

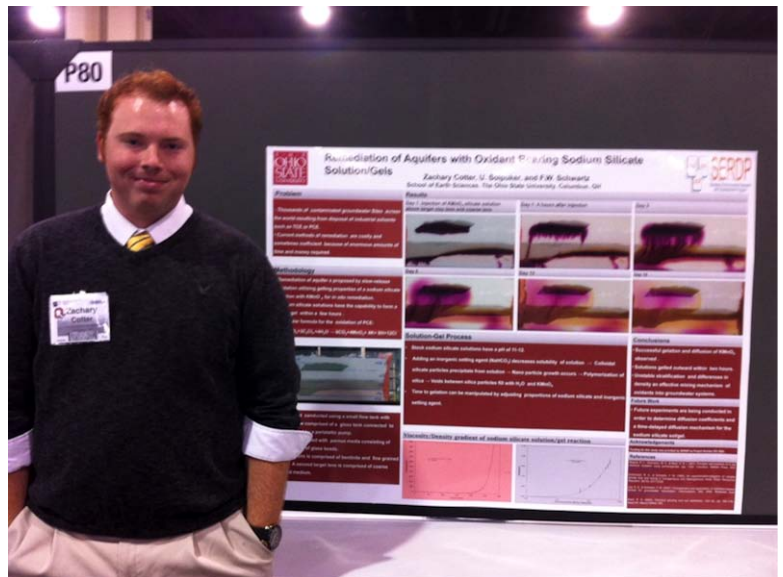
June 2014 News Notes

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Alumni Change Lives

Zachary Cotter (BS expected 2014) received support from the Friends of Orton Hall fund. Here, Zachary describes how this helped advance his career.

The Friends of Orton Hall fund and all the alumni that donate to this fund have made an impression on my life. The first time I received any support from FOH was for the annual GSA meeting of 2012 in Charlotte, North Carolina where I presented a research poster for the first time. The scale of the event and the sheer number of geologists at the meeting blew my mind. Once my nerves subsided and I was done presenting, I began to socialize with everyone and wonder about the meeting. I observed that everyone was mingling, relieving old memories, and in general having fun with each other; this created an impression to me that geology is not just a job but a community. A community of geologists and earth scientists hanging out, doing what they love: this solidified for me that I was in the right place and that I wanted to be part of that community. The 2012 GSA meeting inspired me to love my research, and to devote myself to my studies and to pursuing a career in geology. Since the 2012 GSA meeting, I have presented my research to a couple Ohio state sponsored research forums and in October, FOH supported me to go to Denver for the 2013 GSA meeting where I gave a talk on my research. The Friends of Orton fund and its donors have given my an opportunity to travel, network, and begin to find my own spot in this great earth science community. I would like to thank all those who donate to the FOH fund.



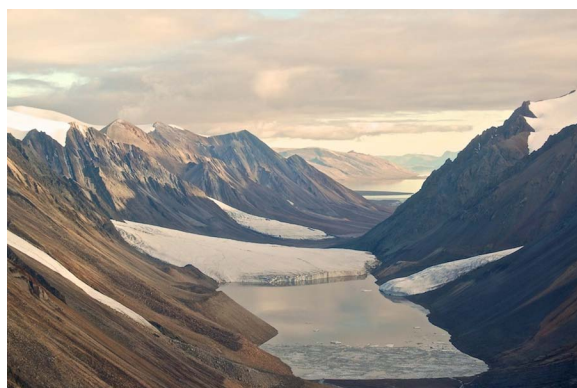
Faculty Profile: Joel Barker

I grew up in Calgary, Alberta, a half hour drive from the front ranges of the Rocky Mountains. I enjoyed spending as much time as possible in the mountains, and I think that this is what led me to pursue an undergraduate degree in the Department of Geography (now Earth and Atmospheric Sciences) at the University of Alberta. The most formative event in my academic career was when I was given the opportunity to be a field assistant in the Canadian High Arctic during the summer of my sophomore year. This was when I first experienced field research in a remote and pristine environment, and I was hooked.



From my undergraduate program at the University of Alberta, I traveled east to the University of Western Ontario for my MSc to investigate karst hydrogeology in southern Ontario and Kentucky. After spending a couple of summers working for an environmental consulting company, I returned to the University of Alberta to pursue a PhD looking at biogeochemical transformations of organic matter in glacier systems.

At the time, my advisor, Dr. Martin Sharp, had just discovered evidence for microbial activity beneath glaciers and the questions regarding who was there, exactly what they were doing, and their prevalence globally was an emerging theme in the combined fields of microbiology, geochemistry and glaciology. This is a research theme that carried me through my PhD and into my tenure as the Byrd Postdoctoral Fellow at the Byrd Polar Research Center at the Ohio State University, working with Dr. Berry Lyons and Dr. Yo Chin, investigating organic carbon export from glaciers in the Taylor Valley, Antarctica. After returning to the University of Alberta to complete an International Polar Year-sponsored postdoctoral fellowship, I returned to the Ohio State University as a research scientist at the Byrd Polar Research Center and lecturer in the School of Earth Sciences. In autumn 2013 I accepted a position as assistant professor at the Ohio State University at Marion. I teach a variety of introductory-level courses including Planet Earth: How it Works, Dynamic Earth, Geology of the National Parks, and Earth Through Time. I continue to maintain the Polar Biogeochemistry Laboratory at the Byrd Polar Research Center and focus my research activities on examining how microbially-mediated processes affect nutrient cycling in rapidly changing polar and alpine environments. Current research projects include sites in the Canadian Arctic, Antarctica, the Rocky Mountains and the Himalaya.



Shell Undergraduate Research Experience 2014

The Earth Sciences undergraduate majors participating in the 2014 Shell Undergraduate Research Experience internship program learned about the geochemical analytical facilities available in the School of Earth Science for their use during a lab tour led by Drs. Susan Welch and Julie Sheets on June 9. The students were introduced to the myriad of instruments in the laboratories of Professors Anne Carey, Dave Cole, and Berry Lyons. Pictured in Dave Cole's aqueous geochemistry lab, from left to right, are Zach Cotter, Erin Lathrop, Sean O'Brien, Lienne Sethna, Brian Vargo, Ben Holt, Hanna Brouman, Casey Saup, Scott Aleshire, Jordan Scheuermann, Zach



Dobey, and Michael Rutana. Not pictured is Erica Maletic who was away doing field work with her research mentor, assistant professor Tom Darrah.

The students' upcoming workshops in June include a mix of personal development and technical topics including resume and cover-letter writing, introduction to GIS, scientific abstract writing, writing personal statements for graduate school applications, and fault identification. Photo above and story by Anne Carey.

Lyons and Wilson participate in 'Horizon Scan'

Late April found Berry Lyons and Terry Wilson in Arrowtown, New Zealand, where the Scientific Committee on Antarctic Research conducted an international workshop to identify the most important research questions for Antarctica and the Southern Ocean twenty years in the future. To that end, ~75 scientists from 22 countries, nominated by the community and representing the broad range of disciplines involved in Antarctic science, carried out an intensive 3-day effort. 'Horizon scanning' is designed to be a democratic, community-driven science planning process, that entails community input of key questions (~1,000 in our starting list), followed by systematic evaluation and selection of a small subset of top priority questions (80 in our final list), via discussion, rewording, and acceptance or elimination by vote. It was a tremendous learning experience, an intense and exhausting endeavor, and a rewarding time with colleagues! The outcome of the workshop will be published in the coming months, so stay tuned if you are interested in the future of Antarctic and Southern Ocean science.



Clockwise from top left: the international Horizon Scan participants; Berry Lyons and colleague Diana Wall pondering science questions; Wilson and Lyons with colleagues Robin Bell (left, USA), Carlo Alberto Ricci (2nd left, Italy) and Jane Francis (right, UK); Wilson leading thematic session to identify priority 'solid earth' questions. All photos by Dan Phillips, commissioned by SCAR.

Fund Profile: Friends of Orton Hall

Story by Prof Mike Barton, chair of the Friends of Orton Hall committee. The Friends of Orton Hall fund (FOH) provides small grants to undergraduate majors and graduate students pursuing geological studies in the School Earth Sciences ([link](#)). The grants are typically used to support fieldwork, analytical work, or presentation of research at professional meetings. The fund is supported by donations from alumni, friends, and faculty of the School, and is exclusively for use by students.

Applications are considered by a committee consisting of a Chairperson (Mike Barton) and two faculty members (Mike Durand and Tom Darrah). The application process has been streamlined in order to expedite the timely review and processing of applications. The amount available in the fund has steadily increased from \$14,767 in 2010-2011 to \$24,261 in 2013-2014. In most years, all available monies are distributed in awards, but any monies remaining at the end of the fiscal year are carried over to the following year.

Typically, over half of the available funds in any year are used to support student travel to scientific meetings. Most of the awards are for travel to the national GSA meeting and to AGU, but we have also supported travel to meetings at NASA, to a symposium on Antarctic research in the UK, to a conference on coral reefs in Australia, to regional GSA meetings and to various workshops. We typically make awards to ~20 students per year for travel to meetings.

We also make awards to support student research. Some of the awards are for fieldwork, some for sample preparation (for example, making thin sections), and some for the use of analytical facilities. Examples of some of the expenditures in the past three years include \$2,293 to support fieldwork in Utah, \$4,976 to support fieldwork in Iceland, \$1,000 to cover the costs of thin section preparation of samples from Utah, \$2,100 to cover the costs of sulfur isotope analyses, and \$1,750 to cover the costs of X-ray tomographic studies of fossils.

The steady increase in the amount available in the FOH fund reflects the generosity of our alumni donors, and has allowed us to increase the size of individual awards to more realistically cover the costs involved in travel and research. For example, prior to 2010-2011 the amount awarded to support travel to a national meeting was typically \$250-\$300, whereas the minimum amount awarded now for conference travel is usually \$500. Undergraduates are encouraged to apply for support for both research and travel. In 2012 we supported travel by 10 undergraduates to the National meeting of GSA and 2 undergraduates to the Fall meeting of AGU.

This support from FOH is greatly appreciated by both students and their advisors. As part of the conditions for receiving an award, students are required to submit a short description of their research, and these descriptions are published in the alumni newsletter to inform donors of how their contributions are impacting the lives of SES students. The importance of FOH awards to students cannot be overestimated. Students that receive awards for research can use the results to seek funding from other sources. Students that travel to conferences to present results gain confidence by seeing how their work fits into the larger national or international context. They also begin to establish contacts that will help them find employment. Importantly, they (perhaps unconsciously) help to spread word about the quality of the work being done in SES, and about the quality of the faculty and students.

On behalf of the FOH committee, the faculty, and the students in SES, I want to sincerely thank all alumni that donate to the FOH fund. I also want to thank those alumni that support the travel of SES students to AAPG. I assure you that your donations are helping change the lives of current students just as awards from FOH probably helped change some of your lives in years gone by.

Brevia

Lena Cole and Davey Wright (doctoral students in Paleobiology, adviser: Prof Emeritus Bill Ausich) are two of approximately 20 participants selected to attend the “NESCent Academy” course titled: “Paleobiological and Phylogenetic Approaches to Macroevolution” in July. This is sponsored National Evolutionary Synthesis Center in Durham, NC. The course includes paleontologists and evolutionary biologists; graduate students, postdocs, and ‘young’ faculty.

Congratulations to Ben Vander Jagt (adviser: Prof Michael Durand), who has been awarded an Ohio State Presidential Fellowship Award ([link](#)). From the Grad School site: “The Presidential Fellowship is the most prestigious award given by the Graduate School to recognize the outstanding scholarly accomplishments and potential of graduate students entering the final phase of their dissertation research or terminal degree project.”

Congratulations to Melissa Wrzesien (adviser: Prof Michael Durand), who was runner-up for the Wiesnet Medal, given to the best student oral presentation at the Eastern Snow Conference, June 3-5, in Boone, North Carolina.