



NORTHWEST GEOLOGICAL SOCIETY

A regional association of professionals, students & others interested in geology
Please browse www.nwgs.org for more about us



March, 2020 Newsletter

Volume 34, Number 3



March 10 Program Speaker

Speaker: Dr. Gerald C. Bryant, private contractor representing Dixie State University

Title: Quicksand in the Ancient Sand Desert: Occurrence and Implications of Soft Sediment Deformation in the Navajo Sandstone

Abstract: Liquefaction, the process that produces quicksand, is a major geologic hazard at locations subject to earthquakes that have high water tables, such as the low-lying areas of King County. Surficial evidence of liquefaction includes sand blows, sinkholes, and lateral spreading. Ancient deposits more often present cross-sectional views of the subsurface products of liquefaction; but we can still identify familiar dynamics. In the Early Jurassic Navajo Sandstone, we also find very large-scale features, unknown from modern environments, and particularly surprising in a paleoenvironmental context that has long been compared to the Sahara desert. These features indicate many liquefaction events, broadly distributed across the ancient dunefields of the Navajo desert. Some of these events founded dunes, displaced massive volumes of subsurface sediment, and produced giant sand blows. Disparities such as these suggest significant differences between modern and ancient desert environments.

5:30pm: No-host social hour

6:30pm: Buffet dinner

7:30pm: Speaker program

All are welcome to attend –
reservations are required
if coming for dinner.

► [Reservations here](#)



PROGRAM DINNER RESERVATIONS: please make dinner reservations at www.nwgs.org by the **Thursday prior to the meeting** (now capped at 60 people due to room capacity and fire code, so reserve early!). Once you have submitted your reservation, you may pay online using your debit or credit card or your PayPal account (follow the online prompts), or by mailing a check or money order to [Northwest Geological Society, 4616 25th Ave NE #397, Seattle, WA. 98105](#) (must be received by the **Thursday prior to the meeting**). NWGS member dinner: \$45; non-member dinner: \$55; late registration: \$55, student dinner: \$20.

MEETING LOCATION: [Silver Cloud Hotel Seattle—University District, 5036 25th Ave NE, Seattle, WA 98105](#). No-host social hour is in the Ag47 Bar & Bistro. Please check in at the Secretary/Treasurer table to get your name tag, which will be your dinner ticket. **Dinner & speaker are in the Husky Dining Room downstairs.** Parking is free. See [Google Maps directions](#).

Upcoming Speakers and Field Trips

April 14: Dr. Melissa Rice, WWU, Exploring the Geology of the Jezero Crater, Mars, with NASA's Next Rover Mission

May 12: Wayne Ranney, Author/River Guide, Ancient Landscapes of North America

Oct 13: Dr. Mike McCulla, Retired Economic Geologist, People and Mineral Deposits of Papua, New Guinea

Nov 10: Dr. Sean Mulcahy, WWU, Subduction Initiation and Early Evolution of the Easton Metamorphic Suite, Northwest Cascades, Wash.

Dec 8: Dr. Eric Cheney, UW Prof Emeritus, The Economic Geology of Washington

Spring Field Trip: Skye Cooley, Idaho Geol. Surv., Calcretes and Implications for Cascade and YFB Tectonism, April .24-26, 2020. Cost: \$160. A limited number of openings remain, so if interested, contact [Kathleen Goodman](#) immediately to register.

If you would like to volunteer to give a talk or lead a field trip for NWGS, please contact President [Katie Brower](#).

Please see the [NWGS website](#) for detailed announcements.

Contact webmaster [Julie Masura](#) if you have any announcements to post on the website.

Announcements

- If you are interested in Skye Cooley's spring field trip *Calcretes and Implications for Cascade and YFB Tectonism* (Apr 24-26), please contact [Kathleen Goodman](#) immediately, as only a few spots remain.
- February speaker **David Williams** will be leading 2 1.5-mile walks touring building stones of downtown Seattle (Apr 4 & Jun 6). [More information here.](#)
- Next **Board of Directors meeting:** March 10, 2020, 4:30 P.M., [Silver Cloud Hotel.](#)

YOU would like to be involved!

Photo Spotlight



Two sets of crossbeds in the Navajo Sandstone that were convoluted by liquefaction/fluidization processes during the accumulation history of this ancient deposit. Photo at Coyote Buttes, Arizona by David Loope (used with permission).

About NWGS

The [Northwest Geological Society](#) is a non-profit educational organization which provides a forum for information and discussion on Northwest geology and related topics. The Society sponsors talks by leading academic and professional geologists at its monthly meetings, conducts field trips to locales of regional geologic interest, and publishes meeting summaries and field guides based on those activities. Membership is open to anyone interested in regional geoscience issues.

Program meetings are the 2nd Tuesdays, October through May at the [Silver Cloud Hotel Seattle-University District](#). Anyone may attend the speaker program, but a reservation is necessary for those wanting dinner (see 1st page).

Field trips (members only): The Society sponsors two overnight field trips each year, in the fall and the spring, to locales of regional geologic interest.

Membership is open to anybody with an interest in geology. **Annual dues:** Professional: \$55; Student: \$10. **To join or pay annual dues:** go to www.nwgs.org, or mail a check or money order to [Northwest Geological Society](#) 4616 25th Ave NE #397, Seattle, WA. 98105. Please include your name, address, home phone, email, and employer/affiliation (if any).

Please visit [About NWGS](#) for more details.

Recommended Readings

Bryant, Gerald, Giovanni, Monegato, and Miall, Andrew, 2013, An example of liquefaction-induced interdune sedimentation from the early Jurassic Navajo Sandstone, USA, *Sedimentary Geology*, vol. 297, pp, 50-62.

Please send your reading recommendations to Newsletter Editor [Tom Bush](#).

To report a change of email or postal address or request to be [removed](#) from mailings, notify Membership Chair [George Bennett](#). Questions or comments? Contact President [Katie Brower](#).

NWGS Board

President [Katie Brower](#)
Nelson Geotechnical

President Elect [Chris Kimmel](#)
Landau Assoc.

Past President [Heather Vick](#)
Dep. of Ecology

Secretary [Amy Knudson](#)

Treasurer [George Bennett](#)
Bennett Consulting

At-Large Board Members [Maura OBrien](#)
Retired

[John LaManna](#)
LaManna Geosciences

Other Personnel

Membership Chair [George Bennett](#)
Bennett Consulting

Field Trip Coordinator [Kathleen Goodman](#), AMEC

Newsletter Editor & Publications [Tom Bush](#)
Pierce College
Puyallup

Poster Chair [Maura OBrien](#)
Retired

Webmaster [Julie Masura](#)
Univ. of Washington

Facebook Pagemaster [Eric Baer](#)
Highline CC