

February 2010

Letter from the Chair.

***The First Annual ESS
Research Gala,
April 1-2, 2010.***

Want to see the latest and great research occurring within the department? Then please join us for the f-ESS-tivities!

Web site:

<http://earthweb.ess.washington.edu/essgala>

***Know of a school that needs
help in teaching geosciences
in Washington State?***

Through the volunteer efforts of our graduates and undergraduates help is available through the department's outreach program called *Rockin' Out*.

Web site:

<http://depts.washington.edu/rocknout/>

It has been a very long time since we have had a newsletter from the department so as a part of my New Year's resolution I thought I would rectify this situation. To be fair there are many reasons why we have not had a newsletter. First, and foremost the faculty will tell you that in the past I have made some amazing typographical errors in memos and this would be just another opportunity to make yet another one. So I will say at the outset that I have put one in here intentionally for you to find and have a laugh. Additionally, I know everyone is bombarded with e-mail letters and the thought of creating one that would stand out is exceptionally daunting. On the other hand, there are many things to celebrate and be proud of here in ESS even in these economically challenging times. And I am sure you as Alumni have great stories to tell and it's a great time to reconnect.

The biggest news of course is that we are now a part of the College of the Environment. This change has seen the reunification of the Earth Sciences under one college, and will enable us to have a much more visible impact on campus and across the nation. It also allows us more flexibility in our degree program and we continue to see increasing interest in the courses run by the department. In any one quarter we have nearly 1000 students in ESS classes!

Our department is fortunate to have very highly motivated majors and graduate students involved not only in their studies but who are willing to give back to the community. Through their leadership we have an outstanding outreach program *Rockin' Out* and the department will hold its first annual *Research Gala* highlighting the different research efforts within the department.



Congratulations to the Class of 2009!

Comings and Goings.

Winter 2009 Professor Stu McCallum officially retired though he is still actively teaching within the department. He joined the faculty as an assistant professor in 1970. Research Professor Patricia Anderson retired in summer 2009, after nearly 26 years of service at UW. All the best to Research Professor, Kenny Matsuoka who is headed to the Norwegian Polar Institute in Spring 2010.

Recent additions include Professor David Catling working in Astrobiology joined ESS in Spring 2009 and Professor Juliet Crider working in Tectonics will be joining the faculty in Spring 2010. Kelly Baker takes over the position as Chair's Assistant, replacing D'Ellen McDannald who provided invaluable service to the Department for 9 yrs.

Where are you now?

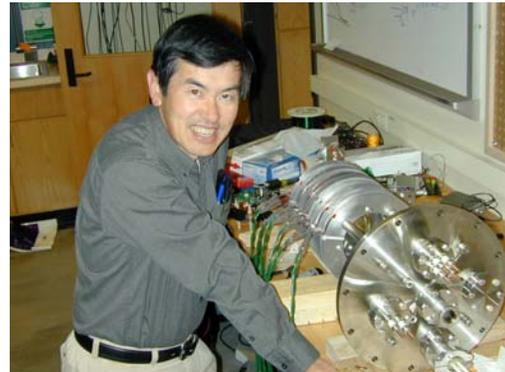
You may not have noticed but we now have a spiffy new web site with lots of new capabilities! One new feature is the potential to include stories from our alumni about what you are doing now. Interested in letting us know what you are doing? Send an e-mail to whereareyounow@ess.washington.edu and tell us when you graduated, highest degree, and what you are doing now. Once we have sufficient responses we will post your responses on the department web site at <http://www.ess.washington.edu/> under the tab *People/Alumni*. Also let us know if you want us to post your e-mail so that old friends may be able to directly contact you.

We have had plenty of comings and goings of faculty over the last few years; some of the most recent are listed to the left. Faculty losses from retirements and outside offers over the last 5 years combined with the deep recession has left the department badly squeezed in several areas. Budget cuts continued to be a concern for all, and we hope that better times will be just around the corner, but we have also had some wonderful additions, some of who are listed in weft (okay that is my typo for today).

Despite the bad economic times, our undergraduates are now regularly involved in research projects, and in multiple field experiences all year round. *US News and World* in Feb. 2009 ranked the department as being 11th best in geosciences in the world, and *Science Watch* recently ranked the department's research as 5th in the world. Some stories behind these efforts are attached.

Enough about us. We hope to hear from you (see insert) and to provide better connectivity in the future.

Robert Winglee



What's Happening: from Prof. David Montgomery. There's no other way to put it, last year was a great year. It started off with the best unimaginable surprise in being awarded a MacArthur Fellowship on the first day of my sabbatical! Still, I managed to stay plenty busy all year as I was working on a new textbook for introductory geomorphology (with my co-author, UW alum Paul Bierman) and also trying to finish up a new popular science book (*Phantom Deluge*) on the evolution of geological thinking about Noah's Flood (and megafloods in general). Although I didn't manage to finish either book, they are both close enough that I've been telling people they're "almost done" now for 6 months. I've also been busy giving talks based on my last book (*Dirt: The Erosion of Civilizations*) and revamping our introductory geomorphology course.



Students at Field Camp, 2009.



Students at Field Camp, 2008.

Field Experiences are key to success in our students. We have increased the opportunities through new Exploration Seminars, Spring break field trips, along with field excursions associated with many of our classes. With the growth of our program, more students than even participate in field camp each year. These field opportunities while transformative they are expensive. Do you remember your field experiences?

Help support continuation of the tradition by a donation to UW Foundation, and mark usage for ESS Geological Field trips, c/o, Prof. Robert Winglee, Department of Earth and Space Sciences, University of Washington, Seattle, 98195-1310.

Another Memorable Year of Giving

Earth and Space Sciences is deeply grateful for another memorable year of private support from all corners of our community. Here are a few examples of philanthropy which have benefited our department:

Vance Fellowship Gift; Emeritus Professor Joseph A. Vance and his spouse, Ms. Sara Throckmorton provided another major gift to the Vance Fellowship in Geological Science to benefit meritorious students who have a research interest involving field geology. Fellowship awards will be made to deserving graduate students through committee this spring.

ESS corporate partners, Chevron and Exxon-Mobil each made significant contributions to our scholarship funds and well as the Friends of Earth and Space Sciences General Use Fund. This annual support is an important part of our ability to recruit and reward promising students from Washington, and across the country. These and other partners also continue to recruit our graduates and alumni. *Thank you* all partners!

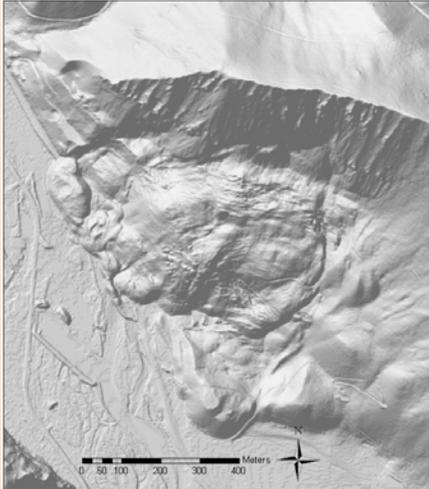
Alumni Jon C. Avent, PhD and his spouse Carol made another very generous gift to the Department's Undergraduate Field Study Support Fund this year. The Avent's joined other friends and alumni in support of transformational student field experiences to study sites such as Mauna Loa, Death Valley, our Montana site, and in the mountains of Italy.

A culture of philanthropy at ESS

Gifts from Alumni, Friends, Foundations and our Corporate and NGO partners have been a defining force in Earth and Space Sciences for over 100 years. *Thank you* to all who have supported us through their gifts of time, talent and treasure!

Want to help? Just contact Department Chair, Robert Winglee at winglee@u.washington.edu, or Director for Advancement, Thomas Mentele at tmentele@u.washington.edu.

Nile Valley Landslide Talks to UW Seismologists: Kate Allstadt, graduate student.



Landslides and seismology are two words not often associated with each other. However, in the case of the Nile Valley Landslide of October 11, 2009, the two went hand in hand. The landslide involved more than 10 million cubic meters of material, destroyed several houses, a portion of Highway 410 and partially dammed a creek, causing flooding in the valley. A portion of the riverbed was later discovered on top of the toe of the slide along with some unsuspecting dead fish. Fortunately, the fish were the only casualties because the landslide gave warning. As the landslide failed in a complex series of events, some of the more energetic failures generated signals that made their way to two seismic stations operated by the Pacific Northwest

Seismic Network (PNSN), where ESS seismologists spotted them. In collaboration with the WA Department of Transportation and Department of Natural Resources, ESS seismologists pieced together the timeline of sliding events using the seismic record in combination with eyewitness accounts and site investigations.



Hunting Fossils in the Antarctic: Professor Eric Steig

Eric Steig whose main work is in isotope geochemistry and climate change has teamed up with paleontologist Peter Ward to work on fossils around the time of the mass extinction period leading up to the K-T boundary, 65 million years ago. Their work has taken them and their students to the Antarctic Peninsula aboard the oceanographic research vessel LM Gould. Among their prize discoveries was a bed of giant ammonites; all ammonites went extinct at or before the KT. One of the fossils they collected is on display at the Burke Museum on the UW Campus.



Faculty and Students headed to Australia. In the tradition of enhancing students studies with field experiences, faculty and students will head to the Australian outback to see its unique geology and wildlife. Description of the trip is at <http://depts.washington.edu/explore/programs/2010/australia.htm>. What to come along or support students? Drop us a line at winglee@ess.washington.edu.



Students on the move: Kathleen Huybers. Kat is returning to the department after a 2 year leave of absence, to complete her PhD studies. During her leave she worked at the summit of the Greenland ice sheet for several winter seasons. Last winter (Nov-Feb 2008-2009), half of the crew that she worked with was actually a team ESS scientists, proving that the world is a small place.



Students on the move: Vivian Leung. Vivian is deep in mud and debris. She is involved in studies of debris flows in a joint collaboration with St. Anthony Falls Laboratory of the University of Minnesota, through the National Center for Earth Surface Dynamics (NCED) Visitor Program. This work is very relevant as more communities move into flood plains.

More Comings and Goings: Eric Cheney. Since retiring in 2005 Eric Cheney continues teaching economic geology in the department and research including field work in the Leavenworth area. He and co-author Nick Hayman (ESS PhD, 2003) have published an alternative to the standard model that the Chiwaukum area near Leavenworth is a syndepositional graben and represents Eocene crustal extension; Eric also continues publishing and speaking on an alternative to the paradigm of a peak in world oil production in the near future.

Breaking News: Prof. Eric Steig, Director of the Quaternary Research Center, in conjunction with Assistant Prof. Kate Huntington will be holding the world's first-ever conference devoted to this important new area paleothermometry. The workshop web site is at <http://depts.washington.edu/qrc/SpringWorkshop2010.html>.