

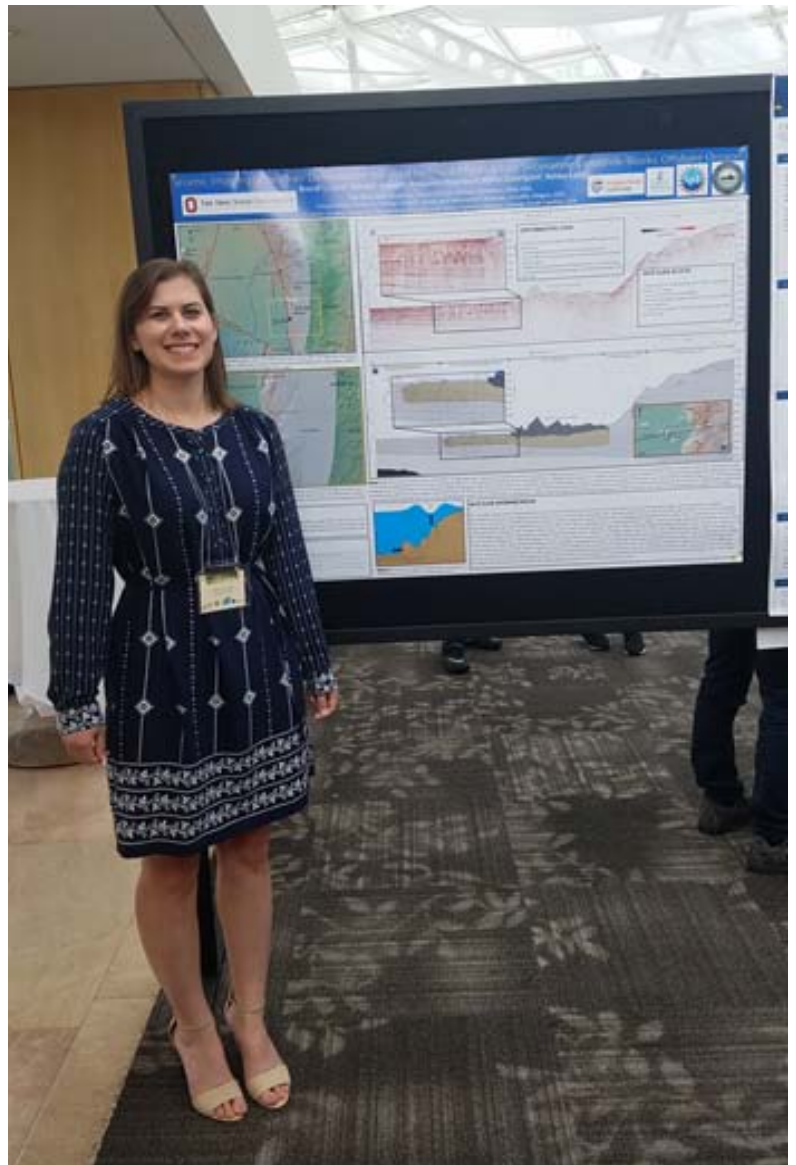
June 2018 News Notes

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Alumni Change Lives

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

I am a first-year PhD student studying submarine landslides. I recently had the opportunity to go offshore Oregon to collect reflection seismic data as part of the National Science Foundation-funded Early Career Seismic Chief Scientist Training cruise in fall of 2017. The Friends of Orton Hall funding allowed me to present my results at the 8th International Symposium on Submarine Mass Movements and Their Consequences in Victoria, British Columbia, Canada and attend a short course on marine geohazards at Canada's Institute for Ocean Science. This was my very first conference that I have been a part of, so just the experience alone was incredible. I was able to communicate my science to an international community of scientists who shared the same interests as me. This enabled me to gain valuable feedback on my work and has helped spark new ideas for future projects, as well as establishing a network of people that I hope to work with in the future. The short course was an energy industry perspective on geohazard assessment lead by Dr. Craig Shipp, Principal Technical Expert in Geohazards Assessment at Shell International Exploration and Development Company, Inc. This opened my eyes to a whole other world of opportunities for me and taught me how my research and skills can be used in industry. Not only was this conference and short course useful in advancing my research, but it has also provided me options for the future once I finish my degree.



Dr. William I. Ausich Receives Moore Medal



During the annual meeting of SEPM (Society of Economic Paleontologists and Mineralogists) in connection with the Annual Meeting of AAPG (American Association of Petroleum Geologists) in Salt Lake City, Dr. Ausich was awarded the very prestigious Raymond C. Moore Medal for “Excellence in Paleontology.” This award, which is given out annually, is, along with the Paleontological Society’s Medal, considered the highest prize in paleontology and soft rock geology in North America. Dr. Ausich was given this award for: “Highly significant and wide-ranging paleontological research, eminence as a university teacher in paleontology and soft-rock geology, and for major service to the Profession.” It is notable that two professors at our school, W.C. Sweet and Stig M. Bergstrom have previously

received this great recognition. That three people from the same university get this prize within a fairly limited time interval may be unusual, if not unique. The fact that Drs. Sweet (1994) and Bergstrom (2011) have also received the Paleontological Society Medal may be viewed as another recognition of the excellence of our paleontology program.

New Paper on Oxygen and Marine Evolution

Earth Sciences professor Matthew Saltzman is co-author on a paper in *Science* magazine this month, which links biological evolutionary innovations to a dramatic rise of atmospheric oxygen in the Devonian period ~400 million years ago, and a subsequent step-change to relatively sustainable near-modern conditions at ~200 Ma near the start of the Jurassic. The study integrated geologic proxy data from iodine to calcium ratios in ancient carbonate sediments with quantitative modeling of Earth's oxygen levels. The iodine proxy is novel in that it can monitor upper ocean oxygen levels around threshold levels for metazoan survival. You can view the full study in *Science* here ([link](#)) and a related media story here ([link](#)).



Paleozoic fossiliferous limestone used in study of ancient oceans (photo by Ben Gill).

ALUMNI SPOTLIGHT



ALE HAKALA

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WHERE HAS YOUR DEGREE TAKEN YOU?

An opportunity to work on unconventional energy research at the National Energy Technology Laboratory was advertised right before my official graduation in March 2008. Although very different from my Ph.D. research which focused on pesticide reactions in wetland sediments, I was interested in applying my knowledge of biogeochemistry towards addressing energy-related research in shale oil and gas. The opportunity to apply for a federal research scientist position focused on geochemistry-related subsurface research opened while I was a postdoctoral researcher at NETL. Since becoming a federal scientist in 2009, I've been able to work on a wide range of research problems associated with carbon storage and unconventional oil and gas.

HOW DID YOUR EXPERIENCE AS AN SES STUDENT PREPARE YOU FOR THE FUTURE?

Having an excellent research advisor (Yo Chin) and committee (Anne Carey, Steven Lower, Pat Hatcher) allowed me to learn about a wide range of topics associated with biogeochemistry from leading experts. Working as part of a multidisciplinary research team allowed me to learn skillsets that are directly applicable towards the large-scale multidisciplinary research performed through the U.S. Department of Energy National Laboratories.

MOST MEMORABLE EXPERIENCE AS AN SES STUDENT?

Spending time collecting sediment cores and performing experimental work at the Old Woman Creek National Estuarine Research Reserve in Huron, Ohio.

“Explore different opportunities if you have interest early on in your careers, so you can gain perspective on where you want to focus your career in the future. Also apply this in your personal life... I took on amateur snowboardcross as an extracurricular and absolutely love it.”



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