

June 2017 News Notes

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Alumni Change Lives

Sydney Olund is a graduate student working with Dr. Berry Lyons. Here she describes how Friends of Orton Hall helped further her studies. If you are interested in giving to support the Friends of Orton Hall or other funds, please visit our giving page ([link](#)).

The Southern Ocean (SO) has been an area of much biogeochemical interest due to the role of Fe limitation for primary production. Primary production is associated with increased carbon sequestration, making it important to characterize and quantify the fluxes of Fe and other nutrients to the ocean. Terrestrial streamflow from the largest ice-free region of Antarctica, the McMurdo Dry Valleys (MDV), is a potential source of Fe to the Southern Ocean. I gave a talk about the hydrology and geochemistry of Fe and other nutrients in these streams at this year's GSA Annual Meeting in Denver. The FOH award I received greatly alleviated the costs of traveling across the country and allowed me to attend my first conference. I presented in the 'Polar Changes' session where I learned more about the northern low-latitudes and discussed the geochemical similarities and differences with researchers that work in Greenland. I also got a chance to visit with other members of the McMurdo Long Term Ecological Research group, many of whom I spent time with in Antarctica during the 2015-2016 field season. In addition to listening to talks, I went to a Women in Geosciences event, where I met women in academic and government jobs that spoke about their careers and offered invaluable advice. Useful career advice was also supplied at the Career Pathways lunch. Overall, my experience at GSA was incredible; I was able to reunite with old friends and discuss science with the exuberant scientist network at GSA. Since then, I have completed my master's degree and now work as a research associate for Berry Lyons, assisting current graduate students with field work and lab work, as well as working on publishing data from my master's research. The project that I am assisting on will identify trace metal concentrations, including Molybdenum, in Ohio lakes and rivers that are impacted by harmful algal blooms. In addition, I am looking for environmental and laboratory jobs in the research and consulting industries.



Appalachian Basin Field Trip

Prof. Matt Saltzman led an Appalachian Basin field trip to eastern West Virginia (Seneca Rocks region) May 2-5, 2017 with the ES 5618/8800 course. The group was based in Germany Valley (no cell phones and no internet!) beneath North Fork Mountain. Sections were studied in detail at 6 localities, including the Ordovician Black River and Trenton succession at Dolly Ridge and Arc Hollow, WV; the Ordovician-Silurian Juniata-Tuscarora at North Fork Mountain, WV; the Silurian Rose Hill to Wills Creek at Blue Grass, VA; the Siluro-Devonian Tonoloway-Helderberg succession at Mustoe and McDowell, VA; and the Late Devonian Foreknobs (Catskill) formation at Briery Gap, WV. Another set of smaller outcrops were visited in the Late Ordovician Reedsville and Lower to Middle Devonian Oriskany-Needmore-Marcellus (Millboro) formations. Despite a late dinner bell the first night, things went mostly as planned and the rain held off until 5:30 pm on the last outcrop of the last day! The field group included undergraduates Taylor Hollis, Brandi Lenz, Sean Newby, Bryan O'Reilly, Nick Rodgers, and Shelby Brewster (field assistant), and graduate students Datu Adiatma, Aaron Evelsizer, Myles Moore, Caroline Robinson and Casey Saup.



Dolly Ridge section beginning in eroded core of anticline at Germany Valley, WV. Outcropping of Ordovician limestone ledges is initially limited in cowpasture, providing an exercise in use of a jacob staff, but becomes 100% exposed as road on left reaches tree line.



Complete exposure of Ordovician Black River Group at Arc Hollow.

Methane Drilling Cruise is a Success!

Prof. Ann Cook and postdoctoral scientist Dr. Alexey Portnov just returned from a drilling cruise on the Q4000 in the northern Gulf of Mexico to recover a 'frozen' form of methane below the seafloor called methane hydrate. The cruise was highly successful, recovering over 100 ft of pressurized core with methane hydrate. The drilling was funded by the US Department of Energy and led by Peter Flemings from the University of Texas at Austin.



Treasure Trove Discovered in Orton Hall

Recent cleaning in the basement of Orton Hall uncovered a treasure cache of approximately 880 3 inch by 4 inch glass lantern slides once belonging to Edmund Spieker (1895-1978), long-time OSU geology professor and chair of the department (1945-1952).

Subjects (according to notes on the boxes) range from Ohio geology to western volcanoes to the Grand Canyon. Some of them are colorized, some were purchased from commercial slide companies and some are of his work (sometimes on horseback) doing geology.

Here is the image from one of them – note at least two individuals prominent in SES history:



The caption reads:

Mt Crillon Expedition 1933 Harvard – Dartmouth
H. Platt, R. Goldthwait, R. Dow, A. Carter, C. Huston, B. Washburn, W. Everett, R. Bates, W. Childs

We also found 1700 35mm slides, housed in plastic sleeves. It will be a big job cleaning and sorting this find, and the supplies needed to do the project right (new plastic sleeves, acid-free archival boxes, etc.) will cost around \$800 but are certainly worth it. In future newsletters we will share more interesting images as we come across them.

Research Groups Travel to Crested Butte

Researchers from both Audrey Sawyer and Mike Wilkins' groups traveled to Crested Butte, Colorado to support an ongoing US Department of Energy project investigating biogeochemical processes in the hyporheic zone of the East River. The research is performed in partnership with Lawrence Berkeley National Laboratory. On the trip were Casey Saup and Michael Whaley (Wilkins group), and Audrey Sawyer, Savannah Bryant, and Amelia Nelson (A. Sawyer group). High river discharge (linked to above-average seasonal snowmelt in the Rocky mountains) made sampling a challenge, but the trip was an overall success.



Recent Graduate Awarded USGS Internship

Nick Rodgers, BS cum laude with research distinction, Spring 2017, has been awarded an internship jointly sponsored by the National Association of Geoscience Teachers (NAGT) and the U.S. Geological Survey (USGS). Nick will spend this summer at USGS headquarters in Reston, Virginia as a hydrologic technician working with Dr. Katherine Skalak. Dr. Skalak studies fluvial geomorphology with particular interest in how landforms respond to human impacts and to restoration effects. Nick's next stop after the internship is graduate school at the University of Minnesota Twin Cities where he will be working on fluvial sedimentary dynamics with Professor Chris Paola.

The NAGT/USGS Cooperative Summer Field Training Program is the longest, continuously running internship program in the Earth sciences. During the 52 years of its existence, more than 2400 students have participated. Students are nominated by field camp directors, reviewed by the USGS scientists, and then matched by a science review and placement panel that places the candidates by their course work, skills, and interests with up to five projects. Following interviews with the USGS, each USGS scientist makes the final intern selection. Congratulations, Nick!



Alumna Kelsey Bisson Receives Funding

Kelsey Bisson, B.S. with Honors 2013, will be the chief scientist on an oceanographic research cruise in December 2017 on Scripps Institution of Oceanography's vessel, the R/V Sally Ride. Kelsey and her fellow graduate student, Nick Huynh, both of the UC Santa Barbara Interdisciplinary Graduate Program in Marine Science, wrote a successful \$250,000 proposal "to explore the daily rhythms of marine plankton within the Santa Barbara Channel," said co-chief scientist Huynh. In addition, Kelsey and Nick received \$50,000 from the National Academies Keck Futures Initiative for four artists-in-residence on the cruise. A creative writer, a videographer, an illustrator and a musician will sail on the cruise to collaborate with the scientists to translate the scientific efforts into a documentary, a novella, and a public art installation. The artists-in-residence program, called ROAM: Rendering Oceanography in Artistic Mediums, "... was designed to leverage the strengths of art and science to motivate a love for the deep ocean across a range of communities. By translating the science experience through art, ROAM will build empathy and wonder for our ocean — and ultimately spark a commitment to marine stewardship," Kelsey said. Read more about Kelsey [here](#) and [here](#). Congratulations to Kelsey on her funding and good luck as chief scientist on her cruise in December.



Possible Orton Hall Renovation

As you may know, the year 2020 will mark Ohio State's 150th anniversary. The academic year leading up to this (2019-2020) has been designated the Sesquicentennial Year with planning underway for a year-long celebration. The Office of Administration and Planning at Ohio State has indicated that this celebration may include "a capital project to commemorate our history and celebrate our distinctive programs, people and places. Renovating iconic Orton Hall, with its rich history, has been proposed as the capital project." SES will have a chance to participate in the process of imagining the future of Orton Hall over the course of the coming year. Some ideas for SES' role in this have included outreach offices (perhaps not only the Museum and Library, but also SERC and Byrd Polar) and improved space for public lectures in the Earth Sciences. Orton Hall is a monument to Ohio's geology and the connection to the School of Earth Sciences runs deep. Stay tuned for further developments!



Brevia

Congratulations to Dr. Jeffrey Pigott, who was just awarded the prestigious Los Alamos National Laboratory's Agnew National Security Postdoc Fellowship. He will be working in the Shock and Detonation Physics Group with Nenad Velisavljevic. The title of his proposal is "Development and implementation of novel method for obtaining highly accurate equation of state data."

Becky Anderson, second year undergraduate major in Earth Sciences following the Geological Sciences track, is one of the twenty students at field camp in Ephraim, Utah this summer. Becky is following in the footsteps of Brandi Lenz and Taylor Hollis who blogged from field camp in 2016. Be reminded of your own days at field camp as Becky chronicles life as a field geologist this summer ([link](#))!