



NORTHWEST GEOLOGICAL SOCIETY

A regional association of professionals, students & others interested in geology
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November 2013 Newsletter

Volume 27, Number 7



November 12 Speaker Program

Speaker: Dave Montgomery, Professor, UW Earth & Space Sciences Department

Title: Megafloods down the Tsangpo River Gorge, south-east Tibet

Abstract: Lacustrine and alluvial terraces and sediments record the extent of at least two Holocene glacially dammed lakes immediately upstream of the Tsangpo River gorge at the eastern syntaxis of the Himalaya. The larger lake covered 2835 km², with a maximum depth of 680 m and contained an estimated 832 km³ of water; the smaller lake contained an estimated 80 km³ of water. Radiocarbon dating of wood and charcoal yielded conventional radiocarbon ages of 8860 ± 40 and 9870 ± 50 ¹⁴C yr B.P. for the higher set of lake terraces, and 1220 ± 40 and 1660 ± 40 ¹⁴C yr B.P. for sediments from the lower terraces. Catastrophic failure of the glacial dams that impounded the lakes would have released outburst floods down the gorge of the Tsangpo River with estimated peak discharges of up to 1 to 5 x 10⁶ m³ s⁻¹. The erosive potential represented by the unit stream power calculated for the head of the gorge during such a catastrophic lake breakout indicates that post-glacial megafloods down the Tsangpo River were likely among the most erosive events in recent Earth history.

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**. \$45 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 [Dan Smith](mailto:Dan.Smith@nwgs.org) at 206-937-5313 or nwgeo@yahoo.com.

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. 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. We meet in the Pacific Dining room on the left.

Upcoming Speakers and Field Trips

Fall Field Trip: Sat. Nov. 16, Bruce Stoker, Earth Systems, the Cadman High Rock Quarry near Duvall and Monroe, WA.

December 10: TBA.

January 14: TBA

February 11: TBA

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

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

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

Announcements

- **Bruce Stoker** of Earth Systems will lead the fall field trip to the **Cadman High Rock Quarry** near Monroe, WA on Saturday, November 16. Watch your in-box for a flier and registration details!
- NWGS is looking for a volunteer to take over the Secretary position. Please contact President [Kathy Troost](#) or current Secretary [Dan Smith](#).
- NWGS is also looking for volunteers for a few other interesting tasks designed to increase the Society's outreach. Some require minimal time commitments. Please contact [Kathy Troost](#) if interested. Please!!!
- Next **Board meetings**: November 12, & December 7, 2013, 4:30 P.M., Talaris Conference Center.

YOU would like to be involved!

Photo Spotlight



Derek Booth standing by a mega-flood transported boulder in the Siang River, NE India (photo and caption by Dave Montgomery).

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 [Dan Smith](#), 10203 40th Ave SW, Seattle, WA. 98146. 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

Earth Magazine, 2013, Down to Earth with **Dave Montgomery** (an interview with Julia Rosen), Earth Magazine, November 2013, pp. 54-55.

Montgomery, D. R., 2012, [The Rocks Don't Lie](#), W. W. Norton & Company, Inc., London, 302 p.

Montgomery, D. R., 2007, [Dirt](#), Univ. California Press, Berkeley, 285 p.

Montgomery, D. R., Hallet, B., Yuping, L., Finnegan, N., Anders, A., Gillespie, A., Greenberg, H. M., 2004, Evidence for Holocene megafloods down the Tsangpo River gorge, southeastern Tibet, Quaternary Research, Vol. 62, pp. 201-207 (DOI: 10.1016/j.yqres.2004.06.008).

Montgomery, D. R., 2003, [King of Fish: The Thousand-Year Run of Salmon](#), Westview Press, Boulder, 290 p.

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 [Julie Masura](#).

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