



NORTHWEST GEOLOGICAL SOCIETY

A regional association of professionals, students & others interested in geology
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November, 2010 Newsletter

Volume 24, Number 9

November 9 Program Speaker

Speaker: Elizabeth Schermer, Professor, Western Washington University Geology Department

Title: New constraints on Mesozoic deformation and metamorphism in the North Cascades

Abstract: New structural and geochronologic results from the North Cascades provide a detailed history of metamorphism and deformation affecting Triassic island arc and ocean-floor rocks, and plutonic rocks emplaced during Cretaceous arc magmatism. In the Mt. Formidable region, retrodeformation of large-scale D1 recumbent folds suggests early thrusts and folds caused >300% shortening. New zircon dates bracket D1 deformation and metamorphism to between ~155 Ma and ~138 Ma. These dates are older than previous estimates of early deformation in the Cascades, inferred as mid to Late Cretaceous. Correlation with similar rocks in southern British Columbia suggests that D1 is related to terrane accretion. Three phases of Cretaceous deformation, including folding, thrusting, imbrication of the terranes and intruding plutons, and strike-slip faulting, are dated between ~94 Ma and ~60 Ma. The kinematics of alternating NW-SE and NE-SW shortening indicate protracted transpression in the Cretaceous arc following terrane accretion.

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: **\$35**; Non-members: **\$40**; Full-time students : **\$15**. 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 agnewv@msn.com.

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

Location: Pacific Dining Hall at the [Talaris Conference Center](#), 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](#) entrance on the north (left) side.

Upcoming Speakers and Field Trips

December 7: Al Eggers, Univ. Puget Sound, Hawai'i

January 11: TBA

February 8: TBA

March 8: TBA

April 12: TBA

May 10: TBA

Spring, 2011 FT: TBA

Fall, 2011 FT: TBA

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

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

Announcements

- **Next Board Meeting:** date, time, and location TBA.
- It is time to start thinking about **nominations** for our next **President-elect!** You may nominate yourself (i.e. volunteer)! Contact [John Figge](#).
- The autumn 2007 **20th anniversary symposium** was a huge success. It is time to start preliminary planning for the 2012 repeat performance for our 25th anniversary. The first step is to decide whether or not to have another symposium, and, if so, then to choose a venue and date. Then we need to set up a organizing committee. Each member will oversee important tasks (general chairman, speaker chairman, fundraising chairman, etc.). Please provide your input to [John Figge](#) as to whether or not we should have another symposium, and if so, how you are willing to contribute to the process. Please!
- Take the **member survey** at www.nwgs.org/.

Photo Spotlight



Westward view up Boulder Creed towards Mt. Baker. The creek has been the pathway of many Baker lahars. Photo taken on NWGS Fall 2010 field trip by D. Charnley, caption modified from G. Ferris.

Your geology photo submissions (~1MB) with captions are appreciated. Please email 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 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 Secretary [Dan Smith](#), 10203 40th Ave SW, Seattle, WA. 98146. Please include your name, address, home phone, email, and employer/affiliation (if any).

Recommended Readings

Hillebrand, R.S., 2009, Did westward subduction cause Cretaceous-Tertiary Orogeny in the North American Cordillera? GSA Spec. Paper 457, 71 p.

Gillaspay, J.; Schermer, E. R. 2004: Kinematics and P-T conditions of brittle deformation in an ancient accretionary prism setting: San Juan Islands, NW Washington. *Geological Society of America Abstracts with Programs*.

Lamb, R.; Schermer, E. R. 2003: Metamorphism and deformation in the eastern San Juan Islands. *Geological Society of America Abstracts with Programs* 35: 114.

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 [John Figge](#).

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