

# EARTHSCIENCES

# September 2019 News Notes

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### Alumni Change Lives

Li Wei is a Ph.D. candidate under Dr. Ann Cook, studying marine geophysics. Li's first authored manuscript titled "Factors controlling short-range methane migration of gas hydrate accumulations in thin coarse-grained layers" was recently accepted in the journal *Geochemistry*, *Geophysics*, *Geosystems*. Li and Cook collaborated with scientists from the University of Texas at Austin, Columbia University, and Sandia National Laboratory. Li has presented this work at a conference in Israel, as well as at Gas in Marine Sediments and AGU 2018. Li is very grateful for the Friends of Orton Hall, which allowed her to attend those conferences.

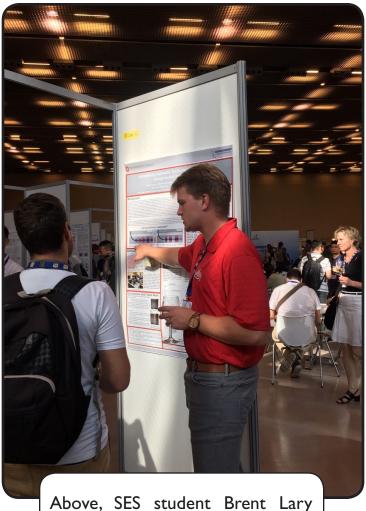
This summer Li participated in a marine EM survey of fluids in Alaska. The team collected seafloor MT data and deep-towed CSEM data in the subduction zone off of the Alaska Peninsula. Here's a photo of Li working aboard the R/V Sikuliaq.

The School of Earth Sciences relies on the generous support of our alumni and friends to provide programs, scholarships and facilities that enrich the experience of our students, provide life-changing opportunities, and enable world-changing discoveries. The Friends of Orton Hall gifts are distributed to students in support of degree research work.

If you are interested in giving to support the Friends of Orton Hall or other funds, please visit our giving page.



#### SES at the Goldschmidt conference in Barcelona



Above, SES student Brent Lary gives a talk regarding his poster presentation. Below, the banner for the 2019 Goldschmidt Symposium in Barcelona, Spain.



Prof David Cole and his PhD students attended the Goldschmidt Conference in Barcelona. Dr. Cole & Alberto Striolo gave a Keynote talk on "Structure, Dynamics and Reactivity of C-O-H Fluids at Interfaces and in Nanopores".

Many of Dr. Tom Darrah's students were also in attendance, and gave talks and exhibited posters.

Erica Maletic and Dr. Tom Darrah gave a poster on Noble gas and trace element geochemistry of Marie Byrd Land xenoliths.

"Identifying zones of natural gas accumulation in unconventional formations using crustal noble gases" was given as a poster and flash talk by Brent Lary, Billy Eymold, Colin Whyte, J. Harrington, J. Moortgat and T. Darrah.

Myles Moore, Steve Phillips, Ann Cook, Gus Wulsin and Tom Darrah gave a talk on "Improved sampling technique to measure noble gas and hydrocarbon composition of gas hydrate reservoirs in Green Canyon, Block GC955, Gulf of Mexico".

Gus Wulsin, Colin Whyte, Myles Mooore and Tom Darrah gave a talk on "Validating sampling techinques for robust measurements of natural gas levels in groundwater"/

Melisa Diaz, Dr.W. Berry Lyons, Byron Adams, Ian Hogg, Noah Fierer, Diana Wall, Christopher Gardner and Marcella Shaver Adams gave a talk on "Surface geochemistry of the Shackleton Glacier region, Antarctica and implications for soil habitability".



Wednesday, October 16 // 6 – 8 p.m. // Orton Hall, 155 S. Oval Mall

Join the School of Earth Sciences and the Orton Geological Museum in celebrating *National Fossil Day* and the one year anniversary of the installation of the Cryolophosaurus skeleton in Orton Hall's lobby. For more information, visit:

go.osu.edu/nationalfossilday

Activities include carnival-style games, fossil digs, museum tours and talks by paleontologists.



#### Groundwater: Is It A Sixth Great Lake?

An estimated 6 quadrillion gallons of water sit in the five Great Lakes and their connectors. That's 6 million billion gallons worth of water. But many Great Lakes communities get their drinking water from groundwater rather than the lakes, and the availability of this subterranean supply can be more volatile.

Great Lakes Now ran a segment on how a small Great Lakes coastal community that relies on groundwater realized it was running out of that water and how the community responded. To help understand the dynamics of aquifers and underground water supplies, Great Lakes Now spoke with Audrey Sawyer, assistant professor at Ohio State University's School of Earth Sciences. Sawyer's research has focused on hydrogeology, surface water-groundwater interactions and coastal hydrology.

To read the full interview with Dr. Sawyer, and to watch the video segment, click here.



## Alumni Gathering

Dear SES Alumni & Friends.

The SES Alumni Committee is excited to announce the 2019 Alumni Gathering! This year, the Alumni Gathering will be on Saturday, October 26, before the Wisconsin game, and will take place in Orton Hall. The event will likely be 11 am – 1pm, but the exact time will be set once the kickoff time is announced. Lunch food, non-alcoholic beverages, and beer and wine will be available. The event is free, but RSVP is requested. Please RSVP by email to Prof. Derek Sawyer (sawyer.144@osu.edu); direct questions about the event to Prof Sawyer, as well.

Further event details will follow. And GO BUCKS!

#### **ALUMNI SPOTLIGHT**



BILL MAGEE, M.Sc Exploration Geologist, Shell Oil Company

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#### WHERE HAS YOUR DEGREE TAKEN YOU?

After graduating with my Bachelor's, I was the recipient of a NAGT (National Association of Geoscience Teachers) internship at the USGS in Fort Collins, Colorado. I worked on campus at Colorado State University and did field work in Rocky Mountain National Park that summer. I studied nitrogen cycling in alpine glaciers and overall glacier health in the park.

I returned to OSU that fall to start my M.Sc. with Dr. Terry Wilson focusing on structural geology and rift tectonics in West Antarctica. I also assisted the installation of many remote GPS and seismometer sites across West Antarctica with the POLENET Project. During my M.Sc. program, I spent my summers interning with Shell in Houston on Gulf of Mexico Exploration teams. After graduation, I took a role with them and have worked in several different basins exploring for oil and gas (Gulf of Mexico, Nova Scotia, Newfoundland, and Trinidad).

# HOW DID YOUR EXPERIENCE AS AN SES STUDENT AT OSU PREPARE YOU FOR YOUR CAREER?

The SES B.Sc. courses had a balance of all "classical" geology skills needed to be a professional geologist. Mineralogy, Petrology, Sed. Strat., and Structural Geology are all part of my daily work in some form or another. Field Camp is the capstone of all of these topics and starts to bring all of those skills together in one setting. Enroll in Field Camp!

#### MOST MEMORABLE EXPERIENCE AS A STUDENT?

Late nights of finishing structural geology labs at 2:00 AM with the entire class, Temple Hill mapping exercise with David Elliot, rain on every single Structural Geology Field Trip, and Field Camp nights on the Wasatch!

Curiosity, especially with science, can solve many mysteries and help you become a better scientist and citizen of this planet.

