



Association for Women Geoscientists

Puget Sound Chapter

February/March 2006

Message from the Editor by Shawn Blaesing-Thompson

Hi all, It seems as though 2006 has come at full speed ahead. I thought I would take a minute to get you up to speed with past and present activities of the AWG Puget Sound Chapter. Because some of our activities are coming together at the last minute we will keep you posted as new events are added to the list either via email or through the chapter website at www.awg-ps.org. As always feel free to send us job announcements, web sites and events you want to share with the group. Happy Spring ☺

OUTREACH ACTIVITIES

Regional / State Science Fairs

This year we are again sending volunteers to the regional and state science fairs. Elaine Brouillard judged at the Mid-Columbia Region Fair in Kennewick on March 9th. Rob Barnes judged at the South Sound Regional Fair at PLU in March 18th, and Paula York and Wendy Gerstel will judge at the State Science and Engineering Fair on March 31st and April 1. Thank you to all of these volunteers who help us with this important educational outreach opportunity. We will have a full report in the Spring Newsletter.

Just to remind you we have received a matching fund grant from AWGF. If you would like to donate \$5, \$10 or \$20 dollars that would help us meet our side of the matching funds (\$145 per year). Please send a check with **Puget Sound Chapter ISEF-SAGE** in the memo line to: **Treasurer** - Lorraine Manz, P.O. Box 7364, Bismarck, ND 58507-7364,

2005 Scholarship Recipient Submitted by Anne Udaloy

The recipient of the 2005 Puget Sound Chapter Geosciences Undergraduate Scholarship is Jennifer Perry. An honor roll student at Spokane Community College, she has transferred to Central Washington University and is majoring in geology. She completed field camp last summer and is planning to receive her Bachelor of Science degree in Spring 2007. A single mother of two, Jennifer is balancing the needs of her family with the demands of a rigorous academic schedule. Her instructors describe her as "mature and hard-working", "one of the hardest-working, most dedicated and accomplished students I have ever had in my twelve years of teaching", and having "an absolute passion for the Earth Sciences" while noting that she is "an absolutely caring and devoted mother". We are pleased to encourage and support her studies with our financial assistance.

If you would like to donate to the scholarship fund that would help us meet our side of the matching funds (\$500 per year). Please send a check with **Puget Sound Chapter Scholarship** in the memo line to: **Treasurer** - Lorraine Manz, P.O. Box 7364, Bismarck, ND 58507-7364. All donations are greatly appreciated.

PAST EVENTS

December 2005 Joint NWGS/AWG Meeting Written by John H. Whitmer

This was a joint meeting with the Northwest Geological Society. The speaker was Kathryn A. Hoppe (UW EARTH & SPACE SCIENCES) *TRACKING MAMMOTHS & MASTODONS: USING THE CHEMISTRY OF TEETH TO RECONSTRUCT THE LIFESTYLES OF EXTINCT ANIMALS.*

Kathryn has an impressive background in paleontology, including a Ph.D. from Princeton University & considerable study at the post-doctoral level. Her primary interest is how animals interact with the environment. There are many unanswered questions in North America, where 75% of mammals larger than small dogs went extinct about 1,000 years ago. Was that the result of pressure from humans; from marked climate change, or from marked landscape change? Her approach is to use stable isotopes, e.g., Sr & Ca to track the range of migration & the type of habitat characteristic of large mammals, particularly Mammoths [up to 12 feet high] & Mastodons [about 9 feet high]. Since tooth enamel grows in annual increments, a time-related graph of Sr isotope ratios can be constructed & compared with soil profiles in regions where these animals once resided. She chose Florida for her study because it had an abundance of mastodons & mammoth fossils & there was extensive data on the isotopic content of soils in the region. Her research indicates that animals which spent any time away from the Florida Coast had higher isotope ratios than those which remained at the coast. Moreover, Mastodons migrated 200 to 400 km. beyond Florida, whereas Mammoths, with a range less than 500 km., did not move beyond Florida. This appears to be consequent to the fact that Mastodons were browsers which inhabited the forest edge, while the Mammoths were grazers, confined to the grassy lowland.

UPCOMING EVENTS

April Joint Meeting

We are doing a joint meeting at the local AWIS meeting on April 19th. The topic is *Global Climate Change in Puget Sound: What Can We Expect in the Next 50 Years?* Presented by Dr. Amy Snover. In addition to giving an overview of climate change causes and impacts, planning for climate change, and action that Pacific Northwesterners can take to attenuate the impacts, Dr Snover will talk about her career - how she got interested in climate change issues, her training and career path.

Amy K. Snover is a research scientist with the Climate Impacts Group at the University of Washington. Dr. Snover performs integrated assessment of the impacts of both natural climate variability and future human-caused climate change on the natural and human systems of the Pacific Northwest. Her special interests include communication of complex scientific topics and facilitating a mutually beneficial relationship between science and decision making.

Location/Directions: UW South Lake Union Building, First Floor Auditorium, 815 Mercer Street, Seattle, WA 98109 Directions to 815 Mercer St., From I-5 N or S, Take Exit 167 – Mercer Street/Seattle Center, Take a left at the light onto Fairview, Turn right onto Republican, Park behind the building on 9th and Republican, meet on the first floor in the Auditorium

Ice Age Floods Institute Field Trip

Ice Age Floods Institute field trip through the western Channeled Scablands to be lead by Bruce Bjornstad (a companion trip to the one we tagged along on to Frenchman Coulee last year) that people might be interested in. Because there's limited space available on the bus and IAFI members will get priority go to the IAFI news page, <http://www.iceagefloodsinstitute.org/news.html#spring06> and look at the Spring 2006 newsletter. There are also some nice illustrations from Bruce's upcoming book on the web page.

Geofilm fest

We are hoping to set a date maybe in June. Check your email postings for more information.

Field Trip and Scholarship Award

We are hoping to do a field trip/east side of the mountains meeting in May or June and we will keep you posted via email.

Crafty Geoscientist Day

We are hoping to pick this activity up again. If you are interested in hosting an event please let me know. Thank you.

AWG Iceland Trip July

AWG is currently accepting registrations for this summer's Iceland Field Trip (July 2-11, with an optional 2-day extension to the Westmann Islands). Please e-mail Marcia Knadle (marciaAWG@aol.com) for information or go to www.awg.org/trips/iceland06/index.html to download trip and registration information. The cut-off date is April 1st, but you can contact Marcia up until April 15th to inquire about available spaces.

NWGS / AWG Joint Meeting– November 14th, 2006

Title: Middle Miocene Southern Ocean Cooling and Antarctic Cryosphere Expansion

Authors: Amelia E. Shevenell, James P. Kennett, and David W. Lea

Magnesium/Calcium data from Southern Ocean planktonic foraminifera demonstrate that high-latitude (~55°S) southwest Pacific sea surface temperatures (SSTs) cooled 6 to 7°C during the middle Miocene climate transition (14.2-13.8 million years ago). Stepwise surface cooling is paced by eccentricity forcing and precedes Antarctic cryosphere expansion by ~60 thousand years, suggestions the involvement of additional feedbacks during this interval of inferred low-atmospheric partial pressure of CO₂ (*p*CO₂). Comparing SSTs and global carbon cycling proxies challenges the notion that episodic *p*CO₂ drawdown drove this major Cenozoic climate transition, SST, salinity, and ice-volume trends suggest instead that orbitally paced ocean circulation changes altered meridional heat/vapor transport, triggering ice growth and global cooling.

More details to come as the event gets closer.

BOOK REVIEW

VOLCANOES AND THE ENVIRONMENT

Joan Marti' and Gerald Ernest, Eds.

Cambridge Univ. Press, New York, 2005

467 pages, many references, tables, and some photos. US\$90

This is your basic Volcanology 101 textbook. If I were teaching a class that had anything to do with volcanoes, it would be required reading. It's jam-packed with information about volcanoes--just about anything a student of college age up would want or need to know about volcanoes.

The only thing missing is a glossary of terms for readers that are familiar only with a limited area of volcano science. Geophysicists might need economic and social terms. Aspiring science writers (fact or fiction) need to understand geochemistry terms. And environmental science students, aspiring urban-regional planners and so on...may need some "translation" of the "hard science" language..

The editors have collected 15 chapters from 19-plus volcano scientists (both social and physical scientists) each chapter with copious references. They are as follows.

Understanding the physical behavior of volcanoes.

Volcano hazards.

Anticipating volcanic eruptions.

Volcanoes and the geological cycle.

Effects of volcanic eruptions on the atmosphere and climate.

Volcanoes, hydrothermal venting, and the origin of life.

Volcanism and mass extinctions.

Effects of modern volcanic eruptions on vegetation.

Animals and volcanoes: survival and revival.

Human impacts of volcanoes.

Volcanoes, geothermal energy, and the environment.

Volcano-hosted ore deposits.

Industrial uses of volcanic materials.

Volcanoes, society, and culture.

Volcanoes and the economy.

As a geohazard management planning consultant now retired, I would have loved to have had this book. And last, Volcanoes and the Environment should be required reading for writers of disaster fiction, TV scripts, and movies featuring volcanoes.....

But then we wouldn't have the fun of laughing at Hollywood's horrendous goofs!

Reviewed by Janet M.C. Tanaka

Puget Sound AWG

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