

# Inland Geological Society

June 2018

Newsletter of the Inland Geological Society

Volume 34 No. 6

Next Meeting:  
**Wednesday**  
**June 6<sup>th</sup>**

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. 5)**

Coming to  
Dinner?  
**Please RSVP**  
**to Jessie Bagby**  
**by Monday, 6/4**  
**rsvp.igs@gmail.com**

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## June Speaker:

**Bryan Castillo**, Graduate Student, California State University, San Bernardino

## **“Preliminary ages of prehistoric earthquakes on the Banning Strand of the San Andreas Fault, near North Palm Springs”**

### ***Abstract:***

The southernmost section of the San Andreas Fault (SAF) is the only section of that fault that has not ruptured historically. It is not known whether this long quiescent period reflects a long average recurrence interval, or whether the current interseismic interval is longer than average. Near Indio, the SAF splits into 3 strands; limited paleoseismic work has been conducted on the Mission Creek and Garnet Hill strands. We studied a paleoseismic trench on the Banning strand, which has no available age control for any surface-rupturing, prehistoric earthquakes. We were able to document clear evidence for five prehistoric earthquakes and possible evidence for four additional events. The most recent event occurred sometime between 617 and 882 calibrated years before present (BP). At least 3-4 earthquakes have occurred since ~2700 years ago. At greater depths, we document two events with strong evidence and two other possible events with weak evidence. From existing dates, we calculate a maximum average interval of 720 yrs based on three complete earthquake cycles between earthquakes 1 and 4 or a minimum average interval of 350 yrs based on limiting ages for earthquakes 1 and 5. This makes the average interval equal to or less than the current open interval on the Banning strand. Compared to nearby paleoseismic sites, the Banning appears to be intermediate; it has a shorter interval than that published for the San Geronio Pass Thrust (~1000 yrs) but longer than the Mission Creek (~215 yrs) and Coachella sections (~220 yrs) of the SAF.

*(continued on p. 2)*

*(continued from p. 1)*

**Biography:**

Bryan Castillo is a graduate student at California State University, San Bernardino, working on a master of science in geology under the supervision of Dr. Sally McGill. His research interests include paleoseismology, earthquake geology, and seismic hazard analysis in southern California. Previous work includes investigating the southern extension of the West Lake Tahoe fault and the structure under the Bushveld complex, South Africa, from receiver functions. Bryan has a bachelor of science in Geophysics from California State University, Northridge.

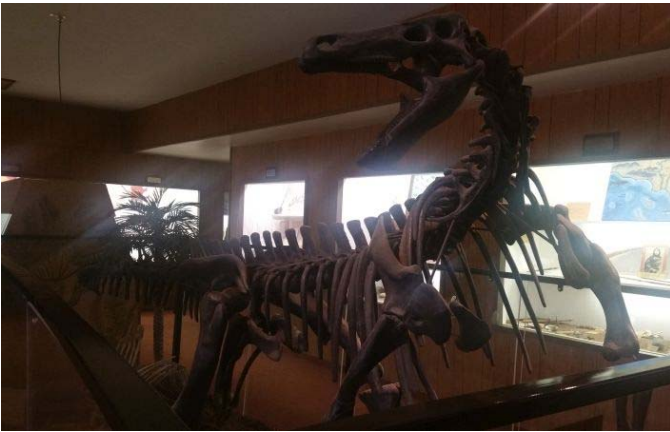
The deadline for the submission of abstracts for the 7th International Conference on Debris Flow Hazards Mitigation is May 31, 2018. Convened by the Association of Environmental and Engineering Geologists, the conference will be held in Golden, Colorado USA on June 10-13, 2019. With the beautiful Rocky Mountains covering half the state, Colorado shares the problem of debris-flow hazards with other mountainous areas of the world. Against this backdrop, scientists, engineers, and policy makers from around the world will be able to share new research and ideas in the field of debris flows. Field trips will take place both before and after those dates.

Proceedings will be published as an AEG special publication; proceedings from previous conferences are highly respected and widely cited.

Abstract submission details are available at <https://dfhm7.csmospace.com/papers.html> and more details about the event are available at <https://dfhm7.csmospace.com/>.

## Note our New Meeting Place!

The Inland Geological Society monthly meeting will be held at 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.

*Visit their website at <https://jmhc.org> to learn more about the Jurupa Mountains Discovery Center, and meet us there on Tuesday, March 6th for our next meeting!*



## Upcoming Meetings/Events

### Inland Geological Society

The Inland Geological Society typically meets the first Wednesday or Thursday of each month. There will be no meeting in July. Join us in August for our next dinner meeting and speaker. For more information, visit our website at [www.inlandgeo.org](http://www.inlandgeo.org).

### South Coast Geological Society



Monthly dinner meetings are typically the 1st Monday of the month. In June, the South Coast Geological Society and the San Diego Association of Geologists will hold their annual joint meeting on Monday, June 4th at 6:00 pm at The Holiday Inn Express in San Clemente. The speaker will be Tom Bourque of GeoTek presenting, "And When the Landfill Swims with the Fishes". For more information, visit the association website at [www.southcoastgeo.org](http://www.southcoastgeo.org).

### AEG—Southern California Chapter



The next meeting of the AEG—Southern California Chapter will be held on Wednesday, June 13th at Victorio's Ristorante in North Hollywood. This meeting will be an opportunity for students to present poster and Power Point presentations. For more information, visit the association website at [www.aegsc.org](http://www.aegsc.org).

### AEG—Inland Empire Chapter



Monthly dinner meetings are typically the third Wednesday of the month at Pinnacle Peak Steakhouse, 2533 S. La Cadena Drive, Colton. The June meeting has not been announced yet. For more information, visit the association website at [www.aegsc.org/chapters/inlandempire](http://www.aegsc.org/chapters/inlandempire).

### San Diego Association of Geologists



Meetings are usually held the third Wednesday evening each month. In June, the South Coast Geological Society and the San Diego Association of Geologists will hold their annual joint meeting on Monday, June 4th at 6:00 pm at The Holiday Inn Express in San Clemente. The speaker will be Tom Bourque of GeoTek presenting, "Landslide Mitigation of a Landfill and Environmental Impacts". For more information, visit the association website at [www.sandiegogeologists.org](http://www.sandiegogeologists.org).

### Los Angeles Basin Geological Society



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

### Get Your IGS Coffee Mug!

IGS will now be selling IGS coffee mugs at the monthly meetings. They will be on sale for \$10.



**IGS MEETING LOCATION:****Jurupa Mountains Discovery Center**

7621 Granite Hill Drive  
Jurupa Valley, California 92509

**IGS OFFICERS****President**

Greg Johnson  
LA County DPW  
gjohnson@dpw.lacounty.gov  
626.458.1741

**Treasurer**

Margaret Gooding  
mgooding@roadrunner.com  
909.434.5377

**Newsletter Editor**

Alice Orton  
Geocon West, Inc.  
orton@geoconinc.com  
951.401.3949

**Co-Vice President**

Jeff Fitzsimmons  
Lahontan RWQCB  
geojeff08@att.net  
951.212.5018

**Secretary**

Jessie Bagby  
CSUSB Undergraduate Student  
rsvp.igs@gmail.com  
951.551.7804

**Web Master**

Scott Orton  
Consultant  
scottorton@hotmail.com  
951.505.6547

**Co-Vice President**

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

**Membership Chairman**

Kirby Roucher  
Independent Contractor  
inlandgeologicalsociety@gmail.com  
951.522.5318