

Department of the Earth Sciences Newsletter

SUNY College at Brockport, Spring 2018

Summer Research

Reilly Blocho (Geology '19)

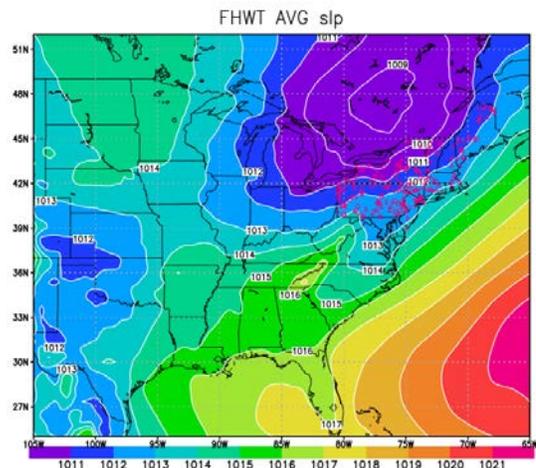


Reilly investigated variations in the Marcellus and Utica shales over the summer through the Student Undergraduate Research Program at Brockport. His interest in black shales stems from the fact that black shales are often studied for possible oil and gas exploration. The Marcellus and Utica shales are two organic-rich shales targeted for natural gas production. Both of these formations underlie the southern tier of New York State and outcrop in east to west bands closer to Lake Ontario.

The project looked at major and trace element concentrations in samples that transect NY State with the goal of assessing variations within the basin during deposition. Trace elements are often used to measure the degree of anoxic conditions needed to preserve organic material. Understanding the spatial distribution will allow future exploration to be more efficient at determining optimal target locations. The project also evaluated the naturally occurring radionuclides within the shales, as this has been raised as an issue for drilling and production.

Reilly's thoughts on the experience: "I was able to present the research that I conducted at Geological Society of America conference in Seattle Washington. Having the opportunity to present at GSA was a valuable experience that was a lot of fun. I enjoyed being able to talk to a number of people who were interested in my research which allowed me to create connections as well as talk to representatives of graduate schools that I plan on going to after Brockport. It was also enjoyable to experience some of Seattle's unique culture as well."

Stewart Negrón (Meteorology '19)



Stewart worked with Dr. Jessup to investigate differences in environmental conditions between various types of severe and hazardous weather, including flash floods, hail, straight-line winds, and tornadoes. The project utilized the North American Regional Reanalysis to examine fields such as sea level pressure, wind shear, and convective potential to determine patterns associated with different combinations of hazards. A statistical procedure known as discriminant analysis was used to identify differences between the groups of events.

While other studies have examined different hazards associated with severe weather (hail, winds, and tornadoes), this project was unique in including flash floods.

Summer Internships

Bob Continelli, Meteorology '18



This summer I worked at 13WHAM news at a weather intern. I felt as if I was an employee, rather than an intern, immediately. Though I was initially skeptical of the broadcast industry prior to my internship, I was absolutely stunned at how professional the broadcasters were putting forecasts in together. The knowledge gained picking their brains on different forecasting techniques was an experience that would not be possible learning within a classroom setting. Furthermore, the high powered computers, which create the graphics, gave me a unique opportunity to learn how to create the graphics which otherwise would never get access to. One of my responsibilities was updating the Weatherline. These voice recorded forecasts prepared me to ad lib through forecasts, which translated to a smooth approach on the green screen. As a result, I feel better prepared to be vaulted into the workforce after my senior year with only three months interning at 13WHAM.



Donald Bullen, Meteorology '19



My internship at WROC TV Rochester was a very good experience. I learned a lot when it comes to forecasting, as well as what it is like working as a Broadcast Meteorologist. I got to work with all of the meteorologists who work at the station, and each of them have unique approaches to forecasting and how they deliver their forecast to the public.

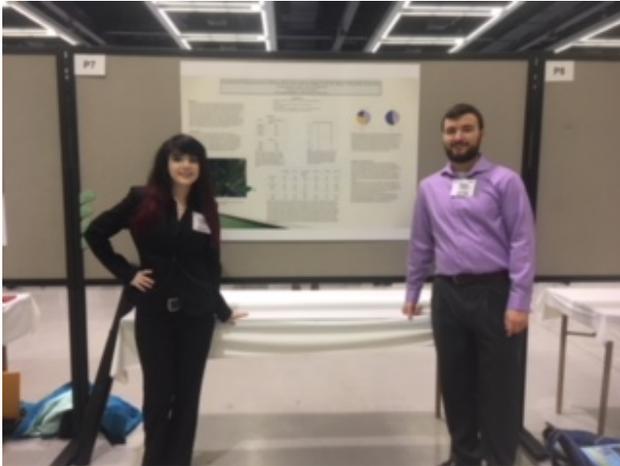
Among my responsibilities were updating the social media pages and the website. This consisted of editing the video for the full weather portion of the news and adding it to the website along with a forecast discussion. I really liked writing the discussions because I could put my own spin on things. I would often try to explain what was going on in a bit of scientific detail without going above the heads of the reader. I found a balance that I was quite comfortable with and stuck with it for the majority of my discussions.

I eventually started producing a seven day forecast during my shifts, which would later be compared with the meteorologist's seven day forecast. The seven day forecast taught me how to forecast for a broad viewing area. I also learned some skills in long term forecasting. I learned more about the available models, and started using more of them.

This internship has shown me that Broadcast Meteorology is what I want to pursue as a career.

Brockport Earth Science Students Attend Regional and National Conferences

Geological Society of America (Fall '17)



Brockport sends a group of students to the Geological Society of America annual meeting every year, and many of these students present their research at this meeting. Several students (Reilly Blocho, GEL '19, Meg Dobinski, GEL '19, Rob Fisher ESC '18 and Liz Kaptein ESC '17) presented results from their research at the 2017 GSA annual meeting, which was held in Seattle from October 22-25, 2017. Reilly presented work on the geochemistry of black shales, Meg's project investigated sediment phosphorus concentrations in Cazenovia Creek, and Rob and Liz (above) presented on stream sediments they collected during their field trip to Puerto Rico. The GSA meeting is one of the largest geoscience meetings in the world and had over 7000 attendees.

Great Lakes Atmospheric Science Symposium (GLASS) (Fall '17)

A few Brockport meteorology students, including AJ Fallon, Donald Bullen, Bob Continelli, Maggie Jividen, and Kevin Zimmer, attended the Great Lakes Atmospheric Science Symposium, held at SUNY Oswego in October 2017. Maggie presented on wind speed observations collected during her summer internship on Mount Washington, New Hampshire.

American Meteorological Society Annual Meeting (January '18)



Three students, Bob Continelli, Donald Bullen, and Kristian Oliver, traveled to Austin, Texas to attend the AMS Annual Meeting from January 7-11, 2018. While there, they caught up on the latest trends in meteorology, including data from the latest weather satellite, GOES-16, as well as talks on lightning and severe weather. They met up with alums Randy Chase '16 and Aidan Kuroski '16, who are in graduate school at the University of Illinois and the University of Wisconsin-Milwaukee, respectively.

Return to Puerto Rico!

Dr. Noll will be taking a group of students from the Earth Science department to Puerto Rico during Spring Break 2018. They will be investigating impacts of the 2018 hurricane season on the landscape. They also hope to help with recovery at a local school.

Class of 2017 Senior Seminar Projects

Miles Bliss (MET): Effect of a shortwave trough on the resulting snow-to-liquid ratio of lake effect snow events occurring in the Tug Hill Plateau.

Jessica Camuto (MET): Comparison of EF1 Tornadoes in Oklahoma & Waterspouts off the Key West Coast.

Michael C. Byrnes (MET): The influence of topography on severe thunderstorms in the Hudson River Valley

Cecilia McCaffrey (MET): Testing Wave Height Prediction Models on the Long Island Coast

Jillian Reynolds (MET): Influence of severe weather on flood-producing rainfall

Alex Steria (GEO): Possible locations in Onondaga County for a new landfill using GIS mapping of soil types and other urban planning criteria.

Jeremy Kilbury (GEO): Source identification of salt contamination in a well water supply

Amanda Burke (MET): Prediction and identification of microbursts in the northeastern U.S.

Kristian Oliver (MET): An analysis of parameters involved in hurricane-induced tornadoes

For more information on our programs and students, visit our website:
<http://www.brockport.edu/esc>
or call the Earth Sciences department at 585-395-2636 to arrange a visit.