



NORTHWEST GEOLOGICAL SOCIETY

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

Volume 24, Number 12

December 14 Program Speaker

Speaker: Al Eggers, Professor Emeritus and Research Professor (Geology), University of Puget Sound

Title: Shallow magma accumulation at Kīlauea Volcano, Hawai‘i, revealed by microgravity surveys

Abstract: Using microgravity data collected at Kīlauea Volcano, Hawai‘i (United States), between November 1975 and January 2008, we document significant mass increase beneath the east margin of Halema‘uma‘u Crater, within Kīlauea’s summit caldera. Surprisingly, there was no sustained uplift accompanying the mass accumulation. We propose that the positive gravity residual in the absence of significant uplift is indicative of magma accumulation in void space (probably a network of interconnected cracks), which may have been created when magma withdrew from the summit in response to the 29 November 1975 $M = 7.2$ south flank earthquake. Subsequent refilling documented by gravity represents a gradual recovery from that earthquake. A new eruptive vent opened at the summit of Kīlauea in 2008 within a few hundred meters of the positive gravity residual maximum, probably tapping the reservoir that had been accumulating magma since the 1975 earthquake.

4:30pm: Board meeting ALL WELCOME
5:30pm: No-host social hour
6:30pm: Buffet dinner
7:30pm: Speaker program
All are welcome to attend – reservations are required

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 agnew@frontier.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](http://www.talariscenter.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](#) entrance on the north (left) side.

Upcoming Speakers and Field Trips

January 11: Darrel Cowan, University of Washington, Actively, Possibly Seismogenic Low-angle, Normal Faults, Death Valley, California

February 8: Pat Pringle, Centralia College

March 8: March, Sian Davies-Vollum, University of Washington Tacoma, Making a Mudrock Sandwich

April 12: TBA

May 10: TBA

Spring, 2011 FT: TBA

Fall, 2011 FT: TBA

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

Contact webmaster Julie Masura if you have any announcements to post on the website.

Announcements

- **Next Board Meeting:** Monday, November 22. See [NWGS website](#) for current time and location. Another meeting is tentatively scheduled prior to the December 14 gathering at the Talaris.
- It is time to start thinking about **nominations** for our next **President-elect**! You may nominate yourself (i.e. volunteer)! Loads of fun! Contact President [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 an 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



Lava enters the ocean at dusk at two sites on the southern flank of Kilauea volcano near Kalapana, Big Island, Hawai'i, Sept. 2009. Note shreds of lava propelled into the air by ocean entry explosions at the west (right) entry. Photo by T. Bush on NWGS Fall Field trip, *Geology of Kilauea Volcano*. 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

Barry, T.L., S. Self, S.P. Kelley, S. Reidel, P. Hooper, M. Widdowson. New ⁴⁰Ar/³⁹Ar dating of the Grande Ronde lavas, Columbia River Basalts, USA: Implications for duration of flood basalt eruption episode. *Lithos*, 2010; DOI: [110.1016/j.lithos.2010.03.014](https://doi.org/10.1016/j.lithos.2010.03.014)

Carrapa, B. 2010. Resolving tectonic problems by dating detrital minerals. *Geology*. vol 38(2). p. 191-192. retrieved from <http://geology.gsapubs.org/content/38/2/191.full>.

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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