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**From the President**

**Greetings!**

*Frank Hladky, PAC NW  
Section President*



It is a new year, and while the national political scene is currently characterized by stalemate, 2019 shaping up to be a year of change for NAGT. The association has a new president, David McConnell, and sometime later this year, a new and yet-to-be-named executive director. Here at the section level, we're seeing some gradual changes. I think changes should be explained in their context. Which reminds me of a story:

Way-back-when during undergraduate mineralogy, my colleagues and I began studying crystallography starting with symmetry, point groups and space points. For me most of the details have been lost to time. But I do remember this: the feeling of utter confusion of having no points of reference from my prior education. I knew a little about symmetry but that was about it. I wasn't alone in this feeling. The topic was foreign, the concepts abstract, the vocabulary bizarre. It was if we had been thrust down Alice in Wonderland's rabbit hole into a realm of utter madness. Somehow we made it, but having no prior reference points was certainly quite disconcerting and our angst was compounded because we felt our futures depended on something that for most of us would not be used in our future. So, we responded the best we could by spending many long nights in the mineralogy lab. I am hoping that the changes I am about to explain will not be quite so disconcerting.

Most of you know, that for a number of years, the section has had its own web domain, [nagtpnw.org](http://nagtpnw.org), hosted by a commercial web hosting service. This domain was formerly generously maintained by one of our members, at no small cost. Having its own domain provided a sense of identity and independence for the section. And in a time when the world-wide-web was expanding, it was the thing to do. Times have evolved. The membership of the section has been relatively constant for a number of years. NAGT

as an organization has spawned several specialty-oriented divisions in addition to the regional sections. Much of the organization's energy has gone there. NAGT as an organization is strong and has a depth of resources. In a time before nagtpnw.org, the Pacific Northwest section's web presence was hosted at nagt.org, as it is now and going forward. The reasons for going back go well beyond cost, and include reasons of durability and accessibility. The information placed on nagt.org, which is hosted on SERC's servers, will last, for all practical purposes, as long as Carleton College lasts. The information placed there in the 90's is *still* there. And the section has never had to pay for it. Work for it, yes. Pay for it, no. The quality of the information is better, too. Images uploaded to the commercial site were retained as low-resolution thumbnails. Documents uploaded to SERC retain their original quality. While commercial services may strive to be accessible, there is nothing that compares with calling upon SERC's web wizard who happens to be a member of NAGT, too—it's like being part of the same family. Our go-to person is Andrew Haveles—when I call him, I don't have to listen to elevator music. And he's a geologist. Get the picture? What we have between the section and NAGT is an enduring relationship with an organization that was here before each of us joined and which will be here after we're gone. That parent organization allowed for the birth of the section. So we really are family! And we've gone home.

Where do you find the section's web presence?  
<https://nagt.org/nagt/sections/northwest/index.html>.

A couple of things I should mention. At the last annual meeting of GSA in Indianapolis I ran into a couple of notables: former NASA astronaut and last man to walk on the moon, Harrison Schmitt, and "Men of Rock" Scottish geologist, Iain Stewart. For a guy in his 80's Jack Schmitt (photo above) is sharp as a tack and still presenting geological papers. Most impressive. If you haven't seen Iain Stewart's "Men of Rock" BBC series on YouTube, you should. When I taught teenagers geology, they ate it up. This generation loves rock stars and they love selfies. What I find remarkable are the opportunities that befall us when we simply get out!



Have a great year and stay tuned for further info on the section's annual meeting.

See you in Penticton!

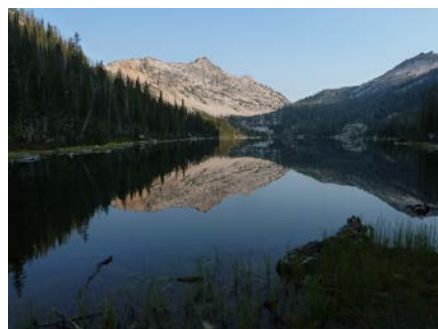
## From National NAGT

*David McConnell*  
*President, NAGT*

Greetings to everyone in NAGT's Pacific Northwest section! I am honored to serve as this year's NAGT president. I joined NAGT many years ago and in those early days, I certainly did not understand what had to happen behind the scenes to keep the organization ticking along. In serving on the Executive Committee for the last couple of years it is obvious how much the success of NAGT depends on the efforts of its members. Whether serving in many of its vibrant sections, working in the divisions or participating on numerous committees, the organization just would not function without so many people stepping up to help. It is this sense of community that I value most about NAGT. I see evidence of that when hundreds of like-minded folks show up for the annual Earth Educators' Rendezvous. It is a concentrated dose of geoscience education in just five days. I'm looking forward to this year's Rendezvous in Nashville, from July 15-19. Come for the geoscience learning, stay for the hot chicken and country music hall of fame!

This is an important year for NAGT as we will be making a significant change in leadership. Our long time Executive Director, Cathy Manduca, is stepping down and we are currently searching for her replacement. While presidents and other officers have come and gone, Cathy has steered NAGT forward, helping us build membership, expand our offerings, and successfully manage the budget. While change can present challenges, it is also an opportunity to embrace new ideas and directions. The executive committee will look forward to working with a new director to continue to strengthen the organization.

Thank you for all you do to keep NAGT strong. Please communicate with your section officers so that they can let us know when and how the national organization can be responsive to your needs. Have a great year!



Hidden Lake, Sawtooth Range, ID

# 2019 NAGT CONFERENCE

June 25-27, Penticton, British Columbia

Host - Todd Redding, Okanagan College

[tredding@okanagan.bc.ca](mailto:tredding@okanagan.bc.ca)



Munson Mountain with glacial lacustrine terrace and Okanagan Lake in foreground.

## **Tue. June 25 – Conference Day, Okanagan College**

Presentations, posters, and section business.

### **Field trips - NAGT 2019 in Penticton**

The Okanagan Valley includes a diverse bedrock and surficial geology that will be highlighted during our two field trips (though you could spend a lifetime exploring...), along with some experiences of the local terroir. Below are some of the highlights we are hoping to visit during the field trips.

## **Wed. June 26 - Naramata and Summerland**

This trip will start with a visit to Munson Mtn., a remnant chunk of dacite, to take in the view of Okanagan Lake and present an overview of the local geologic and glacial history. The morning will be spent looking at the metamorphic rocks that are common on the east side of the valley and spend some time contemplating the thick glacial lacustrine sediments that underlie the famed Naramata Bench wine growing area where we will enjoy lunch accompanied by wine tasting.

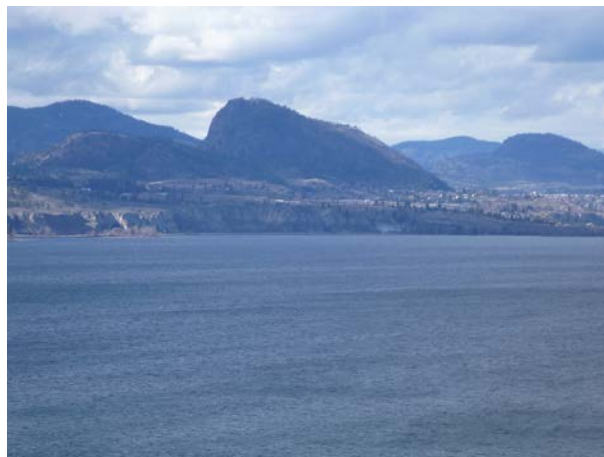
The afternoon will be spent on the west side of Okanagan Lake, visiting Crescent Beach to view more glacial lacustrine deposits, Sumac Ridge to view White Lake Formation Eocene sedimentary rock and Giants Head (extinct volcanic neck) to view columnar dacite and discuss the re-shaping of this feature by glaciers. If time permits we'll have a look at a large landslide affecting Trout Creek. The trip will likely end with a visit to a winery and possibly a distillery.



Vaseaux Lake with McIntyre Bluff in background.



Columnar dacite, Giant's Head Mountain.



Giant's Head Mountain with Okanagan Lake and glacial lacustrine terraces in foreground.

### Thurs. June 27 - Okanagan Falls

On our second day in the field we will head south of Penticton to visit a pegmatite exposure along Skaha Lake, plutonic rocks of the Okanagan Batholith, a drive along the Okanagan Valley Fault along McLean Creek and a hike into the old Dusty Mac Gold Mine. For lunch we will again coordinate with a stop at a winery with a view of Vaseaux Lake and McIntyre Bluff. In the afternoon we will visit the meromictic Mahoney Lake and the White Lake Formation sedimentary rocks and look for fossils. The drive back to Penticton will likely be via a winery stop.



Eocene leaf fossils, White Lake Formation.

I hope this tentative itinerary appeals to you. If you have any requests or suggestions of things you would like to see or do, please let me know.



Silt Cliffs, Naramata Bench, glacial lacustrine.

If any members are keen cyclists (road or mountain), bring your bikes as there are fantastic trails and roads to explore. If you want to come out a bit early or stay longer and get out there, I'd love the chance to show you around. There is also a wide range of hiking, watersports on the beautiful lakes and of course many wineries, breweries, cideries and

distilleries to visit. The Saturday morning downtown farmers market is one of the best and largest in the province. More information to follow; check the section website.

## CALL FOR ABSTRACTS

2019 Summer Conference at Okanagan College  
Penticton, British Columbia, Canada

**Conference Day - Tuesday, June 25, 2019**

Deadline for Abstracts - May 17, 2019

If you would like to present a talk (15-20 minutes) or poster (teaching techniques, geology research, undergraduate research, etc.) submit your abstract to **Hillary Goodner** at [hgoodner@yvcc.edu](mailto:hgoodner@yvcc.edu). Please include "NAGT Conference Abstract" in the subject heading of your email. Make sure that your abstract includes:

- Whether an oral presentation or poster is being submitted
- Title
- Author(s) name, affiliation, and contact email addresses
- Abstract length: maximum 1 full page (8.5" x 11") in Times New Roman, 12-point font. You may include legible line diagrams, graphs or tables. Must maintain at least 1.0" margin on all four sides.
- Deadline — May 17, 2019 Due to the limited amount of time during conference day, acceptance for oral presentation will be based on first submitted, first granted basis. If time slots for oral presentations fill before the deadline date, you'll be contacted in regards to a poster option.

## Research Experiences for Undergraduates

*from Anne Egger, CWU*

The **REU Site: Hazards and Risks of Climate Change in the Pacific Northwest at CWU** is now accepting applications for the spring/summer 2019 program, our third cohort. Please spread the word, and invite students to apply. The range of available research projects is quite extensive, and covers biology, chemistry, climate science, geology, geography, public health, sociology, and science education. We are seeking students in their first two years of college, so please advertise in your introductory courses and share with your colleagues in other disciplines. I'd be

happy to Skype in to classes or chat with any students who are interested, as well. Read more:

- [About our program](#)
- [Potential research projects](#)
- [Who should apply](#)

## Northwest Scientific Association

2019 Annual Meeting

March 26-29<sup>th</sup>

Lewis-Clark State College, Lewiston, ID  
*from Keegan Schmidt, LCSC*



Clearwater & Snake confluence, Lewiston, ID

Join us in March for the annual conference of the Northwest Science Association in Lewiston, Idaho March 25-28, 2019. This is a great opportunity for researchers who are looking for a more regional venue to discuss their research results. Student attendance is highly encouraged. Northwest Science is in the process of shifting their focus back to include more geoscience, a discipline that was well-represented several decades ago, but has largely disappeared from the pages of their journal and from their meeting sessions. This recent initiative is apparent in the plenary sessions scheduled for the upcoming Lewiston meeting. Our keynote speaker is Brian Atwater (UW) speaking on Cascadia earthquakes. Other plenary speakers include Jim O'Connor (USGS) and Nick Zentner (CWU). We also have scheduled a **geologic tour of Hells Canyon by jetboat as one of our field trips**. More information about the meeting and link to submit abstracts can be found at:

<https://www.northwestscience.org/Annual-Meeting>

## Summer Internship Opportunity

*from Michael Hubenthal*

The IRIS Undergraduate Internship Program is accepting applications for the summer of 2019! Details on the application process and the online application form can be found here: <https://www.iris.edu/hq/internship/interns>

**The deadline to apply is February 1st.**

**Please share the following with your students!!!!**

If you are an undergraduate math, physics, geoscience or computer science student interested in exploring Earth and

developing new skills, please consider applying! Our program, now in its 20th year, has proven to be a successful stepping stone for a career in the geosciences. Over 78% of our alumni are pursuing careers in the geosciences and are employed by federal and state governments, academia, industry, and as independent consultants.

**As an IRIS Intern you will...**

Attend a week long orientation at the IRIS/PASSCAL Instrument Center and then spend 8 to 10 weeks working on a seismological research project at your mentor's home institution. Through the project, you will...

- conduct research with state of the art geophysical data and leading researchers at IRIS institutions
- develop an understanding of scientific inquiry, including designing and conducting scientific investigations, defending scientific arguments, and preparing publications
- gather, manage, and convey information, using various skills, strategies, resources, and
- learn, use, and evaluate technologies for the collection and study of geophysical data

**As an IRIS Intern you will receive...**

- A weekly stipend (\$700/week for 9 - 11 weeks)
- Free student memberships in the [American Geophysical Union](#)
- Funding for travel to the orientation as well as room and board
- Funding for travel to the home institution of your research host
- Assistance securing housing at the host institution
- Funding for any additional expenses related to fieldwork
- Full funding for travel to a professional meeting to present your results along with the associated meeting costs (travel, registration, abstract submission fee and per diem)

Learn more about the IRIS Undergraduate Internship Program at [www.iris.edu/internship](http://www.iris.edu/internship)

## Southwestern Oregon CC Geology Lecture Series

*from Ron Metzger*

Here are the remaining talks in the Geology Lecture Series here at SWOCC for the year. Talks are livestreamed (and most archived). The **14<sup>th</sup> Annual Cascadia Anniversary Talk** will be streamed (but NOT archived). Link to more info on that talk: <https://www.socc.edu/pr-archives/1244-the-big-ones-preparing-for-increasing-risk-from-natural-disasters> and the Livestream site:

<https://livestream.com/SWOCC/geology2018-19>

**Friday, January 25, 2019 at 7:00 pm**

Dr. Lucy Jones

USGS (retired) Founder: Dr. Lucy Jones Center for Science and Society

The 14<sup>th</sup> Annual Cascadia Anniversary Lecture: "The Big Ones: Preparing for Increasing Risk from Natural Disasters"

**Saturday, March 2, 2019 at 7:00 pm**

Dr. Shannon Kobs-Nawotniak

Idaho State University

"SUBSEA: Robotic Submarines, Underwater Volcanoes, and the Search for Extraterrestrial Life"

**Saturday, April 13, 2019 at 7:00 pm**

Dr. Julia Reece

Texas A & M University

"Mud and Bugs Under Stress: Compression of Marine Sediments Beneath the Seafloor"

An Ocean Discovery Distinguished Lecturer

**Friday, May 17, 2019 at 7:00 pm**

Dr. Stephen Palumbi

Stanford University

"The Extreme Life of the Sea: Thriving in a Changing World"

**2019 GSA Cordilleran Meeting, Portland, Oregon, May 15-17,**

The GSA Cordilleran Section meeting will be hosted by the City of Roses at the Portland Convention Center. Go to the section meeting website at: [https://www.geosociety.org/GSA/Events/Section\\_Meetings/GSA/Sections/cd/2019mtg/home.aspx](https://www.geosociety.org/GSA/Events/Section_Meetings/GSA/Sections/cd/2019mtg/home.aspx). The abstract deadline is February 5<sup>th</sup>.

**MORE New Ice Age Floodscapes** on YouTube videos from Bruce Bjornstad: **Babcock Bench**: <https://www.youtube.com/watch?v=5qWvPRPxY8>

**NAGT Awards**

As most of you know, NAGT gives numerous annual awards, "mini-grants", and scholarships. These awards support and recognize great teaching and work in the geosciences. But, for people to be recognized and otherwise provided support, there need to be nominations! We need your help. Please, take a moment and think of some deserving teacher or colleague. Maybe you have a student that needs help with field camp funding. Or maybe it's time act on that crazy idea you have for research by applying for funding.

For the complete list of awards and deadlines, visit the NAGT website at <https://nagt.org/nagt/awards/index.html> for all the information needed to nominate or apply. Below is a quick list of what NAGT has to offer:

- Outstanding Earth Science Teacher Award
- Neil Miner Award
- James Shea Award
- Robert Christman Award
- Dorothy Stout Professional Development Awards
- Outstanding TA Award
- Scholarships for Field Study

**MEETINGS, WORKSHOPS & TRIPS**

**Central Washington University, Public Lectures & Field Trips:** <http://www.geology.cwu.edu/lectures/>

**Ice Age Floods Institute:** website, events, field guides: <http://iafi.org/>

**Washington Science Teachers Association:** <https://wsta.wildapricot.org/>

**Northwest Geological Society,** Seattle, Washington: monthly meetings, lectures, and field trips: <http://www.nwgs.org/>

**Geologic Society of the Oregon Country:** <https://www.gsoc.org/>

**Columbia Basin Geological Society** meets monthly in Spokane, the last Tuesday of the month. Contact Chad Pritchard at EWU for more info: [cpritchard@ewu.edu](mailto:cpritchard@ewu.edu)

**GENERAL SECTION NEWS**

**British Columbia:** see announcement above regarding the 2019 NAGT Pacific Northwest Section annual conference to be hosted by Okanagon College and organizer Todd Redding.

Our good friend and colleague, **Tark Hamilton** reports that he is now retired from **Camosun College**, and that he and his wife Coleen are traveling to their many time-shares worldwide, playing golf and cornhole, and still trying to get a gig on *Jeporady*. Hey, **Tark**, Alex is a fellow Canadian, so why can't you get on *Jeporady*? Seriously, after March 1<sup>st</sup>, he'll "be back doing research at PGC/GSC Pacific and available through his daily Yahoo email [tark\\_hamilton@yahoo.com](mailto:tark_hamilton@yahoo.com)". Enjoy retirement Tark!

**Idaho:** no report

**Washington:** new faculty in WA include Brian Marion at CC in Moses Lake and Hillary Goodner and Jamie Hansen at CC in Yakima.

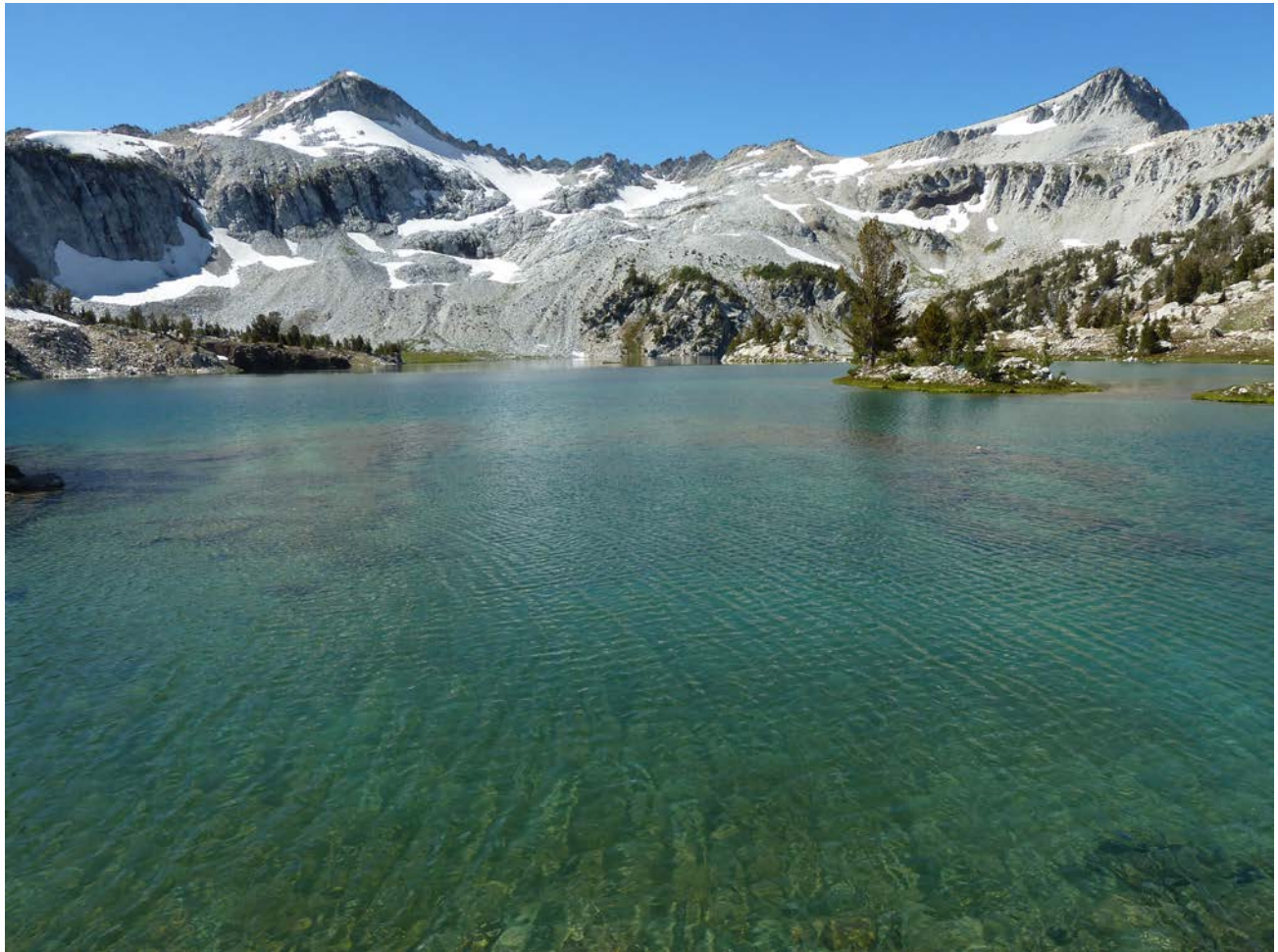
**Alaska:** no report

**Oregon:** Hal Wershow is now at CC in Bend.

**Newsletter Materials!** If you have anything that you would like to share with the section, please don't hesitate to send it to either Frank or Andy. We're always looking for information and items to put in the newsletter. **Got a great field or lab sample photo you want to share?** Send along with a description. Book or article review? Or, heaven forbid, how about writing a relevant piece on something that may be of interest to the rest of us. Please submit!



2018 Introductory Earth Science and Physical Geography students from Okanagan College on Munson Mtn. looking north with Okanagan Lake and Giant's Head in the background (left horizon).



Glacier Peak (9495' left), Glacier Lake, Eagle Cap (9577' right), Eagle Cap Wilderness, Wallowa Mountains, Oregon. Photo, Andy Buddington.