



April 2021

LOS ANGELES BASIN GEOLOGICAL SOCIETY

April 22nd (Thursday) – 12:00 Noon

This will be a virtual (on-line) meeting using ZOOM. See below for instructions.

Rivers of Sand: Sea Level Control on Sediment Dispersal and Provenance Since the Last Glacial Maximum, Southern California

Dr. Glenn Sharman, University of Arkansas

Abstract

Coastal erosion, including sea cliff retreat, represents both an important component of some sediment budgets and a significant threat to coastal communities in the face of rising sea level. Despite the importance of predicting future rates of coastal erosion, few pre-historic constraints exist on the relative importance of sediment supplied by coastal erosion versus rivers with respect to past sea level change. We use detrital zircon U-Pb geochronology as a provenance tracer of river and deep-sea fan deposits from the southern California Borderland (U.S.A.) to estimate relative sediment contributions from rivers and coastal erosion from late Pleistocene to present. Mixture modeling of submarine canyon and fan samples indicates that detrital zircon is dominantly (55-86%) supplied from coastal erosion during early Holocene (ca. 13 ka) sea level rise, with lesser contributions from rivers, on the basis of unique U-Pb age modes relative to local Peninsular Ranges bedrock sources. However, sediment that was deposited when sea level was stable at its highest and lowest points since the last glacial maximum was

dominantly supplied by rivers, suggesting decreased coastal erosion during periods of sea level stability. This study suggests that relative sediment supply from coastal erosion is strongly dependent on sea level state, corroborating predictions of enhanced coastal erosion during future sea level rise.

Speaker's Biography

Dr. Glenn Sharman is a sedimentary geologist who studies how geologic processes (e.g., tectonism, climate, sea level) interact to influence the stratigraphic development and evolution of sedimentary systems. His specific areas of expertise include detrital geochronology and deep-water sedimentology.

Dr. Sharman received a B.S. in Geology from Wheaton College and worked in environmental consulting prior to starting a PhD at Stanford University. Following his dissertation work, Dr. Sharman worked for ConocoPhillips in Houston in their new ventures exploration group. In 2016, Dr. Sharman joined the Bureau of Economic Geology at the University of Texas

at Austin as a postdoctoral researcher. In 2017, Dr. Sharman joined the faculty at Department of Geosciences, University of Arkansas as an assistant professor.

This will be a virtual meeting using Zoom.

When:

**Thursday, April 22, 2021
12:00-1:00 pm**

Virtual Meeting Reservations:

**Reservations should be made by:
12:00 Noon Wednesday April 21st.**

**To register please email our LABGS
secretary, Joseph Landeros at
landerosjd@gmail.com**

This is just to get a head count.

**To join the talk, please use the
following Zoom link (paste it into
your web browser):**

<https://uark.zoom.us/j/84321411287?pwd=TVhmNDc4VXBvZW5vZlM4WGMvOQsyUT09>

**ID: 843 2141 1287
Passcode: WG6cX%Mw**

**Please download the ZOOM app before
the start of the talk, if you have not
already done so.**

LABGS Student Scholarships

Karla Tucker

To my knowledge, LABGS in partnership with PSAAPG has been giving scholarships to undergraduate and graduate geology students at 4-year universities in the LA Basin and San Diego since 2014 (when I was asked to

participate). PSAAPG typically gives \$4000 each year to affiliated societies like us to use in their student scholarship programs. They ask that using their funds we give scholarships of at least \$1000 each to provide students with a substantial amount of money towards paying their tuition or summer field class, and that the scholarships support students at 4-year universities that have an AAPG Student Chapter. LABGS contributes an additional \$1000-\$4000 to our student scholarship program each year (the amount depends on our current bank account). The student scholarships LABGS funds are typically between \$200 to \$750 and support geology students from 4-year universities that may not have an AAPG Student Chapter. Most of our student scholarships go to students at CSULB, CSUF, and SDSU to support graduate work and summer field classes.

Since 2014, we have received from 4 to 21 scholarship applications each year from graduate and undergraduate geology students at 8 different 4-year universities in the LA Basin and San Diego. We have given from 4 to 18 student scholarships each year, totaling \$47,050 over the last 7 years.

As you can imagine, students continue to need scholarship support. Unfortunately, we have not had the ability to fundraise through conventions and field trips like we used to, so our LABGS bank account cannot support as many scholarships. We are always happy to accept donations from our members.

LABGS Board Contact Information:

President: Scott Prior
(714) 495-0959
7figmo@gmail.com

VP & Programs: Nate Busch
(973) 349-4329
nathaniel.busch@gmail.com
Treasurer: Francine Cason
(562) 756-0270
fcason5@gmail.com

Secretary: Joseph Landeros
(626) 497-1710
landerosjd@gmail.com

Scholarships: Karla Tucker
(714) 658-0474
ktkr2@aol.com

Special Projects: Bill Long
(213) 448-2841

wtlgeoscience@gmail.com

Webmaster: Joseph Landeros

(626) 497-1710

landerosjd@gmail.com

ANNOUNCEMENTS:

***Do you know if your PSAAPG/LABGS
membership is current?***

*If you don't know, please check via
the PSAAPG website:*

<http://www.psaapg.info/cloud/miscellaneous/dues.php>

*Please inform a LABGS Board member if
you have a pertinent announcement or
chime in at the end of the Zoom meeting.*