

March 2019



LOS ANGELES BASIN GEOLOGICAL SOCIETY MEETING ANNOUNCEMENT

March 28 (Thursday) – 11:30 AM

Matthew Kirby, PhD

Professor, Cal State Fullerton

LATE QUATERNARY PALEOCLIMATOLOGY OF SOUTHERN CALIFORNIA

Abstract

Global warming is changing the Earth's climate. While California will certainly warm, it remains uncertain whether precipitation amounts will increase or decrease. Even if the trend is towards more persistent and sustained drought, Southern California will continue to experience occasional pluvials (i.e., periods of above-average wetness) as well as event-scale weather, such as floods. Critical to planning for, and mitigating against, future risks from changes in precipitation requires a geological perspective that is longer than instrumental records.

This presentation will include discussion of various lake sediment records from the Pacific Southwest United States that have been used to reconstruct the history of droughts, pluvials, and floods. Importantly, these lake-based reconstructions extend our knowledge of hydroclimatic variability beyond the tree ring records, which, for Southern California, rarely extend beyond 1,000 years. Moreover, tree ring records cannot record flood events and do not cover the driest and low-lying areas of the state where some of our largest cities are located.

Study results indicate drought, pluvial, and flood conditions of longer duration (and magnitude?) than anything observed in the tree-ring records. Regional comparisons show a probable link between tropical Pacific Ocean forcing and drought/pluvials in the study region. Floods, on the other hand, seemingly occur during both wet and dry climate states, suggesting that flood-producing precipitation events may occur regardless of the mean climate state. Learning from our state's history of droughts,

pluvials, and floods will help to inform our state's water management program.

Speaker's Biography

Matthew Kirby is a professor and graduate advisor at Cal State Fullerton in its Department of Geological Sciences. He was raised along the Susquehanna River in Binghamton, NY. In 1992, he spent 38 days on the RV Polar Duke along the Antarctic Peninsula collecting sediment cores for his undergraduate thesis project. From that point on, Kirby knew he wanted to study Earth's climate history. He received his BA from Hamilton College, his MSc from the University of Colorado, Boulder, and his PhD from Syracuse University. He then served as a post-doc at the University of Southern California.

Today he studies California's geological history of droughts, floods, fires, and vegetation impact, using lake sediments. His research is focused on Late Quaternary paleoclimatology, with specific focus on the late-glacial/Holocene transition and the present Holocene Epoch. He incorporates multi-proxy, multi-disciplinary research methods that use historical records of climate change as a calibration for assessing past climate states. Although his present research focuses on lacustrine environments, he has also worked in the marine realm. He suspects his research will ultimately involve both terrestrial and marine settings as he attempts (as many paleoclimatologists do) to deconvolve the large-scale ocean-atmosphere and solar relationships that drive global climate change.

***Please join the LABGS for this
interesting and timely presentation!***

Meeting Time, Place, Cost, and Reservations

When:

Thursday, March 28, 2019

Meeting Agenda

Lunch Served: 11:30 AM to 11:45PM
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: \$30.00 with reservations
\$40.00 without reservations

Retired: \$25.00

Student: **\$10.00**

PAYMENTS IN CASH OR CHECK ONLY

Meeting Reservations:

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

(if problems, try using Google Chrome)

Or, call **Wanjiru Njuguna** at (818) 739-9154 or email her at wanjiru.njuguna@gmail.com.

Reservations must be made by:

10:00 AM Tuesday March 26th

to receive reservations discount price noted above

(this will be strictly adhered to)

But, as always, walk-ins are welcome!

OUR WEB SITE ADDRESS:

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ANNOUNCEMENTS:

LABGS has expanded our meeting raffles. We would appreciate raffle prize donations! *Please bring donation items to the next meeting.*

We still need a new LABGS treasurer. *If interested, please contact a current officer and let us know a bit about you. The LABGS executive committee will select from the interested candidates.*

The **2019 Pacific Section AAPG Convention** will be on April 1st through 3rd, 2019, at the Walter Pyramid at CSULB. The topic this year is "West Coast Creativity in Exploration and Production." The LABGS is the host society for the convention this year – please attend if you can!

GeoMechanics Technologies will hold a 1-day workshop on "**Fundamental Geomechanics from the Wellbore to Reservoir Scale**" March 26th, 2019, in Bakersfield. Topics will include subsurface stresses, compaction, subsidence, well damage, and induced seismicity. For more information see: <http://www.geomechanics-technologies.com/workshops/>

Please inform a LABGS Board member if you have a pertinent announcement.