



# Department of Environmental Science and Biology

State University of New York—College at Brockport

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## ***Dr. Christopher Norment Department Chair***

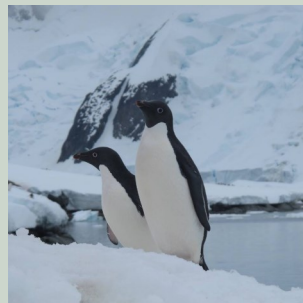
Last winter break, I had the good fortune to travel to Antarctica as leader of an international study program organized through The College at Brockport's Office of International Education. We flew to Ushuaia, Argentina, the southernmost city in the world, where we boarded a ship that took us across the Drake Passage to the South Shetland Islands and Antarctic Peninsula. Antarctica was beautiful and built on a scale that overwhelms the heart and mind. We saw something on the order of sixty thousand penguins and countless whales and seals. And everywhere there was ice—brash ice choking the channels, icebergs grounded along the shorelines, glaciers spilling down valleys and steep mountainsides.



The power and expanse of Antarctica gives one the sense that it has been and always will be there, in the form that we now see it, but this certainly is not the case. Antarctica once was much warmer than it is now, and home to everything from lush forests to dinosaurs and terrestrial mammals. And more recently, climate change has begun to affect parts of Antarctica in major ways. In the last fifty years the Antarctic Peninsula has warmed by about 3°C, more than anywhere else in the Southern Hemisphere. The seas surrounding Antarctica also are warming. Major sections of ten floating ice shelves have disappeared and most glaciers have retreated. Penguin populations have responded to these changes; species like the gentoo penguin have expanded their distributions along the peninsula, while other species, such as the Adélie penguin, have retreated. The "coldest, windiest, highest, and most isolated" continent is changing, and in some areas, doing so very quickly.

In places such as Antarctica, it is the job of environmental scientists to understand the past, present, and the future – to describe environmental events and identify their causes, predict what may happen in the years ahead, and suggest ways in which humans may moderate their impact on the planet. This is very important work and I believe that the environmental science program at the College at Brockport does an excellent job of preparing our students for such a task. The classes we teach and the "hands-on" experiences that we offer lay the groundwork for careers and further education in the field.

*So—as I wrote in the last newsletter—work hard (and in your free time, play hard!) and believe, passionately, in the importance of environmental science and what you are doing at Brockport, whether as a student, teacher, or member of great term, and in this winter of*



*our vitally important support staff. Have a snow and cold, stay warm.*

## ***Molly Stetz BS 2012 Water Resources, MS in progress***

What is your dream career? How do you see yourself fulfilling your dream? Although earning your degree may certainly be an important step in your achievements, you should also consider searching for research, volunteer, or internship position(s) before you graduate. The environmental science field is competitive, and the key to success is to pair research or internship experiences with your degree. The addition of research or internships to your resume will make you stand out and look unique to possible employers, besides giving you something to talk about during your interviews. The College at Brockport faculty acknowledges the competitive field for newly graduated students, and offers opportunities for students, such as research positions or internships with organizations outside of school.

I came to this realization as an undergraduate student and took advantage of the opportunities Brockport offered. I was able to work on multiple research projects starting in my sophomore year and until I graduated. The research positions not only gave me the opportunity to work in the field alongside my professors, but I was also selected to present my research to professionals at a national conference!

The skills I acquired conducting research helped me to obtain my first internship position with the NYS Department of Environmental Conservation (DEC). After my summer internship with the DEC ended, I was able to use my growing network among professionals to get a volunteer internship with the United States Natural Resources Conservation Service, followed by an internship with the Genesee County Soil and Water Conservation District, where I was later hired as a permanent employee. The various research, internship, and professional connections I made then helped me to secure a position as a graduate student, while continuing to work for the conservation district. So again, think of your dream career. As you work to earn your degree, also ask your professors about possible research opportunities and continue to apply for any internship that comes your way. You never know where the opportunities may lead you, just maybe to your dream job.



## ***Tanner Squires BS Aquatic Ecology/Biology***

In the summer of 2014, I began working at the Wally Neorenberg Hatchery of the Prince William Sound Aquaculture Corporation, Alaska, for the purpose of chum salmon egg intake. In 2015 I will return to work for the PWSAC at the Cannery Creek Hatchery from June 3 to Nov 17 as a fish technician; however, I am applying for a permanent staff position and should know if I get the job by graduation. To obtain the permanent position (culturist) at PWSAC is my goal for this semester, along with finishing my work on the mink project being directed by Dr. Haynes.



## ***Environmental Science and Biology Student News***

Congratulations to **Ben Sleeper (BS 2012)** for completing his MS in Forest Resources at the University of Arkansas at Monticello. **"I owe you and the ENV program many thanks."** Ben was an advisee of Dr. James Haynes, with a concentration in Aquatic Ecology/Biology.



**Josh LaFountain (BS 2013 Aquatic Ecology/Biology)** has obtained a position as Research Associate at the University of Michigan. Josh will spend three months sampling lakes north of the Arctic Circle in Alaska over the summer of 2015. The purpose of many of the studies that Josh will be involved in is to determine the effect of melting permafrost and the subsequent nutrient release on arctic lakes and streams. Josh says,



**"Thank you for all the of the help and opportunities you have given me during my undergrad years!"** Josh was an advisee of Dr. Joseph Makarewicz, with a concentration in Aquatic Ecology/Biology.

### ***How the value of volunteer work has made a difference in my employment opportunities and my life***

#### **Patty Wakefield (BS 2014 Aquatic Ecology/Biology)**

I went back to school in 2008 at the age of 45. I knew I wanted to be in the environmental field, and I became active in volunteering and went to many presentations and workshops. I volunteered with DEC any chance I could. I networked and made connections with all kinds of organizations. I became treasurer for the Wildlife Society Club and volunteered to work with school groups teaching kids pond life and canoeing. I spent loads of time in the woods doing tree and plant ID just because it was offered. I volunteered with a bird of prey organization performing interpretive talks. I took weekend classes like winter ecology and wetland mammals that consisted of "hands on in the field" learning, my favorite! I got a number of scholarships, one which helped fund a 3-week trip all down the east coast that ended in the Florida Keys snorkeling on a coral reef! I took advantage of every opportunity there was and often say, "I worked for years with no pay, but it has paid off!" Because of my education and experience working with people of all ages and in many venues, I got a summer job at a 4H camp as an environmental educator, and a position as an educator at a zoo. I applied for a position as a Water Quality Specialist at Hamlin Beach with NYS Parks Environmental Management Bureau. I didn't get it that year— they chose to hire someone with a bit more education than I had at the time. I made a good impression, however, and the following summer I got the job! Three years later, I still am working for NYS Parks because I have received a promotion and a raise and am now in a new position as a "long-term" seasonal.

You can never volunteer enough. Take advantage of *every* opportunity that comes your way. You never know where it may lead. Some of the connections I have made have turned into lifelong friendships/relationships. I continue to get emails and calls from past professors regarding job opportunities. I have respect from my peers and colleagues in the environmental field. I continue to network and do my best. The rewards have been many. I always say, "how lucky I am," but really I have earned everything I have today. Good luck, reach outside of yourself and take risks.

**"Nothing ventured, nothing gained!"**



## ***Environmental Science and Biology 2014-15 Award Winners***

Congratulation to this year's department award winners! Sara Grillo, a senior in the terrestrial ecology/biology concentration with a minor in Biology, has been selected as the 2014-2015 Department Scholar. In her four years here, Sara has achieved a remarkable 4.0 GPA and worked on a number of research projects, including the Great Lakes Coastal Wetlands Monitoring study (funded through the Environmental Protection Agency) and Christina Hoh's (M.S. candidate) thesis study on spring songbird migration along the south shore of Lake Ontario. Sage Hallenbeck (B.S. spring of 2015) and Matt Futia (combined B.S./M.S. program) are the co-winners of the Kenneth Daman Award for Undergraduate Research in Aquatic Ecology. Sage and Matt worked in Dr. Rinchar's lab, where they investigated how fatty acid signatures can be used as a tool to assess predator-prey interactions in aquatic food webs. Both Sage and Matt were supported by Brockport Foundation Summer Undergraduate Research Fellowships.



Sara Grillo



Matt Futia



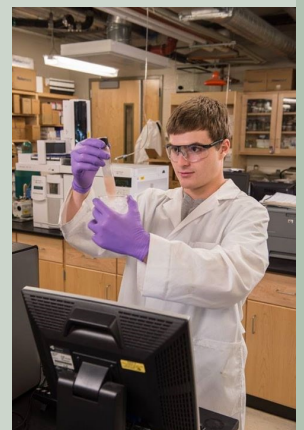
Christina Hoh



Sage Hallenbeck

## ***The Benefits of an Internship—Matthew Futia (BS/MS)***

In the summer of 2014 I participated in an internship through the Brockport Foundation. For my internship I worked in a well-equipped wet laboratory under Dr. Jacques Rinchar and determined the fatty acid signatures of fish from Lake Michigan. During this experience I learned many valuable skills, including how to use scientific instruments, write a formal report, present data at a scientific conference, and work in a professional environment with others. In the future I will be able to apply many of these skills to everyday life and professional work in the environmental science field. These skills will also give me an advantage when I apply for jobs. The internship also allowed me to meet a variety of people and helped me connect with others working in this field, as well as many others working in the sciences. In the future, I may be able to use these connections to help find a career or receive aid with research projects. Overall, my internship was an amazing experience that prepared me for my future, one that I will cherish and look on for years to come.



## ***Marine Biology-Geology Bahamas***

Brockport faculty members began teaching Marine Biology-Geology-Bahamas (ENV/ESC 457/557) at the Gerace Research Centre in 1974. Since 1994, this international education course with on- and off-campus academic components has been directed by Dr. Haynes. Currently the class spends spring break at the GRC studying five marine habitats associated with Bahamian reef systems around San Salvador, the farthest eastern island in the island nation of the Bahamas. The 2015 course is closed, but if you are interested in going in 2016, contact Dr. Haynes (jhaynes@brockport.edu) in the fall of 2015.



**2014 Bahamas class on a fossil dune at Cut Cay (Photo credit: Greg Lawrence)**



**Getting into the water in Fernandez Bay (Photo credit: Sage Hallenbeck)**