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Join us for the 2012 Annual Conference in beautiful Spokane, Washington!

Registration information and forms are here! Register now and order your limited edition tee shirt!



News from Ron Metzger



Welcome to spring. I suppose I'm not the only one that feels that for every step forward that I've made this year, it seems that I end up three steps further behind. The one thing recently that I got ahead of the curve on is submitting my registration for the Spokane meeting. There's more info elsewhere, but if you are planning to go and haven't registered yet get your information to Andy as soon as possible so he can finalize transportation!

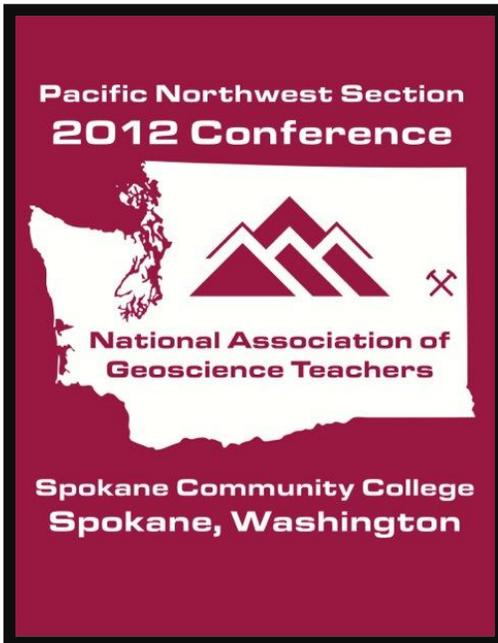
Also, if you haven't had a chance to check out the revised section website take a minute to visit and peruse at: <http://www.nagtpnw.org/>. The conference information is at the website, as well as in this newsletter!

The executive committee of NAGT has been working at strengthening the connections between National and the sections. One of the continuing concerns is declining NAGT membership - which is both a sectional and national issue. The recent transition to Allen Press included some additional technical difficulties that they will be working on by contacting lapsed members from recent years to get them back in the fold. This is certainly important, but I would also like to put a challenge out to our section as well. We all probably know people in the K-12 or college systems that would benefit from NAGT both from an informational as well as collegial standpoint. If we all contacted one or two people and made a personal request that they join, it may provide the impetus to strengthen both our section and national NAGT as well. One area that we have frequently discussed is increasing the number of faculty from four-year/graduate programs. Our K-12 and 2-year students are potentially transferring to these programs, and the relationships that can be produced would serve both sides well. So regardless of what type of institution or agency, please put the call out on our behalf to people you know.

Looking forward to seeing some old faces and new in Spokane in a few weeks. See you in June. If you've got any questions or concerns, drop me a line at rmetzger@socc.edu.

--- Ron

2012 ANNUAL CONFERENCE



Join us in Spokane, Washington for the 2012 Annual Conference!

**Spokane Community College
Spokane, Washington
June 22nd - 26th, 2012**

Spokane Community College will host the 2012 section conference with a slate of 3 great field trips and a day of informative talks. The conference schedule, fieldtrip descriptions, registration forms and related information are detailed in this packet. Don't delay; register today!

The Conference session day includes some great talks and posters! Oral Presentations are full. Poster abstracts will be accepted until May 21, 2012. You won't want to miss any of them.

Oral Session Presentations



Conference Day, June 23rd, Spokane Community College

- *Aquifer Declines in the Odessa Subarea, Washington* - Guy Gregory
- *Classroom and Internet Resources for Geoscience Teachers* - Ken Sutton
- *College Inside - Teaching in a Penitentiary Setting* - Shiela Alfsen and Bill Orr
- *Coeur d'Alene Mining District: Past, Present, Future* - Brian White
- *Lake Clarkia Fossil Sites* - Bill Rember
- *Using Time-Lapse Video to Teach about Slow Geologic Processes* - Scott Linneman
- *Status of DNR - Division of Geology and Earth Resources (Washington Geological Survey)* - Dave Norman
- *Zigzag Geometry of Neoproterozoic - Early Paleozoic Cordilleran Rift Margin and Implications for Mineral Deposits, Canada to Nevada* - Karen Lund and J. N. Aleinikoff
- *Laurentian Washington* - Eric Cheney
- *The Natural History of the Southwest Deserts: A Dual Perspective on the Logistical and Curriculum Challenges of a Nine-Day Field Course* - Sarah Hoover and Sara Herring
- *Paleoseismicity of the Cascadia Accretionary Wedge off of Western Canada: Slipstream; an Early Holocene Slump and Turbidite Record from the Frontal Ridge* - Tark Hamilton, Enkin, R.J., Reidel, M., Pohlman, J.
- *Late Pleistocene Mammoth, Bear, Bison, and Squirrel Fossils from the Airport Lane Site, La Grande, NE Oregon* - Jay Van Tassell
- *Results of Geologic Mapping Projects in Idaho* - Reed Lewis
- *Late Mesozoic Tectonics of Western Idaho* - Keith Gray

Posters:

- *Toward a Structural Synthesis of the Kootenay Arc in Northeastern Washington and Adjacent British Columbia: Recognition of the Pend Oreille River Fold and Thrust Belt (PORFT) from 49.2N to 48.1N* - Eric Cheney
- *Tests of the Newly Recognized Pend Oreille River Fold and Thrust Belt in Northeastern Washington* - Andy Buddington, Ted Doughty, Eric Cheney, and Peter Balholm
- *Green Roof Water Balance Research at Okanagan College, Penticton* - Todd Redding
- *Late Pleistocene Mammoth, Bear, Bison, and Squirrel Fossils from the Airport Lane Site, La Grande, NE Oregon* - Jay Van Tassell
- *Late Wisconsin Glaciation in Northern Idaho* - Roy Breckenridge and Dean Garwood
- *The Math You Need, When You Need It - Remediating Mathematics for Students in a Wide Range of Geoscience Courses* - Eric Baer, Carla Whittington, Jennifer Wenner, and Helen Burn
- *SAGE-2YC - Supporting and Advancing Geoscience Education in Two Year Colleges* - Eric Baer, Heather MacDonald, Bob Blodgett, and Jan Hodder

Oral Session is filled. Abstracts for posters must be submitted to Andy Buddington by May 21, 2012.

Conference Schedule/Field Trip Descriptions

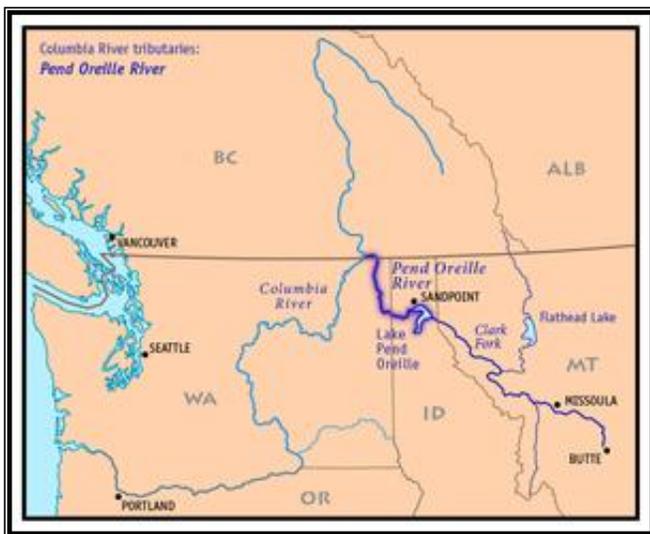


Fig. 1 Location of the Pend Oreille River Valley of NE Washington!

Day 1: Friday, June 22nd

Field Day: Glacial History of the Pend Oreille River Valley

Leader: Gene Kiver

In this mostly ignored part of northeastern Washington, fieldtrip participants will learn about the complicated movement of glaciers and the Missoula Floods. Glacial moraines and outwash deposits here were overprinted during ice recession after failure of the Purcell Trench ice dam holding back Glacial Lake Missoula.

Field trip includes van transportation from Spokane Community College and sack lunch. A field guide will be provided.

Day 2: Saturday, June 23rd

Conference Day: Presentations and Posters @ Spokane Community College

Evening Social with Jack Nisbet, location to be announced

Jack Nisbet (<http://jacknisbet.com>) is a teacher, historian, naturalist and author. His acclaimed works include: *Sources of the River: Tracking David Thompson across Western North America*, *The Mapmaker's Eye: David Thompson on the Columbia Plateau*, *Visible Bones: Journeys through Time in the Columbia River Country*, and *Purple Flat Top: In Pursuit of a Place*. Jack Nisbet brings Inland Northwest history (natural and human) alive in a way very few people can.

2012 ANNUAL CONFERENCE

Day 3: Sunday, June 24th

Field Day: The Clarkia Lagerstätte

Leader: Bill Rember

Located in the Clearwater Mountains near Clarkia, Idaho, this is considered one of the best sites for Miocene plant fossils in the Pacific Northwest – and perhaps the world! Stephen J. Gould's *Magnolias from Moscow* highlights this spectacular record of past life. The Clarkia beds are a true *Lagerstätte* in all senses of the word: a site with significant species diversity exhibiting exceptional preservation. Here you will be able to collect an array of Miocene flora and learn about the development of Lake Clarkia along with paleoclimate implications.



Fig. 2 Miocene fossils of the Clarkia!

Days 4-5: Monday-Tuesday, June 25th-26th

Field Day: The Continental Margin Geology and Tectonic History of NE Washington: Precambrian to Tertiary

Leaders: Eric Cheney (University of Washington) & Andy Buddington (SCC)

The geology and tectonic history of the western margin is well-exposed in northeast Washington. If you teach historical geology or just want to experience Precambrian sedimentation (Belt Supergroup), the rifting of Rodinia (Windermere Supergroup) with the development of early Paleozoic margin (Sauk Sequence), the collision of the Quesnellia, or the formation of the Kettle metamorphic core complex, then this two-day trip is for you!

Conference Lodging Information

Spokane: There are many hotels within 10 minutes of SCC, including everything from the low-priced *Days Inn* to the high-priced *The Davenport*. For a complete list of nearby hotels please consult the website. Andy has provided a spreadsheet that compares room rates. Hotels should be contacted directly to make reservations.
<http://www.scc.spokane.edu/?maps>.

Colville: For people attending the **Continental Margin field trip on June 25-26**, our stop over on Monday night will be in Colville, Washington. Arrangements for lodging on Monday, June 25th have been made with:

Benny's Colville Inn (<http://209.173.244.158/>)
915 South Main, Colville, WA
Phone: 800-680-2517 or 509-684-2517.

Rates: \$63 (King-sized, non-smoking room) & \$78 (2 Queens, non-smoking). Continental style breakfast is included.

You will need to contact Benny's directly to reserve your room. When you call, be sure to mention you are with the NAGT Summer Field Conference to get the rates quoted above. Consider sharing a room to reduce your costs! Make your room reservations early. Late June is a busy time in Colville and your chances decline rapidly after April 1st.

Registration Deadline June 1st
One registration for each person please.

NAME: _____

STREET ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

PHONE NUMBER: _____

E-MAIL: _____ NAGT Member? YES/NO _____

AFFILIATION: _____

EVENTS

June 22nd, Field Trip - *Glacial History of the Pend Oreille River Valley*, Fee = \$40 _____

- Includes van transportation, field guide, sack lunch

June 23rd, Conference Day @ SCC, Evening Social Event with Jack Nisbet Fee = \$30 _____

- includes program w/abstracts, coffee breaks, lunch
- evening social includes or devoirs (no host bar)
- extra person for evening event

Fee = \$15 _____

June 24th, Field Trip - *The Clarkia Lagerstätte*, Fee = \$40 _____

- Includes van transportation, field guide, sack lunch

June 25-26th, Field Trip - *Continental Margin Geology and Tectonic History, NE Washington*, Fee = \$50 _____

- Includes van transportation, field guide, 1st day sack lunch
- Overnight lodging in Colville not included

STUDENTS: go to the NAGT website for funding assistance.

Conference Tee Shirts (please indicate size needed and number of shirts)

\$15 x quantity _____

Small _____ Medium _____ Large _____ X-Large _____ XXL (\$17 x quantity) _____

GRAND TOTAL AMOUNT

\$ _____

Please **make checks payable to** Spokane Community College (sorry, no credit cards).

Mail check to: Andy Buddington
Science Dept. MS 2010
Spokane Community College
N. 1810 Greene St.
Spokane, WA 99217

Lunches

Name (please print your name): _____

Lunches for the field trips and the conference day (excluding June 26th) will be included in the registration fees. Box lunches will include sandwiches, chips, snack, drink, etc. If you have a special dietary need (vegetarian), please indicate below.

June 22nd, Field Trip - *Glacial History of the Pend Oreille River Valley*

A box lunch will be provided as part of your registration fee. If you have registered for this event, please check which sandwich option you prefer:

- turkey _____
- beef _____
- ham _____
- vegetarian _____

June 23rd, Conference Day @ SCC

Lunch will be included with your registration fee for the Conference Day. If you have registered for this event, please check which lunch option you prefer:

- turkey _____
- beef _____
- ham _____
- vegetarian _____

June 24th, Field Trip - *The Clarkia Lagerstätte*

A box lunch will be provided as part of your registration fee. If you have registered for this event, please check which sandwich option you prefer:

- turkey _____
- beef _____
- ham _____
- vegetarian _____

June 25-26th, Field Trip - *Continental Margin Geology and Tectonic History, NE Washington*

A box lunch (June 25th) will be provided as part of your registration fee. If you have registered for this event, please check which sandwich option you prefer:

- turkey _____
- beef _____
- ham _____
- vegetarian _____

2012 ANNUAL CONFERENCE

Travel/Registration Grants for the 2012 Annual Conference

Travel/registration grants are available in the following categories:

1. K-12 Instructors - please apply for the Ron Kahle Professional Development Award, application details at: www.nagt.org/nagt/organization/northwest/ron_kahle_award.html
2. Students - please go to www.scc.spokane.edu/?nagt2012 and download the form or fill out and return the form below.

Student Grant Application

2012 Summer Conference Registration
National Association of Geoscience Teachers
Pacific Northwest Section

The Pacific Northwest Section of NAGT will award up to four student grants of \$100 each to help defray the costs of students attending the 2012 conference in Spokane, Washington. Grants will be applied directly towards the registration fees, with any additional registration costs being the responsibility of the student. Please fill in the contact information below, plus include a statement indicating what you hope to gain through attending the conference.

Submit to section President Ron Metzger at rmetzger@scc.edu by May 15th, 2012

NAME: _____

STREET ADDRESS: _____

CITY _____ STATE _____ ZIP _____

E-MAIL: _____ NAGT MEMBER? YES/NO _____

SCHOOL AND ACADEMIC YEAR: _____

NAME OF A FACULTY REFERENCE: _____

ARE YOU SUBMITTING AN ABSTRACT: YES/NO? _____

For more information about the 2012 Annual Conference, please contact our host Andy Buddington at Spokane Community College:

ABuddington@scc.spokane.edu or 509-533-8017

Events and Links From Around the Region

Idaho

State Councilor: Shawn Willsey

- **37th Annual Tobacco Root Geological Society Field Conference** will be held July 26–29, 2012 in West Yellowstone, MT. Website: <http://trgs.org/default.htm>
- **Idaho-STEM Summer Institutes** held at four different locations this summer. Idaho State University (June 19-21), Northern Idaho College (June 18-21), College of Southern Idaho (June 25-28), and College of Western Idaho (June 26-28). For information and registration, go to: <http://www.sde.idaho.gov/site/istem/teachers/events.htm>

Washington

Jennifer A. Thomson, Eastern Washington University

- **SUMMER FIELD TRIP OPPORTUNITY THROUGH EASTERN WASHINGTON UNIVERSITY**

Vulcania! Exploring Mts. Rainier and St. Helens –
Instructors: Drs. Buchanan, O’Quinn and Thomson
Sunday, August 5- Saturday, August 11, 2012

Vulcania is seven-day field trip to Mt. Rainier National Park and Mt. St. Helens National Volcanic Monument for the purpose of examining the geology and biology of the largest and most active volcanoes, respectively, in Washington State. Go to <http://www.ewu.edu/CSHE/Programs/Geology/Summer-Field-Course.xml> for information and contacts.

State Councilor: Sian Davies-Vollum

- Seminars at the UW-Tacoma are open to the public, free of charge. All talks are from 12:30 -1:20 on in the Science Building, Room 309, 1900 Commerce Street, Tacoma:
 - **14 May: Amanda Bruner, Center for Urban Waters - Sound Citizen**
 - **21 May: David Secord, Tides Canada - The Rapidly Changing Arctic**

Alaska

State Councilor: Cathy Connor

Fairbanks

- **International Glaciological Society Meeting**
June 24-29, 2012
University Alaska Fairbanks
<http://glaciers.gi.alaska.edu/events/igs2012>
- **Alaska Science Consortium Summer Science Workshop**
July 30-Aug 1, Fairbanks, Alaska
<http://akscience.org>

ASC will be offering a workshop with a focus on climate change. There will be several guest speakers, a field trip to the Permafrost Tunnel in Fox, and hands on activities. **Class size is limited to 15 and the deadline to register is June 1st.** To find out more and/or download an application please go to the website listed.

- **Lunar Workshop For Educators!**
July 30-August 3, 2012
University of Alaska Museum of the North,
<http://lro.gsfc.nasa.gov/lwe/workshop2012fairbanks.html> Grade 6–12 science teachers are invited to attend a **FREE** workshop focused on lunar science, exploration, and how our understanding of the Moon is evolving with the new data from current and recent lunar missions. The Lunar Reconnaissance Orbiter (LRO) has allowed scientists to measure the coldest known place in the Solar System, map the surface of the Moon in unprecedented detail and accuracy, find evidence of recent lunar geologic activity, characterize the radiation environment around the Moon and its potential effects on future lunar explorers – and much, much more!

Participants will learn about recent discoveries, reinforce their understanding of lunar science concepts, gain tools to help address common student misconceptions about the Moon, interact with lunar scientists and engineers, work with LRO data, and learn how to bring these data and information to their students using hands-on activities aligned with grade 6-12 National Science Education Standards & Benchmarks.

Events and Links From Around the Region

Alaska (continued)

State Councilor: Cathy Connor

- **GIRLS ON ICE**
<http://girlsonice.org/>
North Cascades July 29-August 9, 2012
Alaska July 15-25, 2012

Alaska Range

- **Denali National Park 2012 Summer Courses**
Denali's Changing Landscape (July 6-8)
Geology of Denali July 20-22
Glaciology Backcountry Citizen Science
August 3-7
<http://www.nps.gov/dena/parknews/2012-teacher-scholarships.htm>
<http://www.murieslc.org/>

Anchorage

- **Alaska Native Students in Science and Engineering ANSEP**
<http://www.ansep.net/middle-school-academy.html>
- **Trailside Discovery**
Alaska Pacific University
<http://akcenter.org/trailside-discovery>

Juneau

- **Study of Juneau Icefield Geochemistry Published in NATURE Geoscience Journal and Online**
http://www.nsf.gov/news/news_summ.jsp?cntn_id=123154
The Juneau Icefield is the laboratory for a study revealing that the remnants of fossil fuels in glaciers may be changing the source of food for marine life down the food chain. University of Alaska Southeast Assistant Professor Eran Hood is the second author of the study, to be published in the international journal Nature Geoscience in March 2012 and published online. Hood led the fieldwork at the Mendenhall and Herbert Glaciers where visiting scholar-scientists from throughout the Lower 48 and they sampled snow, ice melt, and glacier runoff. More information and a slideshow of photographs by Hood can be found in the U.S. National Science Foundation online article: "Scientists Unlock Record of Ecosystem Changes Frozen in World's Glaciers."

British Columbia

State Councilor: Tark Hamilton

Dr. Tark Hamilton, Camosun College, BC shares the current structure, status and challenges of geology programs in British Columbia:

BC has 3 large receiving universities with degree programs in Earth and Ocean Sciences: U. B.C. and Simon Fraser University in Vancouver and U. Vic in Victoria. Beyond this there are about a dozen Colleges and University Colleges that are feeder institutions. We have an excellent Articulation program for Geology as well as all other subjects that are supported by delegates from each school and annual meetings to ensure courses articulate between institutions. This seems to be rather different than the stand alone model with regard to course content and deliverables for Washington and Oregon Schools. The other thing that is notably different is the lack of K-12 Earth Science programs with the sole content relegated to part of the content in middle school.

The majority of students who take introductory geology or earth science courses are University transfer students in Liberal arts needing a lab science for their distribution credits. The vast majority of these think they want to be elementary education majors. Science majors in this stream are chronically lacking.

For colleges with more than about 3000 students there is also a steady demand for Earth Science career bound students intending to take Geology, Geophysics or Oceanography. On demand 1-2 times a year there a second year courses also offered. This past year I taught Mineralogy in the winter term with a record enrollment of 20. I also get a steady contingent from our 3 year Environmental Technology Diploma Program.

The funding for Colleges and Universities in BC is all public in the main with a small component made up from tuition which at the colleges is subsidized at about \$80/credit hour. Universities are much higher and closer to cost. Under our conservative minded business oriented provincial Liberal government, Colleges have faced a level budget for 3 years against rising costs. This has devolved to tuition increases, program cuts, faculty layoffs and only self-funded courses being taught. This is hardly a wise or thoughtful investment in the future.

(continued on next page)



British Columbia

State Councilor: Tark Hamilton

(Article continued from previous page)

Given the current resource boom, most students who seek them, find summer jobs in exploration geology or in the oil patch or service sector for these industries. Gas fracking and SAGD (Steam Assisted Gravity Drainage) for unmineably deep tar sand deposits are the current poster children of the oil industry. Pipelining solvated tars and heavy oils cut with naphtha, benzene and gas condensate is the preferred fast buck industrial scheme rather than building local refineries. In mining exploration, while conventional porphyry, epithermal and massive sulfide gold and copper projects remain strong, there is considerable interest in iron oxide-gold deposits and rare earths. Because of this geology and earth sciences in general remain viable career tracks and enrollments track this demand.

Federally Canada has a Conservative government that largely feels it needs to look after the interests of the oil industry. Climate science has been drastically cut. Federal science departments are being heavily cut and censored with any interviews to reporters requiring ministerial approval and sufficient delays that topics in question cease to be timely or topical.

Canada wide we are in year 5 of a revolving 5-year revision of the national building code including for earthquake and geohazard safety standards.

State Councilor: Brett Gilley

- **Canadian Geoscience Education Network Annual Meeting**

2:00 p.m. – 6:00 p.m., May 29, 2012
Duckworth Room, Delta Hotel
St. John's, Newfoundland
for more information visit:
<http://geoscience.ca/index.php?page=cgen-rceg>

- **Neptune Canada**

If you haven't yet had a chance to explore the Neptune Canada website drop by and visit today. There are many resources for including live data and feeds from many sensors on the ocean floor.
<http://www.neptunecanada.ca/>

Have you been receiving the NAGT quarterly publication **In the Trenches?** If your answer is no, you may no longer be on the NAGT mailing list as a dues paying member! With the transition to a new membership services provider, there have been many challenges for NAGT, including web renewal for membership malfunctioning! If you didn't renew your membership by Jan. 1, 2012, you may have inadvertently been dropped! **If so, we want you back! We need you back!** Please contact us so we can fix any problems. NAGT apologizes for any mix ups and we need to hear from you if you have questions or concerns about your membership status.

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