



NORTHWEST GEOLOGICAL SOCIETY

A regional association of professionals, students & others interested in geology
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November 2014 Newsletter

Volume 28, Number 7



November 11 Program Speaker

Speaker: Jeff Tepper, Geology Dept., Univ. Puget Sound

Title: Diverse Environmental Histories of Tacoma Area

Lakes: Deciphering the 12,000 Year Sediment Record

Abstract: Within the Puget Lowlands are numerous lakes, many of which occupy kettles that formed roughly 12,000 years ago as the ice lobe that occupied this region was melting. The sediment within these lakes thus preserves a long record of Holocene environmental history that includes both natural and anthropogenic changes. Recent work by UPS faculty and students on four adjacent lakes near Tacoma (American, Gravelly, Louise, and Waughop) has revealed surprising diversity in both their “plumbing” (water sources) and their recent (last ~150 years) environmental histories. Agricultural activity and ASARCO smelter fallout in particular impacted these lakes, but the responses of individual water bodies have varied greatly. For example, Gravelly Lake has exceptionally clear water while Waughop Lake experiences toxic algal blooms. This talk will describe how we have integrated sediment core analyses, geochronology, and water chemistry to better understand both the past and present day conditions of these lakes.

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: NWGS members: **\$40**; Non-members: **\$45**; Full-time students : **\$20**. Add \$5 for LATE REGISTRATION. Make your reservation and payment on-line at www.nwgs.org (or mail your payment to *Northwest Geological Society, 4616 25th Ave NE #397, Seattle, WA. 98105* (must be received by Thursday prior to meeting)). Contact Secretary [Beth Tanner](#) with questions about dinner reservations.

If attending the speaker program only, a \$5 voluntary donation to help defray the meeting room cost is requested.

Location: Pacific Dining Hall at the [Talaris Conference Center](#), 4000 NE 41st St., Seattle, WA., 98105. **Directions:** See [on-line directions with map](#), or: from I-5 northbound or southbound in Seattle, take Exit 168B (NE 45th St.). Drive east on NE 45th St. past UW down the hill and past University Village. Turn south (right) onto Mary Gates Memorial Drive at the 5-way intersection. MGM Drive will curve east (left) and become NE 41st St. Continue several blocks to the [Talaris Conference Center](#) entrance on the north (left) side. We meet in the Pacific Dining room on the left.

Upcoming Speakers and Field Trips

December 9: TBA.

January 13: TBA

February 10: TBA

Spring Field Trip: possible trip to the east and north sides of the Olympic Mtns.

Summer: there is some talk of putting together a Scotland field trip! Stay tuned!

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

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

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

Announcements

- There have been discussions about resurrecting the outstanding publication **Washington Geology**, originally published by WA DNR, with people from NWGS acting as *Scientific Editor* and *Technical Editor*. If interested, contact [Dan Smith](#).
- President Elect [Grace Winer](#) says she has a full compliment of exciting speakers lined up for the upcoming meeting year! Watch for names in the *Upcoming Speakers and Field Trips* section of the newsletter when speakers have committed to specific dates.
- Additional **field guides** from recent NWGS field trips are now available to **members in good standing**. Please check the NWGS [Field Trip Guides](#) webpage for recent additions and how to get them.
- Please contact [Grace Winer](#) if you would like to be added to the NWGS Speakers Bureau or would like more information.
- Next **Board meeting**: TBA, 4:30pm, Talaris Conference Center.

YOU would like to be involved!

Photo Spotlight



UPS students collecting a sediment core at Lake Louise. Inset at lower left: sediment core from the same lake after it has been extruded. (Photos submitted by J. Tepper.)

About NWGS

NWGS, a regional association of professionals, students & other persons interested in **geology**, provides a forum for the presentation and discussion of a wide range of geologic topics, emphasizing those of the Pacific Northwest of fundamental scientific interest.

YOU would like to be involved!

Program meetings: 2nd Tuesdays, October through May in the Pacific Dining Hall at the [Talaris Conference Center](#) in Seattle (see 1st page). Anyone may attend the speaker program, but a reservation is necessary for those wanting dinner (see 1st page). **Field trips (members only)**: one in late spring/early summer and one in late summer/early fall, usually of 1-3 days in length. **Membership** is open to anybody with a professional or amateur interest in geology. **Annual dues**: Professional: \$30; Student: \$5. **To join or pay annual dues**: send a check payable to NWGS to Secretary [Beth Tanner](#), 4616 25th Ave NE #397, Seattle, WA. 98105. Please include your name, address, home phone, email, and employer/affiliation (if any). Professional dues may now also be paid at www.nwgs.org.

YOU would like to be involved!

Recommended Readings

Tepper, J. H., 2013, Using sediment cores to reconstruct the environmental history of south Puget Sound Lakes, *Waterline*, <http://www.walpa.org/waterline/september-2013/>.

Tepper, J.H., and Hyatt, J.A., 2011, Holocene trophic state history of a subtropical blackwater lake, South Georgia, USA, *Journal of Paleolimnology*, vol. 45, no. 1, p. 9-22.

Gawel, J.E. et al., 2014, Arsenic and lead distribution and mobility in lake sediments in the south-central Puget Sound watershed: The long-term impact of a metal smelter in Ruston, Washington, USA, *Science of the Total Environment* vol. 472, p. 530-537.

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 [Dan Smith](#).

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