

# Inland Geological Society

July 2013

Newsletter of the Inland Geological Society

Volume 29 No. 7

## This Meeting:

Tuesday,  
July 16<sup>th</sup>

### 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 Monday 7/12  
(951) 784-2168  
dixie.lass@att.net

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## **July Speaker:**

**Kevin Nguyen**

Graduate Student, University of California, Riverside

## **The Early Ocean and Life: A View from Australia 1.5 Billion Years Ago**

### *Abstract*

Understanding the nature of the mid-Proterozoic ocean redox is vital to unraveling the apparent biogeochemical stasis that defines an estimated one-billion-year interval and its relationship to the early evolution of eukaryotic life. The true geochemical nature of this “boring billion” remains poorly constrained, and many of the best data have come from the McArthur basin, Northern Territory, Australia. Specifically, black shales from the Roper Group Formation have emerged as one of the best windows to the mid-Proterozoic ocean. These rocks are well dated, minimally metamorphosed, and lie in the middle of this key interval. In addition, paleogeographic data suggests a relative strong connection to the open ocean; therefore conditions in the Roper basin may reflect the redox state of the broader ocean margin.

The aim is to generate a high resolution geochemical history captured in the samples from the Roper Group obtained by drill core. In order to access the oxygenation spatial-temporal variability, we have used a multi-geochemical proxy

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approach which include a high-resolution elemental concentrations and isotopes. Preliminary data suggests that the Roper, in contrast to previous claims, was not widely sulfidic—consistent with an emerging view that limits the spatial extent of mid-Proterozoic euxinia.

**Biography:**

Kevin Nguyen is a second-year graduate student in geology from the University of California, Riverside. He earned his B.S. in Chemistry, also at Riverside and is currently pursuing an M.S. in Geology/Geochemistry; he will complete his degree by the end of this year.

Kevin has worked as a research assistant for a number of years, starting at the Bourn's College, Center for Environmental Research and Technology (CE-CERT). There, he worked with Dr. David Cocker and Dr. Tom Durbin, who investigated the role of atmospheric secondary organic aerosol (SOA) and Vehicle Emissions Research, respectively. After his job at CE-CERT, he pursued research with Dr. Yadong Yin where he collaborated with Zhenda Lu in creating controllable multi-functional beads. His collaboration yielded a paper in the journal of *Langmuir* (2011). Kevin is now researching the Precambrian biosphere with Dr. Timothy Lyons, where he combines his passion for environmental chemistry and curiosity for geology to investigate the nuances of the mid-Proterozoic—a time period noted for its long biogeochemical stasis. Data generated from this research can shed light on the geochemical nature that took place during this interval. Ultimately, he will examine the broad coeval water-column redox structure through analysis of other cores.

## Recent College Graduates Seeking Employment

**Breeanna Copeland**

B.S. in Geology, California State University, San Bernardino, 2013  
G.I.S, California State University, San Bernardino, 2013  
Email: bpcopeland91380@gmail.com

**Joseph Berg**

B.S. in Geology, California State University, San Bernardino, 2013  
Outstanding Undergraduate Student, Geology Department, 2013  
Email: geidoberg@gmail.com

**Nicole La Face**

B.S. in Environmental Sciences, University of California, Riverside, 2013  
Email: nlafa001@student.ucr.edu

**Rainer Luptowitz**

B.S. in General Geology, California State University, San Bernardino, 2013  
B.S. in Environmental Geology, California State University, San Bernardino, 2013  
M.S. in Geological Sciences, University of California, Riverside, Expected completion: June 2015  
Email: rluptowitz@gmail.com

## Upcoming Meetings/Events

### Rock & Gem Shows—Various locations

Various rock and mineral shows will be throughout So. California. To find one near you, visit [www.rockngem.com/showdates.asp](http://www.rockngem.com/showdates.asp)

### AEG—So. California Chapter Meeting



Miles Kenney, PhD, PG, of Kenney GeoScience, will be giving at talk on the "Late Quaternary Stratigraphic and Structural Development of the Cheviot Hills/Century City Area"

on **Tuesday, July 9, 2013** at the Double-Tree Club Hotel in Santa Ana, CA. For more info, visit [www.aegsc.org/calendar/](http://www.aegsc.org/calendar/)

### AEG—Inland Empire Chapter Meeting



Dr. Keith Meldahl, Professor at Mira Costa College, will be giving at talk on "Rough Hewn Land: A Geologic Journey from California to the Rocky Mountains" on **Thursday, July 18,**

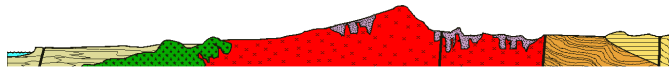
**2013** at the Temecula Public Library in Temecula, CA. For more info, visit [www.aegsc.org/chapters/inlandempire/](http://www.aegsc.org/chapters/inlandempire/)

### 29th Biennial Groundwater Conference and 22nd GRA Annual Meeting

Groundwater Resources Association of California will be having their Biennial Conference and Annual Meeting in Sacramento, CA on **October 8-9, 2013**. Abstracts are due **June 30, 2013**. For more info, visit [www.grac.org/](http://www.grac.org/)



### San Diego Assoc. of Geologists Meeting



Jill Krezoski will be giving at talk on the Mars at the July meeting on **Wednesday, July 17, 2013**. For more info, visit [www.sandiegogeologists.org](http://www.sandiegogeologists.org)

### San Diego Assoc. of Geologists Meeting



Dr. Tom Rockwell will be giving at talk at the August meeting on **Wednesday, August 21, 2013**. For more info, visit [www.sandiegogeologists.org](http://www.sandiegogeologists.org)

## IGS Meeting Schedule

### **August 7, 2013 (Wednesday)**

Miles Kenney, PhD, PG, Kenney GeoScience  
*Geology of the Marble Mountains*

### **September 5, 2013 (Thursday)**

Britt Leatham, PhD, CSU San Bernardino  
*The Hidden World of Caliche and its Implications for Paleoenvironmental Interpretation*

### **October 2, 2013 (Wednesday)**

Frank Jordan, PG, CEG, ChG  
*Unrecognized Faults in the Mojave Desert, California*

### **November 7, 2013 (Thursday)**

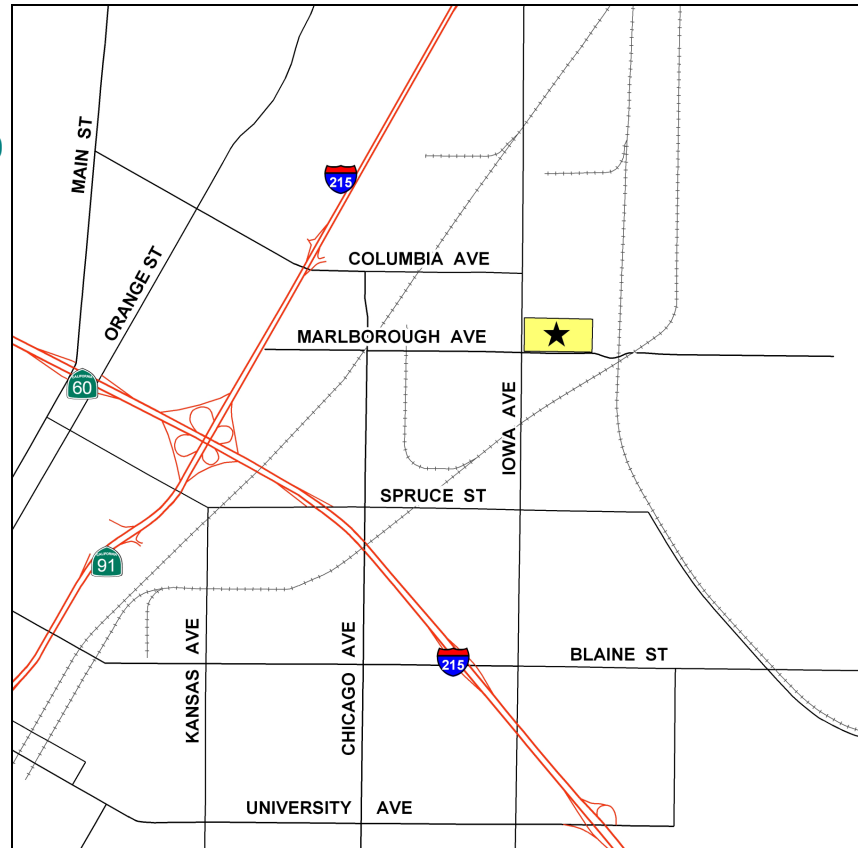
Gary S. Rasmussen, Consulting Geology  
*Mt. San Jacinto Mega-Slide: A Bedrock Mega-Landslide with a Twist*

### **December 4, 2013 (Wednesday)**

TBA

**IGS MEETING LOCATION:**

**LSA Associates, Inc.**  
**1500 Iowa Ave, Suite 200**  
**Riverside, CA 92507**

**2013 IGS OFFICERS****Co-President**

Greg Johnson, LADPW  
 gjohnson@dpw.lacounty.gov  
 626.458.1741

**Co-President**

Rob Johnson, AMEC  
 rob.b.johnson@amec.com  
 951.369.8060

**Co-Vice President**

Jeff Fitzsimmons, John R. Byerly, Inc.  
 geojeff08@att.net  
 909.877.1324

**Co-Vice President**

Debbie Kunath, Consulting Geologist  
 Debbie\_Kunath@ymail.com  
 760.885.0232

**Treasurer**

Margaret Gooding, LSA Associates  
 Margaret.gooding@lsa-assoc.com  
 951.781.9310 x279

**Secretary**

Dixie Lass, Retired  
 Dixie.lass@att.net  
 951.784.2168

**Membership**

Steven E. Mains, Watermaster  
 Support Services  
 watermains@aol.com  
 951.780.5636

**Newsletter Editor**

Shelby Barker, AECOM  
 shelby.barker@aecom.com  
 760.680.0389

**Web Mistress**

Marina West, Bighorn Desert View  
 Water Agency  
 wells.out.west@gmail.com  
 760.910.3264

**Web Master**

Ernie Roumelis, AKW Geotechnical  
 eroumelis@verizon.net  
 951.265.9849