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Environmental Science & Ecology Department  
Newsletters

Environmental Science and Ecology

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## Newsletter Spring 2017

Christopher J. Norment

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The College at Brockport, SUNY

Introducing our new department name:

**“Environmental Science & Ecology”**



## Message from the Chair—Dr. Chris Norment

I write this in March of 2017, more than four months after our last national election. It is a time of great concern for environmental scientists, as the new administration has proposed slashing budgets for scientific research, essentially abandoning all federal efforts to combat human-induced climate change, rolling back legal and regulatory protection for clean air and water, and weakening or eliminating the Endangered Species Act. Perhaps even more ominously, a segment our society—encouraged by the behavior of some political candidates and their followers—appears to be drifting toward what commentators have termed a “post-truth” world, one populated by “alternative facts,” in which the reality of an event, piece of information, hypothesis, or theory is simply a matter of one’s perspective or belief system. This attitude is incompatible with science and threatens its very foundations.

What should our response to this situation be, as educators, scientists, students, or “just” citizens interested in promoting a safe and healthy environment for ourselves, our communities, and our descendants? First, we must cultivate the ability to think critically about the world—a process that is central to the mission of the Department of Environmental Science and Ecology. Second, we must continue to do and teach science, collect and analyze data, make accurate observations about the natural world, and faithfully apply our conclusions, rather than our prejudices, to the problems facing *our* environment. Third, we must engage with the world—with the political process, with people who do not believe in the same things that we believe in. Finally, we must join organizations that promote values similar to ours, and we must work to communicate our concerns to others.

Amidst what feels to me like a constant stream of bad news, it is heartening to see a sense of energy and purpose among so many colleagues and students. I feel as though the events of the last few months have galvanized people into action and fostered the kind of energy that has produced the sorts of achievements described in this newsletter. So read on, and discover how folks in the Department of Environmental Science and Ecology are doing their best to promote scientific work, and help make the world a better place.

### ENVIRONMENTAL SCIENCE & ECOLOGY DEPARTMENT

- **Dr. Kathryn Amatangelo, Assistant Professor**
- **Ms. Andie Graham, Instructional Support Technician**
- **Dr. James Haynes, Professor, Interim Provost & VP of Academic Affairs.**
- **Ms. Tammy Jo Manz, Secretary**
- **Dr. Christopher Norment, Professor & Chair**
- **Dr. Jacques Rinchard, Associate Professor**
- **Dr. Douglas Wilcox, Professor**
- **Dr. Clayton Williams, Assistant Professor**



**NEWS FROM THE  
NORMENT LAB:**

**Tiffany Clay** (MSc candidate): this summer, Tiffany will begin her research on management techniques to enhance monarch butterfly habitat at Iroquois and Montezuma National Wildlife Refuges. Eastern populations of the monarch have declined precipitously, and Tiffany’s research will help identify mowing methods that will enhance growth of the monarch’s primary host plant, milkweed. Tiffany also will be heading the Brockport field crew monitoring birds and amphibians in Lake Ontario coastal wetlands, as part of **Dr. Wilcox’s** EPA-funded Great Lakes Coastal Wetlands monitoring project. **James Ianni** (BSc candidate) will be helping with this project, too.

**CONGRATULATIONS AWARD WINNERS!**

*School of Science and Mathematics Graduate Student of the Year*

**Eli Polzer**

*Departmental Scholar Award*

**Holly Jackson**

*Kenneth E. Damann Award for Research in Aquatic Ecology & Biology*

**Erica Kingdollar**

*Klumb-Spindler Memorial Travel Award from the NY Chapter of the American Fisheries Society*

**Matt Futia**

*Distinguished Professor Graduate Student Research Award*

**Cassie Wolfanger and Tiffany Clay**

*Great Lakes Research Consortium Student Travel Grant*

**Kinsey Irvin and Jeremy Kraus**

*ES & E Graduate Student Grant to Support for Thesis Research*

**Matt Futia, Cassie Wolfanger, and Scott Ward**

*Great Lakes Research Consortium Student to Support Research Grant*

**Cassie Wolfanger**

*The College at Brockport Student Travel Grant*

**Nick Farese and Chris Maier**

**Brockport Foundation  
Summer Undergraduate Research  
Fellowship Winners**

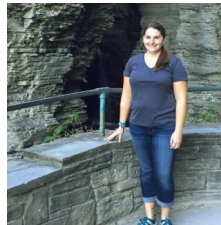
**Nathan Barker:**  
“Use of fatty acid to asses diet of salmonids in Lake Michigan.”



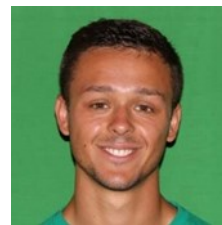
**Abigail Butler:**  
“Reproduction of red-winged blackbirds (*Agelaius phoeniceus*) in stormwater retention ponds on the SUNY Brockport campus.”



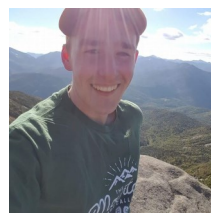
**Jessica DeToy:**  
“The allelopathic effects of *Cynanchum* sp. on the germination and growth success of two native forbs.”



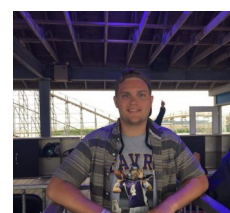
**Cory Hammond:**  
“Transfer of fatty acids from prey to predator species.”



**Wyatt Jackson:**  
“The effects of non-native vegetation on moth communities.”



**Christopher Plummer:**  
“The effect of pale swallow-wort on tree root and mycorrhizal fungi interactions.”



## ITS ALL ABOUT THE PRESENTATION...

On Friday, April 28 at 10:30 a.m. in Seymour Union, room #B116, **Jeremy Pike** (graduate student) will present and defend his thesis entitled “Effects of dietary fatty acids on lake trout (*Salvelinus namaycush*) fatty acid signature and use in mixing models to predict contribution to prey.”



Undergraduate and graduate students from the Department of Environmental Science & Ecology presented their research work in Buffalo, N.Y. at the NY Chapter of the American Fisheries Society 51 st Annual Meeting in February 2017 .

### Oral Presentations:

**Matt Futia** (Graduate Student): “Analysis of thiamine deficiency complex in Lake Ontario salmonines.”

**Kinsey Irvin** (Graduate Student): “Use of fatty acid signatures to explore the river continuum concept.”

**Jeremy Kraus** (Graduate Student): “Fatty acid signatures to access lake trout diet in Cayuga Lake.”

### Poster Presentations:

**Nick Farese** (Undergraduate Student): “Thiamine and lipid content in Lake Ontario prey fish.”

**Matt Futia** (Graduate Student): “Thiamine and fatty acids of Lake Ontario lake trout—2013 monitoring.”

**Chris Maier** (Undergraduate Student): “Fatty acid signatures of predatory fish from Lake Michigan.”

## SPRING 2017

### IMPORTANT DATES:

- ◆ **“Free R Short Course”**: Mondays, starting March 20 , running to May 1 from 4:00 to 5:30 p.m. in Lennon Hall computer lab. You are welcome to attend as many classes as you are able. For more information please contact Dr. Williams (cjwillia@brockport.edu)
- ◆ **“Bob Iveson Ceremony”**: Tuesday, March 28 “in Lennon Hall, Room #140. All are invited to attend, in support of his insect collection, which has been donated to SUNY Brockport.
- ◆ **“Village Cleanup”**: In collaboration with Habitat for Humanity—Saturday, April 8, 2017 from 11 a.m. to 2 p.m.; E.C.O.S. will meet on the side of Monroe Ave by Hartwell Hall to distribute bags for trash collection around the village. At the end of the day the total trash collection will be weighed to show how much was collected.
- ◆ **“Earth Day”**, be part of a movement. On April 22, 2017, more than 1 billion people in 192 countries are expected to join together to protect our common home.
- ◆ **“Climate March”**: Saturday, April 29; attending a people’s march to combat current climate policy; Brockport E.C.O.S. will be participating in this event. *Reminder: E.C.O.S. Meetings are held every Wednesday evening at 9:30 p.m. in Lennon Hall, Rm. #228.*





## AWARENESS FOR WILD WINGS, INC.



Once again the Environmental Science & Ecology capstone course students (ENV 492-class of 2017) are giving back to the community. The capstone students are raising money and awareness for Wild Wings Inc. ([www.wildwingsinc.com](http://www.wildwingsinc.com)), a not-for-profit educational organization that houses and cares for permanently injured birds of prey. Last year, the 2016 class raised \$375.00 in cash and around \$250.00 in donated goods to help support the birds of prey and the facility. In addition, the 2016 classes efforts helped the Brockport community learn about Wild Wings, ***“I want to let you know we had several calls today about the students and what a great thing they think it is they are doing. They were eager to learn about Wild Wings, Inc., as well as visiting and did not know we existed before this.”*** - Terry @ Wild Wings, Inc.

***“Thank you SO much!! We are so grateful and really appreciate all the effort and support!”*** - Terry @ Wild Wings, Inc.

This year the Global Environmental Issues class hopes to raise more than \$600.00 and best the 2016 class total. To raise funds, the 2017 class will sell candy bars, approach local restaurants for donations, and accept donations via Go Fund Me, among other activities. The class is also considering raising funds through dunk tank and pie throwing activities. Who wouldn't donate a few dollars to see Dr. Williams and others get dunked or hit with a pie! We are accepting volunteers and taking suggestions for persons of interest to be dunked. With your support, this year's Wild Wing fundraising campaign will be another big success.

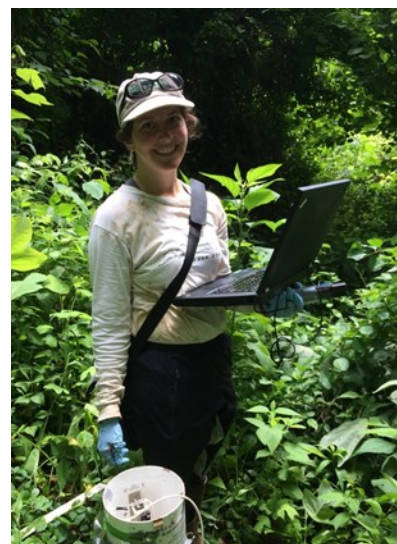




## ALUMNI UPDATES

**Dr. Rosemary Fanelli** (pictured to the right) graduated from Brockport in 2004 from the ES & B Undergraduate Program. (She was also affiliated with the Earth Sciences Dept.)

Rosemary finished her doctoral program at the University of Maryland-College Park in December 2016. Her dissertation research was on the effects of urbanization and watershed restoration on the hydro-ecology of headwater streams. She is now a hydrologist with the U.S. Geological Survey, where her research focuses on the effects of land use change and watershed management on water quality patterns in rivers draining to the Chesapeake Bay.



**Mr. Stoss was cited in “Librarians as Sustainability Advocates, Educators, and Entrepreneurs” (in *The Entrepreneurial Librarian: Essays on the Infusion of Private-Business Dynamism into Professional Service.*)**

**Mr. Fred Stoss** graduated from Brockport in 1974 with a Masters Degree in Zoology.

Fred was promoted to Full Librarian (faculty status) at the SUNY University at Buffalo, where he is the librarian serving the Biological Sciences, Geology, and Mathematics Departments. He was recently awarded a Carnegie-Whitney Grant from the American Library Association to assist in the preparation of a book with a working title, *Environmental ICE: Information, Communication, Education-Vol. 1. Resources for Sustainable Communities.*

Fred was named as the Program Committee Chair/Chair-elect of Atmospheric Science Librarians International an affiliate of the American Meteorological Society. He also accepted a position on the Advisory Council of the Associa-

tion for the Advancement of Sustainability in Higher Education. Last August, he was again a Mentor of a Climate Reality International Training Workshop, assisting attendees in presenting information on climate change. He received the New York Library Assistants Association’s Ray Murray Award for supporting library assistants. Fred received the (Rochester, NY) Center for Environmental Initiatives’ Environmental Excellence Award in the NGO/Education category, and was presented the first Friend of the National Library of Aruba Award, for his work establishing the Caribbean Energy, Environmental, and Sustainability Education Program.

**Congratulations to Alumnus - Ashley Street,**

**on acceptance into the graduate program in education at Nazareth!**





***The Brockport wetlands team, under the direction of Dr. Douglas Wilcox, will be working on a number of Lake Ontario wetland projects again in 2017.***

Graduate student **Alex Silva** will continue his post-restoration monitoring effort at Braddock Bay, which will include plant community and invasive species establishment surveys. This will be the second full year of community-level post-restoration data collection, and we anticipate positive results from the restoration effort that was undertaken by the U.S. Army Corps of Engineers. Hopefully, these habitat enhancements will influence the bird and amphibian communities, which will be surveyed by **John Bateman**, and the fish community, which will be surveyed by a fleet of workers led by Research Scientist **Brad Mudrzynski**.

The fen restoration project at Buttonwood Creek will also be entering its second year. The implementation performed by **Tyler Ohle, Robert Tyler, Dan Kenney, and Nate Jones** in 2016 reduced the invasive cattail cover considerably, and the second year of control should completely remove it from the 10 acre fen. Graduate student **Eli Polzer** spent a lot of time working on macrofossil identification from the peat core collected in 2016. Preliminary results from radiocarbon dating suggest that the fen is approx-

imately 2,000 years old! Future work will combine the radiocarbon dating and macrofossil analyses to track the community's change over geological history.

The one new project for 2017 will be the post-restoration sampling of the U.S. Fish and Wildlife Service project at Salmon Creek, Buck Pond, and Long Pond. This restoration project incorporated a number of techniques, including the creation of shrub-covered islands, seeding of diverse emergent mixtures, and channeling and potholing to create habitat heterogeneity and connectivity. Additionally, the U.S. Fish and Wildlife Service implemented a cattail control and diverse emergent island technique that was proposed by Brad Mudrzynski, who adapted cattail control methods developed by former graduate students **Alex Czayka** and **Katie Buckler**.



*“We forget that the water cycle and the life cycle are one.”*

*- Jacques Cousteau*



**Wetland News**



# Externally Funded Projects

In November 2015, the Genesee Valley Audubon Society, led by June Summers, generously donated six nest boxes to Andie Graham for a class project for the environmental science lab (ENV 202). Three of the donated nest boxes were traditional bluebird boxes, whereas the other three boxes were Peterson boxes. Environmental Science students assembled and installed the boxes in three locations around campus. At each site students paired one traditional box with one Peterson box. From late March until early July 2016 student volunteers **Zachary Falconer, Tiffany Clay, James Ianni, and Alex Fisher** monitored the nest boxes weekly. Bluebirds nested at all three locations; however, they only nested in the Peterson boxes. Although the sample size was small, it raised the question about bluebird nest box preference and productivity. Andie Graham wanted to examine this further, so she, along with **Dr.**



**Christopher Norment**, applied for a small research grant through the North American Bluebird Society. In January, they were awarded \$2500 by the North American Bluebird Society and the NY Chapter of the Bluebird Society to conduct their study titled *Nest box preference and productivity of Eastern Bluebirds (Sialia sialis) on The College at Brockport campus*.

In spring 2017, **Andie Graham** and **Zachary Falconer**, who has been hired as a field assistant on the project, will add 34 more nest boxes around campus to test bluebird nest box preference and productivity. Additionally, Zachary was awarded \$100 from The Rochester Academy of Science for his involvement with this project.

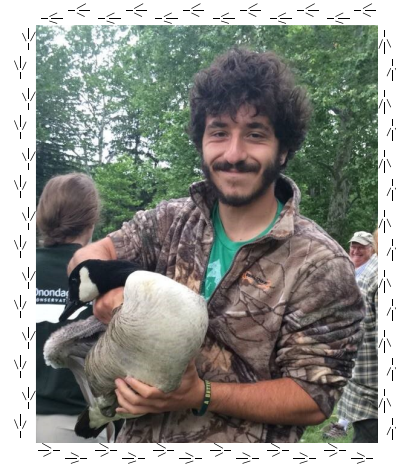
If you are interested in becoming involved with this project, please contact Andie Graham @ [asgraham@brockport.edu](mailto:asgraham@brockport.edu).

**Dr. Williams** presented co-authored research at the All Sciences Meeting for the Association for the Sciences of Limnology and Oceanography in Honolulu, HI. The presentation information is: "Land use and cover are weak predictors of dissolved organic matter composition in eutrophic lakes.". Williams, C.J., Morales-Williams, A., Wolfanger, C., and Downing, J.A., 2017.



## E S & E—EXTERNALLY FUNDED PROJECTS

**Dr. Norment** recently received \$13,000 from the US Fish and Wildlife Service for a survey of Inyo Mountains salamander populations in eastern California. This will support the Service's status review to determine if listing of the species under the Endangered Species Act is warranted. He also received funding from the Fish and Wildlife Service for a pre-construction evaluation of wildlife mortality along a section of NY Route 63 through Iroquois National Wildlife Refuge. The NYS Department of Transportation will be installing a "wildlife-friendly" culvert, and the study will help evaluate the effectiveness of the culvert. **James Ian-ni** (BSc candidate) (*photo to the right*) will help gather data for the project.



**Dr. Rinchar**d has received funding for the "Thiamine Status of Lake Champlain Landlocked Atlantic Salmon." The project is financed by the US Fish and Wildlife Service (\$8,188). Other research projects include: Health assessment for thiamine deficiency in Lake Ontario salmonids and their prey. Project financed by NYSDEC (\$275,284) in collaboration with Don Tillitt (USGS-Columbia Environmental Research Center), Clifford Kraft and Katie Edwards (Cornell University). \*Dr. Rinchar has also received a UUP Individual Development Award to attend the NY American Fisheries Society Conference.

## RESEARCH PUBLICATIONS

### CONTACT US!

Please feel free to email Tammy Jo Manz, Environmental Science & Ecology Secretary at [tmanz@brockport.edu](mailto:tmanz@brockport.edu) if you would like to submit interesting news about your accomplishments, such as awards, research, projects, or field work. If you have a photo please include that as well.

- Are you an alumnus with an update on activities?
- Would you like further information about the Department, its offerings or activities?



**Futia, M.H., Hallenbeck, S.,** Noyes, A.D., Honeyfield, D.C., Eckerlin, G.E. and **Rinchar**d J., 2017. Thiamine deficiency and the effectiveness of thiamine treatments through broodstock injections and egg emmersion on Lake Ontario steelhead trout. *Journal of Great Lakes Research*, 43, 352-358

Foley, C.J., Henebry, M.L., Happel, A., Boostma, H., Czesny, S., Janssen, J. Jude, D.J., **Rinchar**d, J. and Hook, T.O., 2017. Patters of integration of invasive round goby (*Neogobius melanostomus*) into a nearshore freshwater food web. *Food Webs*, 10, 26-38.

Happel, A., **Rinchar**d, J. and Czesny, S., 2017. Variability in sea lamprey fatty acid profiles indicates a range of host species utilization in Lake Michigan. *Journal of Great Lakes Research*, 43, 182-188.

Panci, H., Niemi, G., Regal, R., Tozer, D., Ghering, T., Howe, R., **Norment, C.J.**, 2017. Influence of local-and landscape-scale habitat on Sedge and Marsh Wren occurrence in Great Lakes coastal wetlands. *Wetlands*

Uzarski, D.G., plus additional authors, including **Wilcox, D.A.** and **Norment, C.J.**, 2017. Standardized measures of coastal wetlands condition: Implementation on a Laurentian Great Lakes Basin scale. *Wetlands*.