PLU Department of Geosciences!

CONGRATULATIONS TO OUR MAY 2012 GRADUATES!

Our first newsletter!

Welcome to our first Department of Geosciences newsletter. We're hoping to use this and subsequent newsletters to help us all keep in touch. Combined with our Facebook group, our website, and the e-mails and letters we receive from time to time, we're looking forward to strengthening the PLU Geosciences community. Next semester's newsletter will include alumni updates, pictures from the field, and more! So stay tuned, and alums – look for update requests in the coming year!

The past few years in the Department of Geosciences have brought the retirement of department founder Dr. Brian Lowes (see page 6), and three new hires (see faculty profiles on pages 2 and 4!). Fortunately, we've had faculty members Steve Benham, Duncan Foley, Jill Whitman, and Rose McKenney to guide the new arrivals!

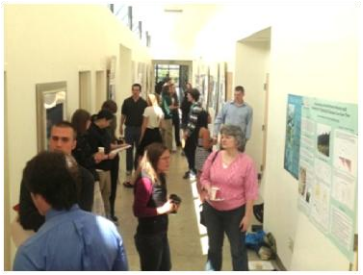
We're showing off our 2012 graduates in the picture above. Congratulations to (above, left to right) Katie Bryant, LeAndra Lemen, Vivian Ngo, Megan Noborikawa, Danielle Williams, Michael Vermeulen, and Ad Byerly. As is tradition, they are receiving their very own PLU Geosciences Rite-in-the-Rain field books!

All Geosciences majors have to complete a senior capstone project before graduating (see page 3 for a summary of 2012 topics). In early May each spring, students give their final capstone presentations. We encourage alums to join us for next year's presentations on May 4th, 2013! We will have over ten capstone students next year, with topics to interest geoscientists of all backgrounds.

This fall, faculty and students returned to Rieke Science Center for another semester full of learning experiences inside and outside of the classroom. Seniors are developing their capstone projects, meeting with mentors and heading to the field and to the library to begin their investigations. Some students began their work during the summer months (see page 4 to learn more!), while others will explore a topic completely new to them. We are excited to see where the capstone journey takes all of us this year.

As faculty, we are proud of our current and former students. Feel free to drop us a line from time to time to let us know how you're doing! Happy Holidays from PLU Geosciences!

IN THIS ISSUE



FACULTY PROFILES

Dr. Duncan Foley

This past spring and this fall, Duncan taught Earthquakes, Volcanoes and Geologic Hazards. He also teaches our capstone course in spring. His Hazards course takes students on field trips to Cape Shoalwater (Washaway Beach), Mt. Rainier, and Mt. St. Helens. He is writing a research report on photographic protocols for monitoring hydrothermal systems in Yellowstone National Park. He also has been working with PLU staff and a capstone student on assessment of the potential use of groundwater beneath campus for a heat pump system to heat and cool upper-campus dorms.

Duncan attended a week-long workshop about teaching environmental geology last summer, and snuck a trip to Yellowstone into an off day. He also visited many thermal fields during a trip to New Zealand and Australia. He continues to be a photo judge at the Puyallup Fair.

Dr. Peter Davis

In spring, Peter taught Igneous and Metamorphic Petrology and his introductory class, the Geology of Energy. These classes will include field trips to the Rimrock lake area and to Alder and La Grande Dams. This fall he taught GEOS 201 Principles of Geology, our gateway-to-the-major course! He recently developed a successful research group that has focused on the Precambrian geology of the Tusas Mountains in northern New Mexico. Peter has also been awarded a Regency Grant from PLU that will allow him to start a new investigation into the deep-seated tectonic features expressed in the southern Cascades, between Rimrock Lake and Ellensburg.

Peter also enjoys being the faculty advisor to the new Bike Coop. Peter's wife Carmen Eyssautier is now a Study Abroad advisor in the Wang Center for Global Education. Peter and Carmen continue to enjoy their small house in northern Tacoma. With it's sizable back yard, it serves as a great base for neighborhood mixers, as well as the 2010 PLU Geoscience Graduation luncheon!

Dr. Jill Whitman

In spring, Jill taught Marine Geology and Oceanography. She's currently teaching GEOS 335 Geophysics. She also continues her tireless work on behalf of our department as Chair. She recently completed work on a collaborative grant called *Teachers on the Leading Edge*. This grant provided a professional development program for Pacific Northwest K-12 teachers of Earth Science, featuring plate tectonics and geologic hazards of the Pacific Northwest. Through funding from the National Science Foundation, Teachers on the Leading Edge had teacher workshops each summer from 2008 through 2010.

Jill's children have grown and left the nest. Her oldest son Bobby works as a part-time middle school science teacher in Bellingham, WA, and is hoping for a full-time position! Her younger son David is a junior, studying civil engineering at the University of Vermont. Her husband Don is retired and taking great care of Jill.

Jill and Duncan - two very proud capstone instructors!

Capstones 2012!

by Senior Geosciences Students!

This past spring, four students completed capstone projects. Three of the students graduated in spring. One student, Matt Hegland, completed his capstone as a junior and has returned this fall to complete his senior year at PLU.

Capstone students enroll in a fall and spring course as part of completing their project. By the end of the fall semester course, students have a project proposal. They spend spring semester completing their field and lab work and writing up their final product. 2011-12 students tackled the following projects:

Ad Byerly

Understanding the thermal stabilization of continental lithosphere through examination of elastic flexure

Matt Hegland

The Evolution of Glacial Processes in the Thomas Hills, Antarctica

Vivian Ngo

The influence of setback levees on the river morphology and floodplain connectivity of the Puyallup River

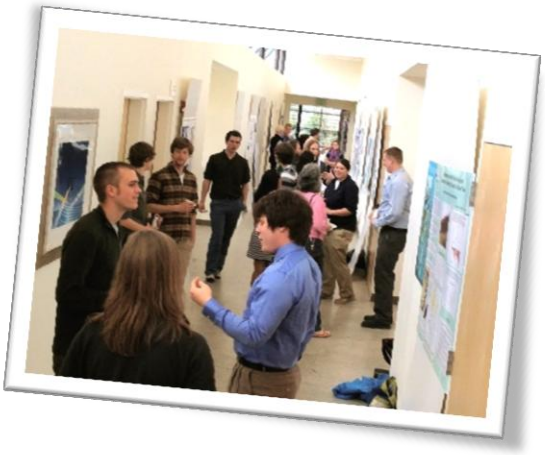
LeAndra Lemen

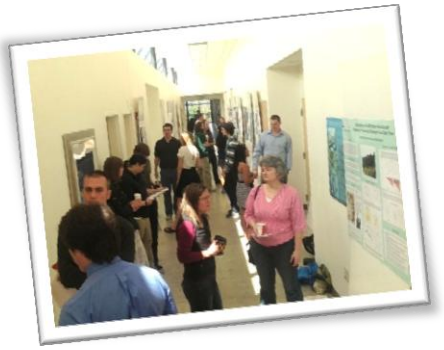
Understanding Pacific Lutheran University Groundwater for Geothermal Resources

First Annual South Sound Undergraduate Geosciences Conference!

This spring, Peter collaborated with Jeff Tepper at the University of Puget Sound Geology Department to host the First Annual South Sound Undergraduate Geosciences Conference. On April 28th, students and faculty from both departments met in Morken Center to share their work.

Peter reports, "we in the Geosciences Department are very proud of the turnout and overall quality of our students' work, and that 20 of our students voluntarilycame out on a Saturday to participate! 14 presentations in all from PLU and UPS ranged in scope from stellar class projects, to current and past capstones, to the results of previous summer research and ongoing larger projects. It is really amazing how engaged our students are in carrying out significant focused research projects. I think they appreciate how important this preparation is for professional life as well as how important it is to be representatives for science in their communities."





"The interactions between schools in the discussions that ensued showed us that this 'exo-academic' component is very important for a small department like ours to provide for all of our students, not just the ones that make it to the national Geoscience conferences. In this light we plan to repeat this conference and to include other schools such as UW-Tacoma and community colleges next year."

SEE YOU AT GSA? AT AGU?

Over the past two years, PLU Geosciences had nine students present their work at the annual Geological Society for America Meeting or the American Geophysical Union Meeting.

Be sure to find us at next year's meetings!

Changes around Rieke Science Center!

If you haven't set foot in Rieke Science Center for a while, you might not recognize some of our students' most common haunts! The arrival of Dr. Peter Davis, our current "hard rock" geologist, motivated the creation of our "rock room." Rieke Science Center 107 now has card swipe access for student and faculty and houses most thin section activity.

We have also upgraded our teaching spaces. Our largest classroom now has a "smart" podium, and all of our classrooms have relatively new projectors, video capabilities, and computers. We don't miss wheeling the squeaky old cart with the television and VCR on it!

Finally, we're very excited to have acquired a new ion chromatograph! This new instrument will allow students and faculty to measure low levels of cations and anions. So far, Dr. Todd and her students have used it to analyze glacial meltwater, but the possibilities abound!

Summer Research in Geosciences!

Dr. Claire Todd

Students working with Dr. Todd investigate glacial change through time. Most students spend many nights in Mount Rainier National park collecting meltwater and sediment samples to determine how glacial mass balance and glacial erosion evolve on different time scales.

Dr. Peter Davis

Since joining the PLU Geoscience faculty, Dr. Peter Davis has initiated a field-based research program centered on large-scale mountain building processes. Peter studies orogenesis from both the subduction end, by investigating regional blueschist and eclogite metamorphic terranes, and the continental end by investigating deep seated precambrian rocks in the desert southwest U.S. Peter has investigated two exposures of blueschists within the state of Washington with students.

Most recently Peter has been awarded a Regency Research Grant to investigate amphibolite and blueschist rocks near White Pass and Cle Elum Washington. Several students have also worked with Peter looking at Precambrian rocks in the Tusas Mountains of northern New Mexico. These studies have focused primarily on trying to understand the processes that assemble and stabilize rocks as continental crust, and to understand the rates at which these processes occur. All of these students have carried out detailed projects. many of which have led to presentations at national meetings of the Geological Society of America and the American Geophysical Union.

MORE FACULTY PROFILES!

Dr. Claire Todd

In spring, Claire taught GEOS 104, Conservation of Natural Resources. She's currently teaching GEOS 190 Global Climate Change, and an upper-division environmental studies course. This past year, Claire completed a field research program in Antarctica, and she is currently developing an undergraduate research program on Mount Rainier. Claire continues to maintain enthusiasm in teaching and working with students!!!! She often commutes by train and bicycle from Seattle where she lives with her husband George.

Dr. Avery Shinneman

Avery will be visiting this fall to teach Conservation of Natural Resources. Her research uses lake sediment cores to investigate environmental change over long time scales. Recently, she's been working with the Fond du Lac (Chippewa) tribe in Minnesota to investigate the relationship between environmental and climate change and the productivity of wild rice lakes and is looking forward to a new research grant taking her to Mongolia next summer.

Avery recently finished a post-doctoral position at the University of Washington and she lives in Seattle with her husband and baby boy, Soren, born last April.

Poetry and Geosciences?

by Vivian Ngo

[*The Geosciences Faculty were delighted to receive an invitation to Geosciences major Vivian Ngo's Poetry Capstone presentation! Vivian agreed to share one of her poems in the newsletter. Enjoy!*]

Cleavage Planes

Cleavage planes—
where certain crystalline
rocks, or minerals, split.

Mid-lecture, Dr. Benham,
the only professor addressed as "Doctor,"
walks over to a shelf,
picks up a rock. *This is dolomite*
found outside of Arches National Park
along the Moab Fault. He never forgets
where his samples come from.

Elbows at his side, Peter flails his arms,
T-Rex. *Ahh, I can't reach. Little arms.*
BIG head. The class stares—
some confused, some laugh. *No? Really?*
Okay then, moving along
the shear stress can be compared…

Sitting down in his office, he
says in a dramatic voice,
I need to pick up the things I just
printed before it gets kited away.
Duncan Foley, PhD in Geology.

Exclamation points
all over the white board
shows Claire's subtle nudge
of the importance of the material.
The first lab consisted of mapping
the classroom to scale.

Rose's desk scattered with papers—
a reassuring sight
for my fifth visit in
the last twenty minutes.

Luckily Jill's office is next door,
she calms nerves
with her
organized
student files
and chocolate box.
That, even the professors need.
Sometimes, they break into her office.

MORE FACULTY PROFILES!

Dr. Steve Benham

In spring, Steve taught Principles of Geology, our gateway-to-the-major course! He also teaches the sedimentary sequence, including Paleontology. This fall he taught Oceanography and Geology of National Parks. He recently collaborated with students to collect Eocene cold seep samples from the Olympic Peninsula, currently being examined for siliceous remains, primarily sponges. Steve is still working on grandfather clocks and collecting interesting rocks. Some of the collection rests at the west entrance to Rieke Science Center. Come and see for yourself!

Dr. Rose McKenney

Trained as a fluvial geomorphologist, Rose continues to wander into other disciplines rather like an avid tourist. She collects bits from other academic disciplines to use in class the way tourists collect souvenirs to store at home. This past spring, Rose taught Environmental Studies 350, and a new Writing 101 course called: Cultivating Sustainability: Food choices, the environment, labor practices, and human health. Rose moved to Lakewood, WA last year. Now she is torn between trying to grow food in her yard and outfit everyone with handmade jewelry in her 'spare' time.

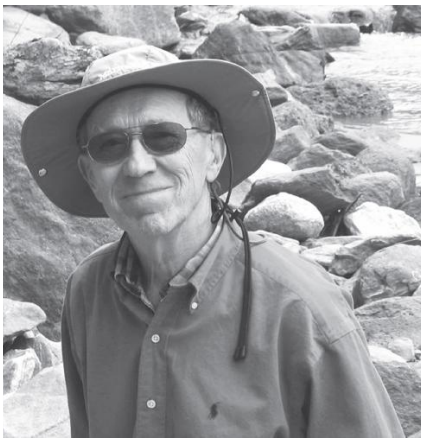
Give to the Brian Lowes Fund!

Geosciences Department founder Dr. Brian Lowes retired in May 2009 after 41 years on the faculty. The Brian Lowes Endowed Field Geology Fund has been established to recognize his long career and contributions. Brian was devoted to getting his students out into the field to experience geology first hand. We continue to honor him with a fund that supports student-faculty research in field-related projects.

PLEASE CONSIDER A GIFT

We welcome your gift to the Brian Lowes Fund

FOR MORE INFORMATION:
Office of Development
1-800-826-0035
development@plu.edu
www.plu.edu



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