



NORTHWEST GEOLOGICAL SOCIETY

A regional association of professionals, students & others interested in geology
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October 2008 Newsletter

Volume 22, Issue 1

October 14 Program Speaker (joint meeting with Pug. Sound Chap. Am. Meteorological Soc.)

Speaker: Jon Riedel, North Cascades National Park

Title: Shrinking glaciers in the North Cascades

Speaker Abstract: Glaciers represent a significant natural resource in Washington's national parks, covering a combined area of more than 230km². These glaciers are defining features of the Olympic and Cascade mountains, are the sole habitat for some species, provide an important source of freshwater during summer drought, and are sensitive indicators of climate change. Oblique aerial photographs of several North Cascades glaciers taken in the late 1950s by Austin Post and in 2005 by John Scurlock, provide dramatic evidence of the rapid loss of this resource.

The National Park service began monitoring glaciers at North Cascades National Park in 1993, and at Mount Rainier in 2003. Monitoring consists of seasonal measurements of accumulation and melt at 30 sites on six glaciers, including Nisqually and Emmons glaciers at Mount Rainier, and Noisy, Silver, Sandalee, and North Klawatti glaciers in the North Cascades. Protocols also call for periodic inventories of the area and volume of all park glaciers and monitoring of glacial melt-water discharge in six watersheds.

Monitoring data indicate that winter snowfall decreases above about 2500m on Mt. Rainier, and that the average daily temperature above 3000m does not rise above 0°C until the middle of July. All of the glaciers in this study have negative cumulative balances over the periods of record, with a cumulative net loss of approximately 5 billion gallons of water for the four North Cascade glaciers between 1993 and 2007. Research complimenting the monitoring program indicates that a 50% reduction in the glacier area since 1900 in Thunder Creek watershed has resulted in a decrease in summer stream flow of about 25%.

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.

Program dinner reservations: NWGS members: \$30; Non-members: \$35; Full-time students in good standing: \$10. Add \$5 for LATE REGISTRATION. Mail check to Ginny Agnew, 935 Pine St., Edmonds, WA. 98020 (must be received by Thursday prior to meeting). Contact her at 425-776-6151 or agnew@msn.com.

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

Location: Pacific Dining Hall at the [Talaris Conference Center](http://www.talaris.com), 4000 NE 41st St., Seattle, WA. Ph 206-268-7000. 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](http://www.talaris.com) entrance on the north (left) side.

Upcoming Speakers and Field Trips

November Speaker: Peter Ward, UW Biology, [Extinction astrobiology](#).

December Speaker: Eric Cheney, UW ESS Dept., [scintillating topic TBA](#).

January Speaker: [Tom Bush](#), Pierce College Puyallup, [Breccias, breccias everywhere, but where's the gold?](#)

February Speaker: Josh Banfield, UW, [Space Geology](#).

March Speaker: Don Swanson, USGS HVO, [Kilauea, an explosive, not milquetoast, volcano!!](#)

April Speaker: Tim Walsh, Washington DNR Geology, [Tsunami hazards](#).

May Speaker: Jody Bourgeois, UW, [Does Kamchatka belong to North America?](#)

Spring 2009 Field Trip: TBA.

Other Announcements

Long-time Newsletter Editor John Whitmer Retires: [John Whitmer](#) has retired as Newsletter Editor after many years of dedicated and outstanding newsletter production. His services over the years are greatly appreciated by all! As of this month, [Tom Bush](#) is taking over, with a new Newsletter design. Please send comments regarding the new design or other pertinent newsletter information to [him](#).

Fall 2008 Field Trip news: The fall field trip was to Cypress Island in the San Juan Islands, Sept. 28-29.

Tax Exempt Status: [John Figge](#) is making progress on the task of obtaining tax exempt status for NWGS.

2009 Annual Dues will be due soon! Please send dues (\$30 professional, \$5 student) to [Dan Smith](#), 10203 40th Ave SW, Seattle, WA. 98146. *Thank you if you have already paid.*

Next Board Meeting: October 14, 4:30pm, [Talaris Conference Center](#).

[Lars Gilmour](#) is new Poster Chair! Lars has volunteered to oversee posters presented at our functions. If you would like to present a poster, please contact Lars.

Please see the [NWGS website](http://www.nwgs.org) for detailed announcements.

Photo Spotlight

A pod of iceberg-rafted boulders at the southern edge of the Quincy Basin, at the foot of the Frenchman Hills. The boulders are pegmatite, which must have come from the Lake Pend Oreille area. Photo and caption from [John Whitmer](#), NWGS spring field trip, *Ice Age Floods Field Trip to the Western Channeled Scablands*, led by Bruce Bjornstad.



Please send your photos with captions (1MB) to Newsletter Editor [Tom Bush](#).

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 or of fundamental scientific interest. **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 Treasurer [Dan Smith](#), 10203 40th Ave SW, Seattle, WA. 98146. Please include your name, address, home phone, email, and employer/affiliation (if any).

Recommended Readings

Burchfiel, B. C., 2008, A geological and geophysical context for the Wenchuan earthquake of 12 May 2008, Sichuan, People's Republic of China, *GSA Today*, Vol. 18, No. 7, pp. 4-11.

Bottjer, D. J., et al., 2008, Understanding mechanisms for the end-Permian mass extinction and the protracted Early Triassic aftermath and recovery, *GSA Today*, Vol. 18, No. 9, pp. 4-10.

Dante Canil, 2008, Canada's craton: A bottoms-up view, *GSA Today*, Vol. 18, No. 6, pp. 4-10.

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 Secretary [Dan Smith](#) at 206.937.5313. Questions or comments? Contact President [Dave McCormack](#) at 206.838.5834.

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253.840.8484

Northwest Geological Society
10203 40th Ave SW
Seattle, WA. 98146

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