

NORTHWEST GEOLOGICAL SOCIETY

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

Volume 28, Number 5



May 13 Program Speaker

Speaker: Anne Tréhu, Professor, Oregon State University

Title: New Seismic Data From the Outer Forearc of the Cascadia Subduction Zone

Abstract: In the past several years, several new data sets have been acquired from the Oregon and Washington continental margins in the region where the Juan de Fuca and North American plates are thought to be locked. I will present some preliminary results from these experiments that provide more detailed information on crustal heterogeneity in the forearc and on the locations of the earthquakes occurring there (Tréhu et al., 2008, 2012). The new data confirm that the plate boundary, while generally ominously quiet, is slipping locally in small earthquakes and that this earthquake activity is spatially correlated with structural heterogeneity in the crust.

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

Spring, 2014 Field Trip: Ralph Haugerud, USGS UW, the Seattle fault zone on Bainbridge Island, May 17, 2014.

Fall, 2014 Field Trip: Eric Cheney, UW ESS, and Andy Buddington, Spokane CC, the Pre-Jurassic margin of Laurentia in Northeastern Washington, October 3-5, 2014.

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.

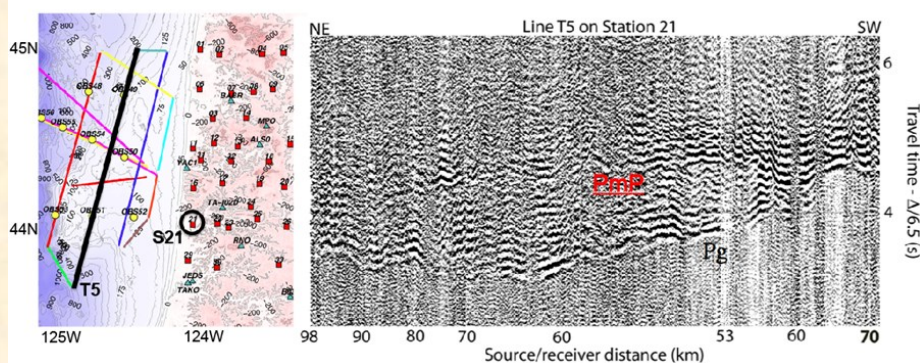
Contact webmaster [Julie Masura](#) if you have any announcements to post on the website.

Announcements

- **Field guides** from recent NWGS field trips are now becoming available. Please check the NWGS [Field Trip Guides](#) webpage for recent additions.
- Eric Cheney will lead his Leavenworth-Ellensburg-Peoh Point field trip again in conjunction with the GSA Annual Meeting in Vancouver, B.C. this fall. See [GSA](#) for details.
- Please contact [Grace Winer](#) if you would like to be added to the NWGS Speakers Bureau.
- The [Tobacco Root Geological Society](#) will be running a field conference in NE WA, July 31 -Aug. 3. Contact [Skye Cooley](#) for more.
- [College of S. Idaho geology](#) professor Shawn Willsey will lead the GSA Geoventure trip entitled *Geology of Dinosaur National Monument Yampa River Trip*, June 5-11, 2014. Cost: \$1675 (\$1575 GSA members). Info: swillsey@csi.edu.
- Next **Board meeting**: April 8, 4:30pm, Talaris Conference Center.

YOU would like to be involved!

Photo Spotlight



Map shows lines of airgun sources and positions of temporary ocean bottom (yellow circles) and onshore (red squares) seismometers that recorded those shots to generate a high-resolution 3D velocity model of the subsurface. Data from Line T5 recorded on Station S21 are shown on the right. Note that the path from a source near the northern part of the line to S21 is nearly 2 seconds faster than a path of the same length from sources to the south. This isn't your grandmother's seismic refraction! (Provided by A. Tréhu.)

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

Tréhu, A.M., Blakely, R.J., Williams, M.C., 2012, Subducted sea-mounts and recent earthquakes beneath the central Cascadia fore-arc, *Geology*, v. 40, p. 103-106.

Tréhu, A.M., Braunmiller, J., Nabelek, J.L., 2008, Probable low-angle thrust earthquakes on the Juan de Fuca-North America plate boundary, *Geology*, v. 36, p. 127-130.

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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