologist, and Professional Engineer with the State of California.

Tell us about what you have been working on!

Can you believe it is already 2009?! Before the time flies by us (any quicker than it already has), we want to schedule speakers for the latter half of this year!

Tell us what you have been working on!

Have been working on an interesting project at work?

Maybe you have been conducting research that you can share with us!

Are you a student and would like you share your senior project?
Your future employer may even be sitting in the audience listening!

Maybe you know of someone who would like to come and speak at a meeting!

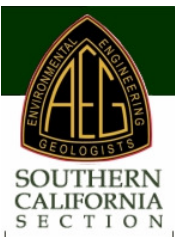
Please contact Steve Mains or Greg Johnson and get your name in the schedule!

Upcoming Meetings/Events

Rock & Gem Shows—Various locations

Various rock and mineral shows will be throughout southern California. To find one nearest you, visit www.rockngem.com/showdates.asp

AEG—Inland Empire Chapter Meeting



Dr. Ed Medley of Geosyntec Consultants in Oakland, CA and the GSA/AEG 2009 Jahns Distinguished Lecturer in Engineering Geology will be giving a talk at the April AEG meeting. The meeting will be **Wed., April 15, 2009** at Cal Poly Pomona. For more information, please visit www.aegsc.org/chapters/inlandempire/

2009 Ground Water Summit and Ground Water Protection Council Spring Meeting

This conference will bring together regulators, natural resource managers, practitioners and more to share knowledge and technology related to current water issues. The meeting will be **April 19-23, 2009** in Tucson, Arizona. For more information, visit <http://www.ngwa.org/>

SME—Southern California Section Meeting

Dr. Jonathan A. Nourse, Professor of Geological Sciences at Cal Poly Pomona, will be giving a talk on *Gold-Silver-Copper-Molybdenum Exploration Meets Structural Geology and Tectonics Along the Sonora Mineral Belt, Northwester Mexico*. The meeting will be **Tues., April 21, 2009** at the Pomona Valley Mining Co. Restaurant. For more information, visit www.smenet.org/

South Coast Geological Society



The speaker and topic is TBA. The next meeting will be **Mon., April 6, 2009** at the Doubletree Club Hotel in Santa Ana, CA. For more information, visit www.southcoastgeo.org

IGS Meeting Schedule

May 7, 2009 (Thursday)

Bob Reynolds, LSA Associates, Inc.
Stratigraphic Relationships in the Lower Barstow Formation

June 3, 2009 (Wednesday)

Lisa Pierce/Suzie Earp, Water Resources Inst.
Resources available at the Water Resources Institute at Cal State University, San Bernardino

July 2, 2009 (Thursday)

TBA

August 5, 2009 (Wednesday)

TBA

September 3, 2009 (Thursday)

TBA

October 7, 2009 (Wednesday)

TBA

November 5, 2009 (Thursday)

TBA

December 2, 2009 (Wednesday)

TBA

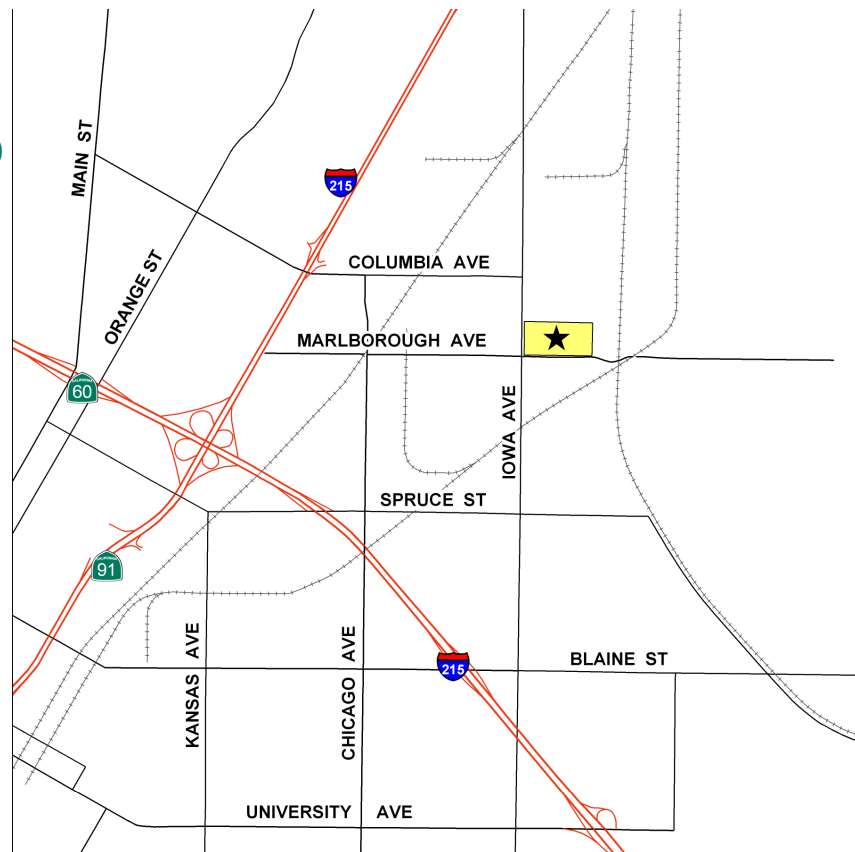
January 7, 2010 (Thursday)

Baird King, Student at UCR
A record of climate change in the Rock Creek drainage of the Eastern Sierra Nevada, California



IGS MEETING LOCATION:

**LSA Associates, Inc.
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Riverside, CA 92507**

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