

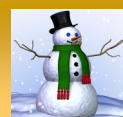
# NORTHWEST GEOLOGICAL SOCIETY

A regional association of professionals, students & others interested in geology  
Please browse [www.nwgs.org](http://www.nwgs.org) for more about us



## January 2016 Newsletter

Volume 30, Number 1



### January 12 Program Speaker

**Speaker:** Brian Sherrod, U. S. Geological Survey

**Title:** Holocene paleoseismology in Washington

**Abstract:** Paleoseismic studies at sites in western Washington

show that at least 12 faults were the locus of Holocene earthquakes. Paleoseismic shortening rates varied through time, from a low of ~0.5 mm/yr in the late Pleistocene to a high of ~14.5 mm/yr in the middle and late Holocene. The paleoseismic shortening rate over the last millennium is ~2 mm/yr, close to the GPS-derived rate. About 50% of the total Holocene shortening occurred during a burst of activity on several faults across the region around 1100 years ago. Sites in the Yakima folds in central Washington show that earthquakes occurred in the latest Pleistocene to Holocene on at least eight faults. Work continues in central Washington along several fronts to adequately assess deformation rates. I will focus much of the presentation on two examples - the Spencer Canyon fault near Entiat, site of the 1872 earthquake, and faults near Bellingham, Washington.

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](http://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 Building on the left (**SEE MAP ON P. 3**).

### Upcoming Speakers and Field Trips

**February 9:** Rob McCaffrey, Portland St. Univ., GPS velocity field mapping for active tectonics of the Pacific Northwest.

**March 8:** Lydia Staisch, USGS, Methods of absolute age control on geologic materials.

**April 12:** Dottie Mtecalf-Lindenburger, UW, Geology from 200 miles above and 65 feet below: an astronaut's and aquanaut's perspective, [and](#) Mellissa Rice, WWU, NASA's exploration of Mars.

**May 10:** Matt Taylor, UW, Stone tool evolution through pre-history.

**Spring, 2016:** There may be a field trip to a quarry near Granite Falls. Details TBA.

**Fall, 2016 Field Trip:** Eric Cheney, UW, Geology of the Republic area and the Okanogan Metamorphic Core Complex.

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

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

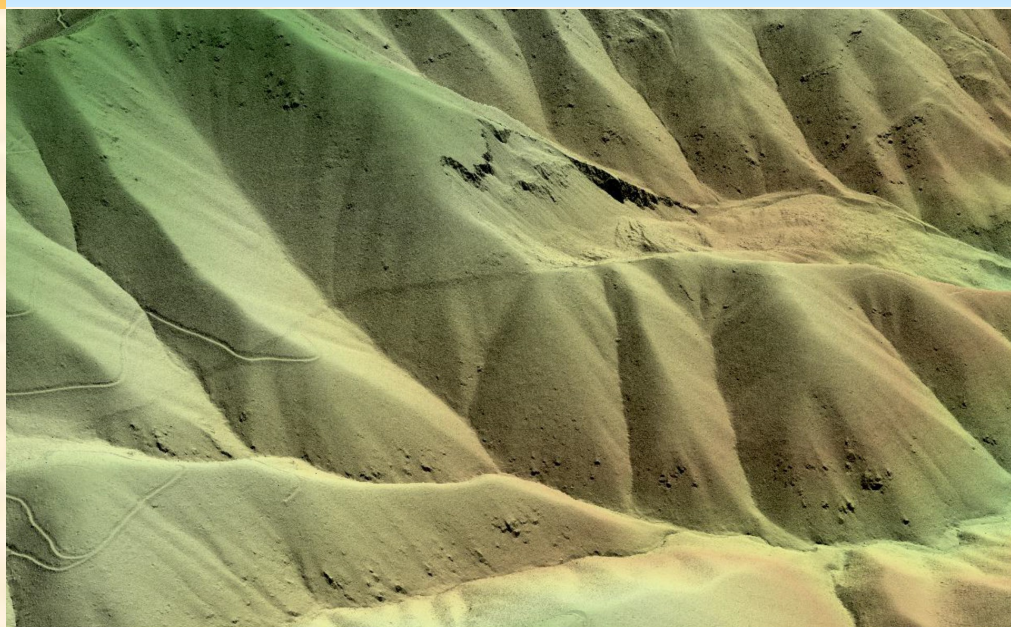
Contact webmaster [Julie Masura](#) if you have any announcements to post on the website.



## Announcements

- **2016 membership dues** are due! [Pay dues here!](#)
- There are currently 3 openings for the June 21-July 1, 2016 **Geology of Scotland** field trip (\$2900 plus air-fare). Contact [Kathleen Goodman](#) **now** to register!
- Planning is underway for the next **NWGS all-day symposium** in 2018. There are many positions needing to be filled on the planning committee. Please volunteer to help...*many hands make for light work!* Please contact [Eric Cheney](#) to volunteer.
- [AWG](#) is seeking applications for their annual **student scholarship** (Jan. 15 deadline). See [AWG scholarship](#).
- If you have an **interesting mineral or rock**, please bring it to the next meeting to show!
- **Next Board Meeting:** Tues., Jan. 12, 4:30pm, Talaris Conference Center.  
*YOU would like to be involved!*

## Photo Spotlight



Oblique view of Spencer Canyon fault, site of the 1872 earthquake, view to northeast. Source – Watershed Sciences, Inc., 2013. (Photo submitted by B. Sherrod.)

## 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 geological topics, emphasizing those of the Pacific Northwest of fundamental scientific interest.

*YOU would like to be involved!*

**Program meetings:** 2<sup>nd</sup> Tuesdays, October through May in the Pacific Dining Hall at the [Talaris Conference Center](#) in Seattle (see 1<sup>st</sup> page). Anyone may attend the speaker program, but a reservation is necessary for those wanting dinner (see 1<sup>st</sup> 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](http://www.nwgs.org).

*YOU would like to be involved!*

## Recommended Readings

Sherrod, B., and Gomberg, J., 2014, Crustal earthquake triggering by pre-historic great earthquakes on subduction zone thrusts: *Journal of Geophysical Research-Solid Earth*, v. 119, p. 1273-1294, doi: 10.1002/2013JB010635; *and companion paper* by Gomberg, J., and Sherrod, B., 2014, Crustal earthquake triggering by modern great earthquakes on subduction zone thrusts: *Journal of Geophysical Research-Solid Earth*, v. 119, p. 1235-1250, doi: 10.1002/2012JB009826.

Sherrod, B.L., Barnett, E., Schermer, E., Kelsey, H.M., Hughes, J., Foit, F.F., Jr, Weaver, C.S., Haugerud, R., and Hyatt, T., 2013, Holocene tectonics and fault reactivation in the foothills of the north Cascade Mountains, Washington: *Geosphere*, v. 9, p. 827-852, doi: 10.1130/GES00880.S1

Pratt, T.L., Troost, K.G., Odum, J.K., and Stephenson, W.J., 2015, Kinematics of shallow backthrusts in the Seattle fault zone, Washington State, vol. 11, no. 6. pp. 1948-1974, doi: 10.1130/GES01179.1.

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 [Jim Miller](#).

## NWGS Board

**President** [Jim Miller](#)  
GeoEngineers

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**Past President** [Grace Winer](#)  
Lindblad/Nat. Geog

**Secretary** [Beth Tanner](#)  
Windermere Real Estate

**Treasurer** [George Bennett](#)  
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**At-Large Board Members** [Scott Calhoun](#)

[Katie Brower](#)  
Student, Everett C.C.

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Bennett Consulting

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

**Newsletter Editor & Publications** [Tom Bush](#)  
Pierce College  
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**Poster Chair** [Maura O'Brien](#)  
Wa. Dept. of Ecology

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Highline CC

# HOW TO FIND THE NWGS MEETING SITE IN THE PACIFIC BUILDING AT THE TALARIS CONFERENCE CENTER

