

Inland Geological Society

October 2018

Newsletter of the Inland Geological Society

Volume 34 No. 10

Next Meeting:
Wednesday
October 3rd

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

Location:
Jurupa Mountains
Discovery Center
7621 Granite Hill Dr.
Jurupa Valley, CA
92509
(Map on Pg. 6)

Coming to
Dinner?
Please RSVP
to Jessie Bagby
by Monday, 10/1
rsvp.igs@gmail.com

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October Speaker:

Nicholas J. Van Buer, Cal Poly Pomona

“Tectonic evolution of the western Mojave batholith”

Abstract:

Much of the Mesozoic Cordilleran batholith, including the Sierra Nevada and Peninsular Ranges batholiths, is preserved in more or less coherent structural blocks displaying regionally consistent trends in age and geochemistry. Between these coherent blocks, however, the Mojave batholith is extensively faulted by Laramide age compression and subsequent extension, Oligo-Miocene core-complex formation, and, more recently, transrotation. A combination of new zircon U-Pb SHRIMP ages, reconnaissance geologic mapping, thermobarometry, and thermochronology is now beginning to elucidate the structure of the Mojave batholith. There is a slight trend toward younger ages to the southeast, which is distinct from age trends in the adjacent Sierra Nevada batholith and may represent later tectonic modification. 81-77 Ma granitic rocks between Palmdale and the Cajon Pass are juxtaposed against 91-84 Ma granitic rocks to the north, supporting at least ~30 km of right-lateral slip on the Cajon Valley Fault north of and paralleling the San Andreas Fault. The structural history of the western Mojave is also illuminated by new biotite and K-feldspar $40\text{Ar}/39\text{Ar}$ ages, together with published K/Ar ages (Miller and Morton, 1980) which fall in the 70-80 Ma range throughout most of the western Mojave. These ages are substantially younger than plutonic emplacement ages and suggest that western Mojave plutonic rocks remained at depths greater than 10 km (consistent with new igneous thermobarometry results) until Laramide-age exhumation, likely related to coeval oceanic plateau subduction. Although many structural boundaries of the western Mojave appear to be buried beneath recent alluvium, ongoing reconnaissance geologic mapping may provide additional clues about their locations and significance.

(continued on p. 2)

Speaker Biography:

Nick Van Buer is an Assistant Professor of Geology at Cal Poly Pomona, where he currently researches the tectonic history of plutonic rocks in the Mojave Desert and leads student research projects across a wide variety of topics, from ring-dikes to rock glaciers. He teaches hard-rock geology classes including mineralogy, petrology and geologic mapping. Nick received a BS from Caltech (2005) and a PhD from Stanford (2012), both in geology. Before his current position, he mapped part of the western corner of the Himalaya while a postdoc at MIT, and spent a year working for Flood Matters, Inc., a hazard map analysis start-up company.

Steven Mains of Watermaster Support Services is pleased to announce the completion of the
Spring 2018 Cooperative Well Measuring Program

This project, which started in the Spring of 1964, lists water level data from wells in

- ◆ the Upper Santa Ana Basin
- ◆ the San Jacinto Basin
- ◆ the western portion of the White Water River Basin
- ◆ and portions of the Santa Margarita Basin

More than 5,000 wells from 80 different reporting agencies are listed, with almost 1,500 new measurements added in this Spring Report. Please contact Steve at (951) 201-6571 or watermains@aol.com for pricing. Your continued support keeps this data gathering project viable.

IGS OFFICER POSITIONS OPENING THIS WINTER

The **IGS President** and **Secretary** board member positions will be open this fall for the election of new officers for 2019. IGS Officer elections will take place in November so that training may take place in December and new officers can begin serving in January. All nominations for the positions of President and Secretary should be submitted to the current Secretary, Jessie Bagby, at rsvp.igs@gmail.com for inclusion on the ballot. Additionally, we will be needing a **newsletter editor** and **webmaster**. All members, including students, are invited to volunteer or nominate appropriate individuals for these positions.

International Petroleum Environmental Conference (IPEC)

The 25th IPEC will be held from October 30 to November 1, 2018, in Denver, Colorado. Registration is now open. For more information, read more at <https://cese.utulsa.edu/ipec-conference/>.

EMPLOYMENT OPENINGS

**DEPARTMENT OF GEOLOGICAL SCIENCES
CALIFORNIA STATE UNIVERSITY, FULLERTON (CSUF)
Tectonophysicist - Tenure-Track**

The Department of Geological Sciences at CSUF invites applications for a tenure-track Assistant Professorship in the broad field of tectonophysics beginning August 2019. We are seeking an Earth scientist who integrates field and geophysical techniques to investigate tectonic questions, demonstrates a strong commitment to teaching excellence and shows evidence of an existing or developing active, externally funded, student-centered, research program. A Ph.D. in Geological Sciences or related field is required at the time of appointment. We seek scholars who will teach introductory geophysics (bi-annually) and regularly participate in teaching geologic field techniques, summer field camp, upper-division or graduate courses in their area of specialization, as well as general education courses. Preference will be given to candidates who can occasionally teach structural geology. The successful candidate will contribute to the diverse CSUF campus. To apply, please go to: <https://apps.fullerton.edu/facultyrecruitment> to view all job listings and select 10499BR to begin the application process. To ensure full consideration, submit all application materials by November 16, 2018.

**GEOCON WEST, INC.
RIVERSIDE COUNTY OFFICE, MURRIETA
Staff or Senior Staff Geologist**

Geocon's Riverside County Office located in Murrieta is seeking a staff to senior staff geologist to become part of our team.

Requirements:

- BS Degree in Geology
- Ability to work well with a diverse group of individuals including contractors, professional peers, and clients
- Ability to work in a variety of environments: office, client meetings, construction job site, independently in field environment
- Ability to lift 40-pound samples or equipment
- Must have own field-ready vehicle with clean driving record.

Job Duties:

Perform basic field geotechnical investigations and field construction management with limited supervision. Abilities include geologic mapping during reconnaissance-level investigations. Perform tasks of a basic field investigation including coordination of utility locating, encroachment permit processing, selection and scheduling of exploration equipment, perform drilling/trenching, logging and sampling including accurate collection of geologic structural information using a compass, scheduling laboratory testing with supervision, and performing geophysical exploration methods. The position entails travel throughout Riverside and San Bernardino Counties and occasionally to San Diego County, Orange County and greater Los Angeles areas. Individual must be able to maintain flexibility in an often-changing environment.

This job splits time between a professional office environment and field time.

For immediate consideration, please email your resume to Lisa Battiato at battiato@geoconinc.com.

NOTICE OF CHANGE OF DINNER POLICY

For our monthly meetings, IGS typically orders meal quantities based on the number of responses made by the RSVP deadline published in the newsletter each month. Although we are always pleased to have as many people as possible in attendance, dinner may not be available to those who have not responded in time to be counted in the dinner order. ***Beginning in October 2018, those who have not responded by the published deadline will not be served dinner at the monthly meetings until all those who have reserved a meal have received one.*** Those who do not RSVP are still invited to attend for drinks, networking, announcements, and the dinner speaker free of charge. We appreciate your cooperation with this change in policy and encourage you to RSVP by the published date each month. We look forward to seeing you there!

Visit the
Jurupa Mountains Discovery Center
7621 Granite Hill Drive, Jurupa Valley, California 92509
951.685.5818



The Jurupa Mountains Discovery Center hosts the Ruth and Sam Kirkby Earth Science Museum, which houses a unique collection of exhibits including the Crestmore Quarry, fluorescent minerals, Indian artifacts, mining exhibits, petrified wood, sea shells, dinosaur exhibits, fossils, rocks and minerals, and many more.

The onsite Granite Hill Nursery stocks a large variety of cacti and succulents, and the gardens showcase mature and unique species over several acres. A collection of butterfly gardens is under construction as part of ongoing Eagle Scout Service Projects. The Center also provides hands-on educational kits for educators, houses a critter corner in the gift shop, and hosts themed toddler times on Friday afternoons.

The Center is always looking for volunteers to assist in the many on-going activities from light construction work to assisting with tours and programs. This is a worthwhile and fulfilling opportunity for scientifically-minded individuals of all ranks, from students through working professionals to retirees. This service will look great on your resume! Please contact Executive Director Wes Andree at 951/685-5818 or director@jmdc.org for further details.

Visit the website at <https://jmdc.org> to learn more about the Jurupa Mountains Discovery Center!

Upcoming Meetings/Events

Inland Geological Society

The Inland Geological Society typically meets the first Wednesday or Thursday of each month. The November meeting has not been announced yet. For more information, visit our website at www.inlandgeo.org.

South Coast Geological Society



Monthly dinner meetings are typically the first Monday of each month. The October meeting has not been announced yet. For more information, visit the association website at www.southcoastgeo.org.

AEG—Southern California Chapter



The AEG — Southern California Chapter typically meets the second Wednesday of each month at Victorio's Ristorante in North Hollywood. The October meeting has not been announced yet. For more information, visit the association website at www.aegsc.org.

AEG—Inland Empire Chapter

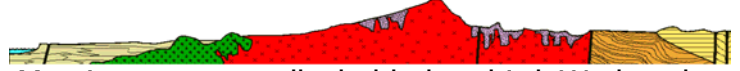


The AEG — Inland Empire Chapter typically meets the third Wednesday of each month at Pinnacle Peak Steakhouse, 2533 S. La Cadena Drive, Colton. At the next meeting on October 17th, Ryan Bulatao of ROCTEST will speak on the topic "*Permanent Safety Assessment of Dams, Levees, Waterways with Fiber Optic Distributed Sensing*". For more information, visit the association website at www.aegsc.org/chapters/inlandempire.

Rock & Gem Shows—various locations

Various rock and mineral shows will be held throughout southern California. To find one near you, visit www.rockngem.com, then select the Show Dates tab.

San Diego Association of Geologists



Meetings are usually held the third Wednesday evening of each month. SDAG will not hold a meeting in October, but will sponsor their annual field trip on October 12-14 to the Mojave Desert near Calico. The last date to register for the field trip is September 30th. For more information, visit the association website at www.sandiegogeologists.org.



Los Angeles Basin Geological Society

Monthly lunch meetings are typically the 4th Thursday of each month from 11:30 am to 1:00 pm at the Willow Street Conference Center, 4101 E. Willow Street, Long Beach. The October meeting has not been announced yet. For more information, visit the association website at www.labgs.org.

IGS Has a Facebook Page!

Check us out at
<https://www.facebook.com/groups/994947540677585/>.

Request to join and
 post comments online.

For additional assistance,
 contact Margaret Gooding
 at mgooding@roadrunner.com.

IGS MEETING LOCATION:
Jurupa Mountains Discovery Center
 7621 Granite Hill Drive
 Jurupa Valley, California 92509



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