

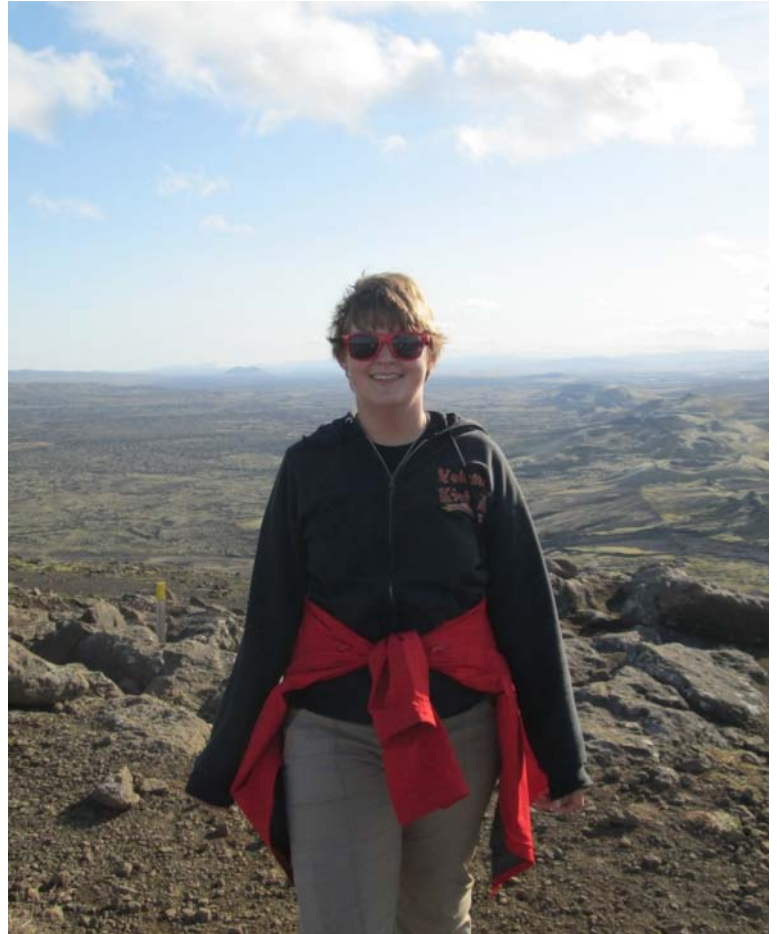
November 2015 News Notes

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Alumni Change Lives

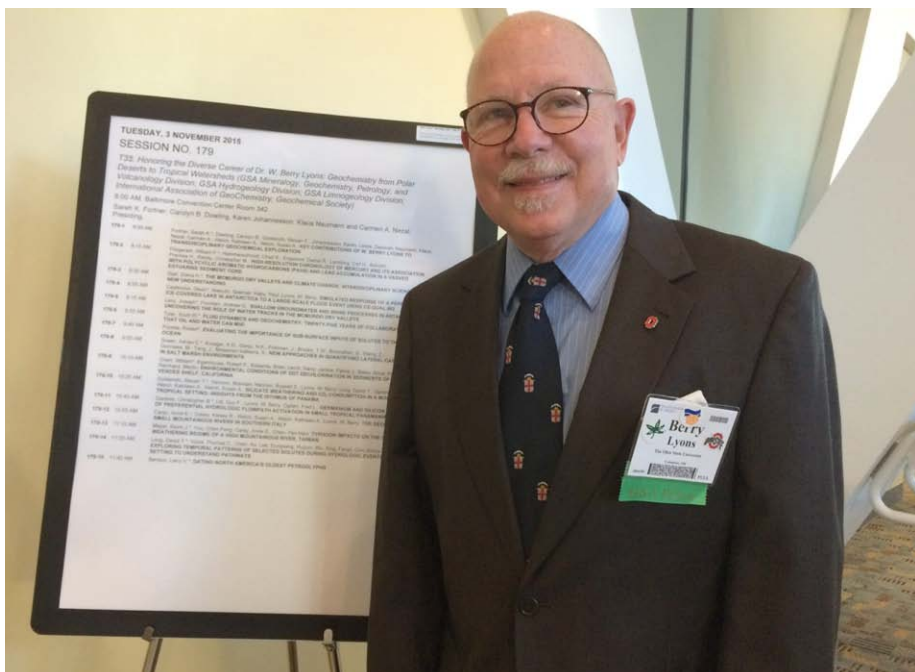
Brittany Van Wagenen is an undergraduate student working with Prof Tom Darrah. Here, she tells how Friends of Orton Hall helped further her studies.

The goal of my undergraduate thesis research project is to understand the evolution of geologic regions that produce rare, silica-undersaturated carbonatite lavas and the relationship between subduction zones, failed rifts, and the emergence of nascent rift zones. Our team recently recognized a trend of carbonatite lavas occurring along Paleozoic, potentially reactivated cratonic suture zones that have experienced nascent rifting. We used noble gas, major, and trace element geochemistry to determine if carbonatites are related to re-melting of thickened lithosphere or to changing behavior in the mantle. Our main study area is the Four Corners region of the U.S., but we compare our data to data from Jackson Dome, Mississippi and Nyiragongo, Democratic Republic of the Congo. The award money received from Friends of Orton Hall enabled me to travel to Baltimore, Maryland for the annual GSA conference. A poster was presented presenting our team's work. Our team consists of me, Colin Whyte, Dr. Tom Darrah, Dr. Karl Karlstrom, Dr. Laura Crossey, and Dr. Robert Poreda. It was a wonderful opportunity to network, both with other scientists contributing to my research and with potential graduate schools. Thank you for the opportunity.



GSA Session in honor of Prof Lyons

On November 3rd at the annual meeting of the Geological Society of America in Baltimore, there was a session to honor current Director of SES Berry Lyons. It was entitled, “Honoring the Diverse Career of Dr W. Berry Lyons: Geochemistry from Polar Deserts to Tropical Watersheds”. The session was put together and chaired by 4 of Lyons’s former students and a former post doctoral fellow. He was unaware that it was taking place until it was announced in the GSA news magazine GSA TODAY. The 14 oral and 6 poster presentations included such diverse topics as chemical weathering determinations in Panama to the physical limnology of perennially ice-covered Antarctic lakes. The presenters included 5 former students, 2 former post-docs, 2 current OSU students, his former PhD advisor, Prof Carey from SES, and nine past and current collaborators from throughout the US.



Prof Grottoli’s group publishes new study

Prof Andrea Grottoli’s group recently published a study in *Proceedings of the Royal Society B: Biological Sciences*, entitled “Annual coral bleaching and the long-term recovery capacity of coral”. The study is described in a recent OSU press release ([link](#)). Congratulations, Andrea!



GEOS Update

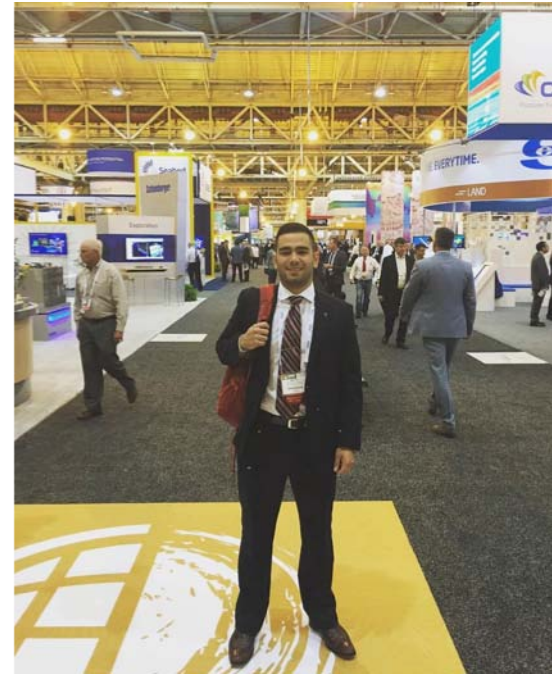
SEG Video Geophysics Lecture

On Saturday October 24th, students participated in a SEG Video geophysics lecture by Dr. Fred Hilterman. His presentation “Seismic Amplitude Interpretation” provided a brief and detailed introduction to AVO (Amplitude Versus Offset). We plan to continue supplementing our academic development with SEG geophysical resources.

GEOS at SEG Annual Meeting 2015

GEOS member Mario Andres Gutierrez (right) was awarded a full travel grant to participate in the SEG/ExxonMobil SEP (Student Education Program) over the weekend prior to the October 19-22 2015 SEG Annual Meeting in New Orleans, LA. Among 40 PHD, MS, BS students from around the world, Mario was able to learn from Exxon experts about the face-paced aspects of exploration geophysics with real situational activities and examples over a 2-day course. SEP students were then able to attend the SEG conference,

attend technical talks, and engage with professionals. Many thanks to Exxon and SEG for the support to attend the program and conference. We hope to continue engaging with SEG and developing the geophysical aspect of energy applied geosciences at SES.



WVU Petroleum Engineering Professor Visit

On November 13th, Dr. Ilkin Bilgesu of WVU Petroleum Engineering presented “Well Control & Its Application to Horizontal Wells” to OSU faculty and students from SES and engineering (photo below).

Upcoming Event

Orton Museum & Archive Event, December 3rd. More info on the GEOS Facebook page ([link](#))

Contact us at aapg@osu.edu for more information on all things GEOS.

Stayed tuned and GO BUCKS !!!



Basin Research Group Presents at NZ conference

The 7th International Symposium on Submarine Mass Movements and Their Consequences was held in Wellington, New Zealand from November 1-4. The Biannual Symposium connects researchers, faculty, and students from around the world within in the field of seafloor landslides and associated hazards. In New Zealand, the tectonic and sedimentary setting has resulted in numerous examples of offshore slope failures that demonstrate tsunami hazard risk to coastal populations as well as continental margin scale collapses that are affecting subduction zone behavior. In addition there are excellent ancient deposits exposed onshore that can be studied in detail (and visited by participants in a post-conference field trip).

OSU School of Earth Sciences Prof. Derek Sawyer and 2 of his graduate students, Joshua DeVore (at right, below) and Levent Akinci (at right, above), were invited to give oral presentations in addition to their conference papers. Sawyer presented on the role of oceanic microfossils in altering the shear strength of marine sediments. DeVore presented his research on the effects of seismicity on submarine sediment slope stability. Akinci presented on the Cape Fear landslide offshore North Carolina to analyze the relationship between rising salt diapirs and submarine landsliding. Josh and Levent were the only two master's students to be given talks gives, which demonstrates the quality and significance of their research work. Friends of Orton Hall and Graduate Students Research Fellowships from the Geological Society of America provided partial support for the students' travel.

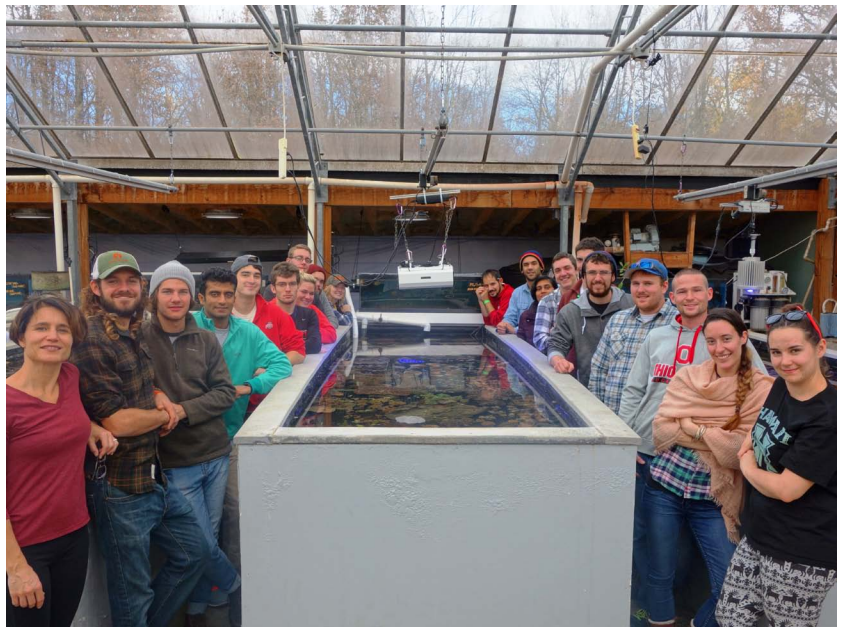


Advanced Oceanography Class Fieldtrips

As part of the section on biological oceanography, the School of Earth Sciences class in Advanced Oceanography visited the reef, manatee, and polar bear exhibits at the Columbus Zoo and Aquarium (CZA) (<https://www.columbuszoo.org/>), and visited the private operation of the Reef Systems Coral Farm (RSCF) on Saturday 7 November. The guides at CZA provided insightful information on the details of marine animal husbandry, answered student questions, and were incredibly inspiring. The female polar bears were denning (one has since given birth to a cub) but the male polar bear put on a great display of underwater agility. Two manatees are currently at the rescue facility with one scheduled for release back in Florida once ready. And, the coral reef exhibit was riveting with the scale of the operation and maintenance being truly impressive.

At the RSCF in New Albany (<http://www.reefsystems.com/>), students got to see first hand how the aquarium trade can sustainably farm corals so that coral sales to the private sector do not impact existing natural reefs. Students were able to ask the owners directly about the details and level of investment needed for such an enterprise.

This field trip is repeated every year for this class and is always a highlight for the students.



Stratigraphy & Sedimentation Field Trip

On November 12 and 13, 2015, the Earth Science 4502 Stratigraphy & Sedimentation class participated in a class field trip with Dr. Larry Krissek. Photo provided by Christina Jauregui.



Remembering John Ghist

Contributed by Prof Emeritus Stig Bergstrom

A well-known OSU alumnus, John Ghist, lost his long battle with brain cancer in late August. He received both his BS (1973) and MS (1976) degrees at our school. His MS thesis, a monograph on Devonian Tentaculitids, was an international state-of-the-art piece of work, and it is still frequently consulted by specialists and cited in the literature. Immediately after his graduation, John began a career in the oil industry that included positions with EM Stork, Arco, and Gas/Vastar in Houston, Dallas, and Bakersfield. He left the oil patch in the 1980s and became a highly successful and well-liked high school teacher in the Denver area as shown by the fact that among other awards, in 2004 he received the 'Teacher of the Year' Award by the Rocky Mountains Association of Geologists. Another of his accomplishments was that he and his students were instrumental in getting Rhodochrosite recognized as Colorado's State Mineral. He was also very active and held prominent positions in local science organizations, such as 'Friends of the Dinosaur Ridge,' the 'Florissant Science Society,' and the 'Colorado Science Society.' One of his last publications was a co-authored book on Arthur Lake's classic dinosaur collecting localities at Morrison, Colorado. He also spent summers working as a geoscientist for the Colorado National Park Service.

John, who is well remembered by the oldtimers at SES, regularly visited Orton Hall when he was in Columbus. He was a friendly, easygoing, and very knowledgeable person with wide scientific interests. He was a book lover and assembled a remarkable library of classic books in natural history. He will be sorely missed by his many friends around the country. His philosophy of life is illustrated by the admirable 'Laws of Ghist' that he had summarized on a plaque: Participation, Respect, Honesty, and Courtesy. There is no doubt that if everyone adopted "The Law of Ghist" we would live in a much better world.

Brevia

A recent Yale Climate Connections video ([link](#)) featured an interview with Prof Lonnie Thompson. Congratulations, Lonnie!

Senator Sheldon Whitehouse (RI) visited The Ohio State University and Byrd Polar & Climate Research Center on October 30th. Senator Whitehouse. His address to the US Senate on November 16 feature ongoing work at Byrd (links: [transcript](#), [video](#)).