



NORTHWEST GEOLOGICAL SOCIETY

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



February 2015 Newsletter

Volume 29, Number 2



February 10 Program Speaker

Speaker: Ian Joughin, Polar Science Center, Applied Physics Lab, University of Washington

Title: Ice Sheets and Sea Level

Abstract: The Greenland and Antarctic ice sheets are losing ice to the ocean at rate that is presently raising global sea level by ~1-mm/yr. As recently as 2-decades ago, the ice sheets were assumed to respond slowly to climate change.

Contrary to this conventional wisdom, many glaciers in both Greenland and Antarctica have sped up rapidly over the past few decades as revealed by largely satellite observations. Such observations, which were not predicted by models, caused the 4th Intergovernmental Panel on Climate Change (IPCC) to conclude there was as no way to quantify an upper bound on 21st Century sea-level rise from the unstable ice dynamics. With further observations and study since then, we now have a better understanding of the processes that control fast flow and can rule out some of the more catastrophic scenarios. Nonetheless, understanding the fast flow of the glaciers and ice streams that discharge ice to the ocean remains a major challenge. This talk will cover some recent observations of unstable flow as well as attempts to use the data to constrain models in an effort to understand future sea level rise.

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

March 10: Greg Wilson, UW, Mammals Inherit the Earth: How the K/Pg Mass Extinction Killed Off Dinosaurs and Opened the Way for Mammals.

April 14: Jim Aldrich, Structural Geology and Tectonics of the Olympic Mountains.

May 12: Timothy Melbourne, CWU Cascadia Hazards Institute, topic TBA.

Spring Field Trip: Eric Cheney/Darrel Cowan, UW, Fidalgo and Guemes Islands, April 24-26 (see *Announcements* for more).

Fall Field Trip: Possible trip to the east and north sides of the Olympic Mtns, leader(s) and dates TBA.

Summer, 2016: Scotland, 10 days, June, 2016 (**Important: see *Announcements* below for more**).

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

- [Jim Miller](#) has been approved as the next **NWGS President-elect**. Congratulations, Jim, and thanks!
- Please contact [Kathleen Goodman](#) if you are seriously interested in the **10-day field trip to Scotland in June of 2016**. All participants must **commit by March, 2015**.
- The **spring field trip** will be April 24-26, led by Eric Cheney and Darrel Cowan of UW ESS to Fidalgo and Guemes Islands, and may include stops at the Oso and Whidbey Island landslides. Accommodations will likely be at the [Rosario Beach Marine Lab](#) at Deception Pass. Watch for details later.
- There will be an opening on the [Washington State Licensing Board for geologists](#) starting this spring. Please contact [Bill Laprade](#) if interested and qualified.
- 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, 4:30 p.m., Talaris Conference Center.

YOU would like to be involved!

Photo Spotlight



Melt stream on the surface of the Greenland Ice Sheet in the summer of 2010. Photo submitted by Ian Joughin.

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

Joughin, Ian, Smith, B. E., and Medley, Brooke, 2014, Marine Ice Sheet Collapse Potentially Under Way for the Thwaites Glacier Basin, West Antarctica, *Science*, Vol. 344, no. 6185, pp. 735-738, DOI: 10.1126/science.1249055.

Joughin, Ian, Alley, R. B., and Holland, D. M., 2012, Ice-Sheet Response to Oceanic Forcing, *Science*, Vol. 338, no. 6111, pp. 1172-1176, DOI: 10.1126/science.1226481.

Joughin, Ian, Das, S. B., King, M. A., Smith, B. e., Howat, I. M., Moon, Twila, Seasonal Speedup Along the Western Flank of the Greenland Ice Sheet, 2008, *Science*, Vol. 320, no. 5877 pp. 781-783 DOI:10.1126/

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 [Grace Winer](#).

NWGS Board

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

President Elect [Jim Miller](#)
GeoEngineers

Past President [Dan Smith](#)
King County

Secretary [Beth Tanner](#)
Windermere Real Estate

Treasurer [Carla Whittington](#)
Highline Com. Coll.

At-Large Board Members [2 Positions Open](#)

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 O'Brien](#)
Wa. Dept. of Ecology

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

Facebook Pagemaster [Eric Baer](#)
Highline CC