THE OHIO STATE UNIVERSITY

SCHOOL OF

EARTHSCIENCES

July 2015 News Notes

- Alumni Change Lives
- SES Alumni Event in Hawaii
- SURE Poster Session
- AAPG/SEG Student Chapter Update
- Reflections from the Final Week of Field Camp 2015
- SES at SCAR

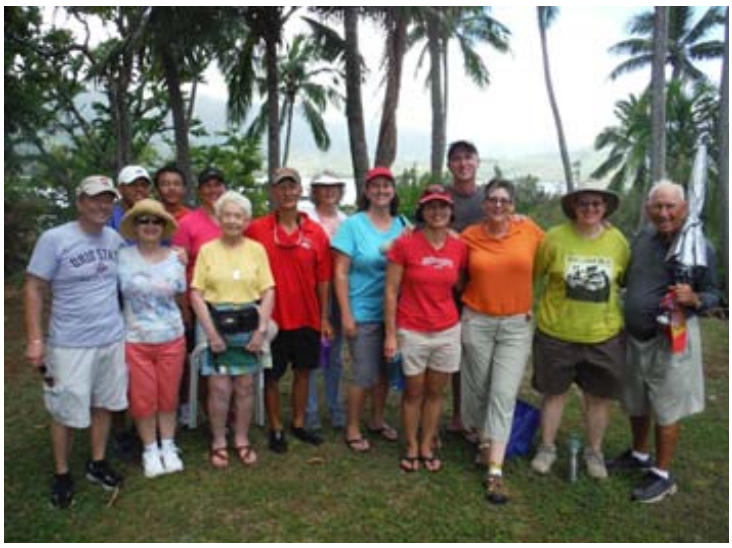
Alumni Change Lives

Xiaoli Su is a senior PhD student working with Professor CK Shum. Here she describes how funding from the Friends of Orton Hall helped to further her research.

My PhD research is focused on the inter-annual mass variations of the Greenland ice sheet. Knowledge of Greenland long-term ice sheet mass variations is critical for evaluating its contribution to sea level rise. Such knowledge can be derived from NASA's Gravity Recovery and Climate Experiment (GRACE) data albeit with a coarse spatial resolution of a few hundred kilometers. The European Environmental Satellite (EnviSat) altimeter measures ice sheet surface elevation change with much better spatial resolution but has no corresponding information of the firn/ice density for inferring mass change. Consequently, we have been using both GRACE and EnviSat to study Greenland ice sheet mass balance, with an objective of estimating the surface density purely using geodetic observations for the first time.

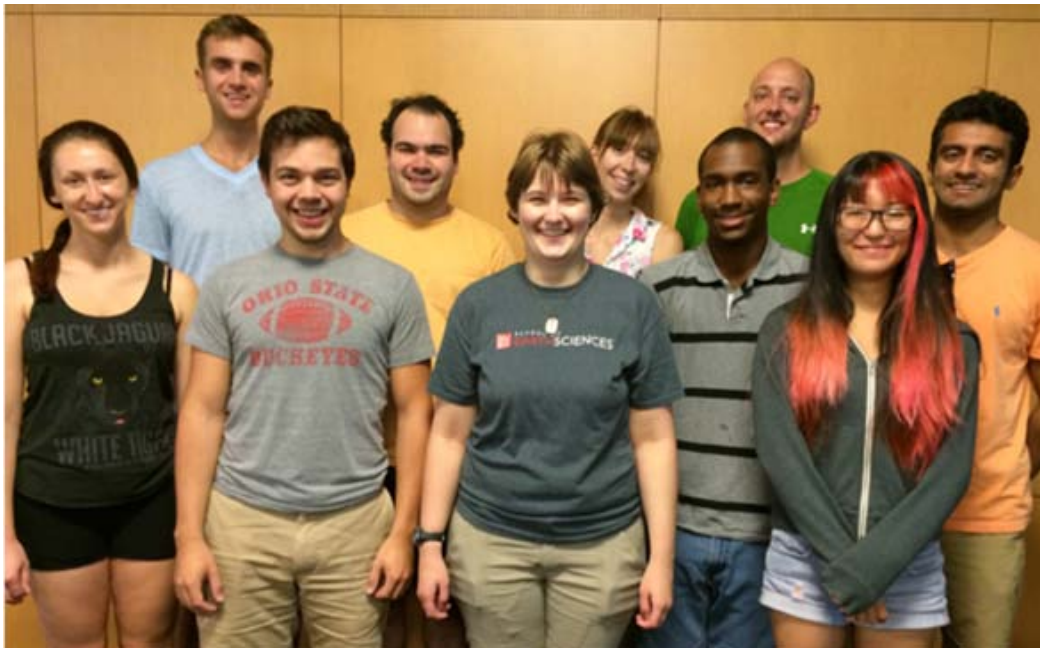
I would like to say thanks to FOH for supporting me to present my poster in the 2014 AGU Fall Meeting in San Francisco. As it was my first time to AGU meeting, this trip was unforgettable. It enabled me to better understand the academic progress from other researchers in the research topics related to mine. It was a good opportunity to talk with some researchers face to face, and meet with old friends. I also received some excellent research suggestions from colleagues. AGU inspired me to become better in my future research, and has furthered my academic career. I really appreciate the support from FOH fund for this trip.

SES Alumni Event in Hawaii



SES alumni in Hawaii visited Professor Grottoli (center, with red OSU shirt and hat) at her research site at the Hawaii Institute of Marine Biology on Coconut Island, on 27 June 2015. The visit included a brief presentation on corals and Prof. Grottoli's research, followed by a tour of her experiments, an introduction to other marine research at the institute, and a summary of the history of Coconut Island. Many thanks to all who attended. Prof. Grottoli will be back in Hawaii in December and can be reached at grottoli.1@osu.edu. You can learn more about her research at https://u.osu.edu/grottoli.1/. You can support student research in her lab by donating to the Coral Research Fund #313775 at give.to.osu.edu.

SURE Poster Session



The School of Earth Sciences undergraduate majors participating in the 2015 Shell Undergraduate Research Experience (SURE) internships presented results of their summer research projects at a poster session yesterday, July 30. The SURE students are pictured above. Look for more on the SURE poster session in next month's News!

AAPG/SEG Student Chapter Update

After a successful trip to the AAPG ACE 2015 in Denver in June, several of our members have been busy this summer. We are preparing for an exciting start to the semester.

Summer Opportunities

In addition to several members attending SES Field Camp in Utah and conducting research at the Shell Undergraduate Research Experience on campus, the following current and recent graduating members are spending their summers participating in different industry and research opportunities (the photo at right shows AAPG/SEG members Burchwell, Cotter, and Grove):

- Andrew Burchwell - Continuing internship focused on CO2 sequestration with Battelle Memorial Institute in Columbus, Ohio
- Zach Cotter - Internship focused on CO2 sequestration with Battelle Memorial Institute in Columbus, Ohio
- Zach Dobey - Started as hydrogeologist at Eagon & Associates, Inc. in Worthington, Ohio
- Ben Grove - Continuing internship focused on CO2 sequestration with Battelle Memorial Institute in Columbus, Ohio
- Mario Gutierrez - Geoscience intern at Statoil Exploration North America in Houston, Texas
- Jake Harrington - Geoscience intern at Shell Exploration & Production Company in Houston, Texas
- Sean O'Brien - Starts as field engineer at Schlumberger in Lafayette, Louisiana

Student Chapter Awarded L. Austin Weeks Grant

The Association of American Petroleum Geologists Foundation has awarded the AAPG/SEG Student Chapter at OSU the 2015 L. Austin Weeks Student Organization Grant ($500.00 USD). We plan to use the funds to conduct an educational field trip visit the geology to Pine Mountain, Red River Gorge and geologic sites through Kentucky this coming fall. More information to come in the future.

Upcoming Chapter Events & Activities

- Involvement Fair - August 23rd, Oval, OSU.
- 2nd Annual Semester Kickoff Cookout - August 29th, OSU.
- AAPG/SEG Student Expo – Sept 22-23 in Houston,TX.
- 44th Annual Eastern Section AAPG Meeting – Sept 20-22, in Indianapolis, Indiana.

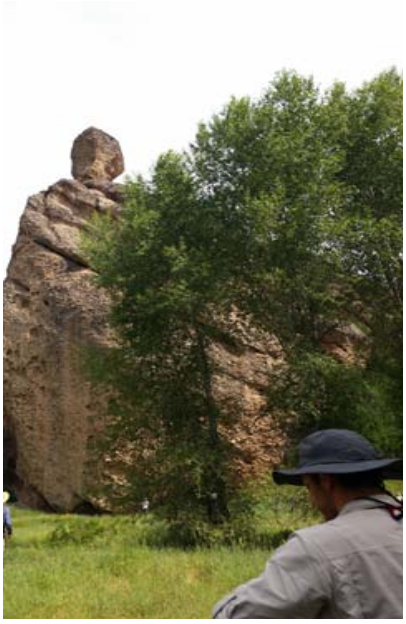
Please let us know if you will be these upcoming events!

Contact us at aapg@osu.edu for more information on all things AAPG/SEG at Ohio State.

Stayed tuned and GO BUCKS !!!

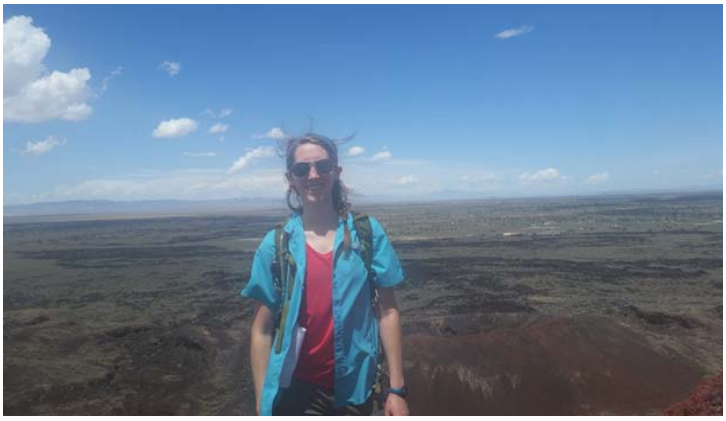
Reflections from the Final Week of Field Camp 2015

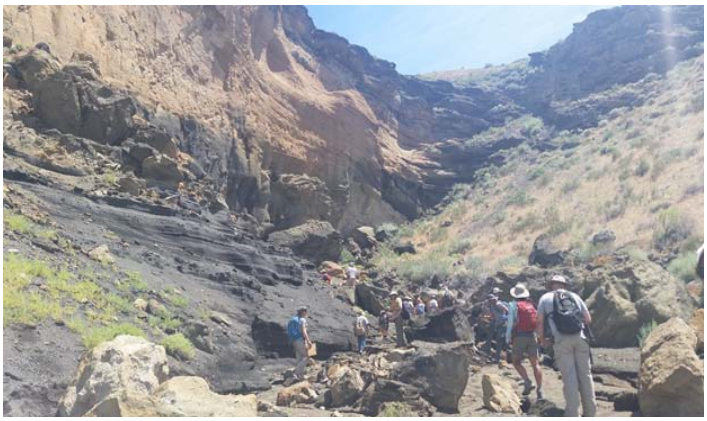
Mackenzie Scharenberg blogged her experiences from Field Camp, this summer (link). In this piece originally written on July 18th, she reflects on the final week of Field Camp.



Last week we completed the north cross-section across Sanpete Valley and the San Pitch Mountains. The rocks told a great story and it was awesome to bring together more regional geology. I love adding new pieces to the puzzle that is central Utah. It motivates me to learn more about this region and to gain such an understanding of every place I dwell. The photo (left) shows some awesome conglomerate we saw during north cross-section. Dr. Dan Kelley shown for scale.

We took our last camping trip to the volcanic province. We saw the basalt of Ice Springs Lava Field, a few cinder cones, and the Pahvant Butte before heading to Marysvale to check out some lahars, welded tuff, and obsidian. We were the first OSU field camp to explore the Pahvant Butte- the perplexities were inspiring and endless. The photo below at left shows me hiking on the cinder cones. The photo below at right shows us hiking near Pahvant Butte: a tuff cone that erupted in a lake!



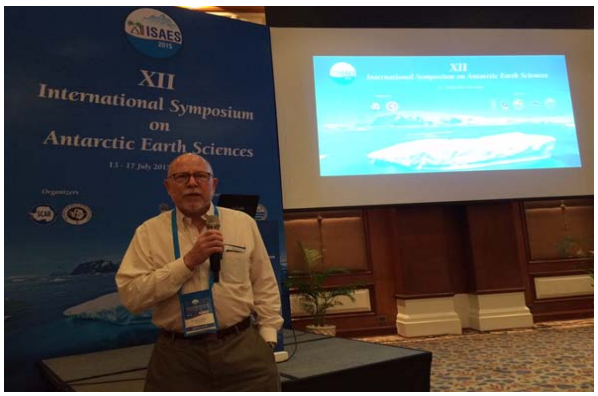


To enjoy my Sunday, I went with a few others on a day trip to Big Cottonwood Canyon, close to where we camped and mapped at Alta earlier in the summer. It was a beautiful day for a hike, especially one through the alpines - my favorite! We hiked Mineral Fork trail and did some prospecting for iron minerals at the top of the canyon.

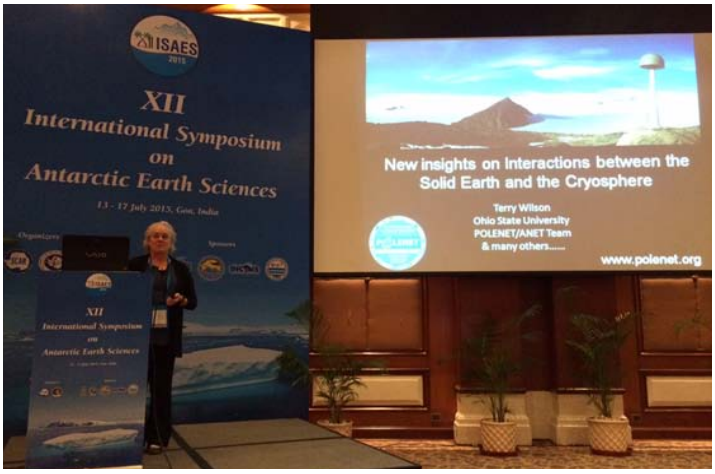
This week we were faced with our final mapping project. The class was divided in half to map two different areas in groups of three. My group spent the week at Fayette, a beautiful and challenging field site. Today was our group show-and-tell. We taught the groups who mapped at a different location this week about Fayette in the morning, then in the afternoon we went to their mapping location this week, Radio Tower, to learn the geology of that area from them. It was fun to share our discoveries and also explore a new area.

I have to pinch myself when I think about the fact that Field Camp is ending. I am excited to continue to become a better geologist in these final days and savor the beauty of Utah.

SES at SCAR



Earth Sciences professors Anne Carey, David Elliot, Berry Lyons (photo at left), Lonnie Thompson (photo bottom right), and Terry Wilson (photo immediately below, at right), and Byrd Polar & Climate Research Center senior research scientist, Anne Grunow, participated in the XII International Symposium on Antarctic Earth Sciences held in Goa, India July 13-17, 2015. Also participating from SES were lecturer Cristina Millan and research assistant David Sadler.



On July 14, Ohio State alumnus, Ross Powell of Northern Illinois University, presented a keynote presentation, "Modern and ancient grounding zone systems--mediators and indicators of ice sheet dynamics." On July 15, Lonnie Thompson gave a keynote presentation on "Global climate change, ENSO and black swan events: A paleoclimate perspective from the world's highest mountains." On July 17, Terry Wilson gave a keynote presentation on "New insights on interactions between the solid Earth and the cryosphere."

Terry Wilson convened a session on "Cryosphere-solid Earth interactions and Antarctic geothermal heat flux, sub glacial geology and ice dynamics." Berry Lyons convened a session, "Surficial processes and climate change in Antarctic terrestrial environment: changes and impact on permafrost erosion and chemical weathering." Contributed oral and poster presentations were given by Berry Lyons, David Elliot, Stephanie Konfal, and Terry Wilson. A symposium highlighting the careers of David Elliot and Ian Dalziel (UT-Austin) was organized by Terry Wilson, Anne Grunow, and Ohio State alumni Tom Fleming and Sam Mukasa and included a presentation by Sam Mukasa, currently dean of the College of Engineering and Physical Sciences at the University of New Hampshire. After a presentation on geoheritage sites, Berry Lyons presided at a discussion on the topic of geopreservation that will be a formal subject for discussion at the 2016 SCAR open science conference in Kuala Lumpur. Lyons asked that those with interest in this topic contact the officers of the Earth Sciences standing group executive committee.

Carey, Elliot, Grunow, Lyons and Wilson participated in the conference field trip in eastern Ladakh on the topic of "Glimpses into past Himalayan cryosphere-Quaternary records from Ladakh" led by Dr. Hari Singh Saini and Dr. Ravi Vadlamani, both formerly of the Geological Survey of India and now professors at the University of Delhi and the India Institute of Technology. The trip included visits to glacial and fluvial deposits in the Indus River valley and to the Ladakh batholith and the Pangong metamorphic complex. Glacial moraines and alluvial fans were highlights of the geomorphology seen. The group stopped for an O-H-I-O (photo above) at Khardung, location of the 18,380 foot pass on the world's highest motorable road.