

State University of New York College at Brockport

Department of **Environmental Science and Biology**

www.brockport.edu/envsci/

585-395-5975

Spring, 2005

From the Department Chairman Dr. James Haynes

Welcome back for the spring, 2005 semester! Many exciting things are happening.

For students in the Aquatic Ecology/Biology track, Aquatic Invertebrates is being taught for the first time in years (see article below), and the course closed with 24 students! Our other courses are also quite full this semester.

Four excellent candidates for the new Plant Ecology position that will begin next fall came for interviews during the first 2 weeks of the semester. We hope to have your new professor under contract by the time you receive this newsletter.

During the fall semester, the Department prepared a Periodic Program Review document in which we explained where we are as a department now and where we want to be in the future. Two external reviewers will visit on March 7-8 to discuss the document with ES&B faculty, staff and students and with the College administration. We hope these discussions will lead to new resources, especially more faculty to teach a greater variety of undergraduate and graduate courses in environmental science.

For you, the faculty and staff wish a productive and happy spring semester. Please stop by the office in 105 Lennon if you have any questions or concerns, or just to say "Hi."

Mr. Gary Neuderfer Lecturer

The Department of Environmental Science and Biology welcomes Mr. Gary Neuderfer from the Avon unit of the New York State Department of Environmental Conservation. He is teaching **ENV 483/BIO 583 - Aquatic Invertebrates** during the spring '05 semester.

Gary is Supervising Ecologist and Director of Avon Field Station for the NYS DEC. He has been part of the Monroe County Health Dept.'s Community Water Watch Program, is Founding Chairperson and Board Member of the Water Education Collaborative at the Rochester Museum and Science Center, and has worked and written extensively in the aquatic and conservation areas.

Hilary Richardson Instructional Support Associate

Hilary Richardson, the new Instructional Support Associate is a native of Pittsford, NY. Her background includes a 2-year stint as a civilian for the United States Army in Garmisch-Partenkirchen, Germany (Bavaria), after which she spent two years traveling the United States. Her undergraduate education was completed at the State University of New York at Plattsburgh

in May 2000, after which time she worked for a pharmaceutical consulting firm providing validation services in Northern New York and Montreal, Quebec, Canada. She completed a Master of Science degree in 2004 at the State University of New York at Brockport. Her thesis dealt with the organochlorine pesticide (mirex) in Lake Ontario salmon and sediment. Her current position at the college includes teaching ecology and environmental science laboratories, serving as the advisor for the Brockport Environmental Awareness Network club, supervising work study students, and maintaining the department's live organisms, equipment and boats. Her future goals include conducting toxicological studies using the department's diluter system and upgrading the greenhouse to allow for student and faculty research. She has been employed by the department since July 2004.

Student and Alumni News

Peter D'Aiuto (MS '04)

Peter is busy working in Palatka, Florida for GreenWater Laboratories. His latest assignment is investigating green algae in the Wekiva River to determine if it is natural or human-caused. Peter censuses algae by pinpointing where it grows and under what conditions, including the amount of sunlight, water depth, temperature, and strength of current.

Scott Wells (MS, in progress)

After an 8-year career in the U.S. Coast Guard, Scott graduated in fisheries from Humboldt State University in Arcata, CA in May '04. During his time at HSU, Scott worked on fisheries projects on and off campus and with several management agencies. He began his M.S. thesis project in June, working with Dr. Haynes. Funded by a State Wildlife Grant, he and **Ross Abbett (BS '06)** surveyed ~200 miles of Johnson and Tonawanda Creeks during the summer to identify likely habitats for rare fishes previously reported to occupy the

streams. This summer Scott and Ross will sample the streams to see if the rare fishes still live in them. In February, Scott gave a poster on his project at the Tri-Society Meeting in Syracuse, a combined meeting of the NY chapters of the American Fisheries Society, the Society of Foresters, and the Wildlife Society.

Sarah Lazazzero (MS, in progress)

Sarah graduated from the SUNY College of Environmental Science and Forestry in 2002 with a BS in Environmental Forest Biology and a concentration in wildlife biology. After working with Santec Consulting Services and the NYS Dept. of Environmental Conservation fisheries unit in Buffalo, she came to Brockport to work with Dr. Norment on grassland birds in the St. Lawrence River region of New York State. Their work is funded by a grant from the NYS Biodiversity Research Institute.

In her spare time, Sarah represents graduate students on the Periodic Program Review Committee (**Kristie Klees, BS '05**, ably served as the undergraduate representative), and she represents ES&B students on the Plant Ecology Search Committee. She worked hard, contributed much, and represented environmental science majors and graduate students very well. THANK YOU for jobs well done, Sarah and Kristie!

Concentrations Offered in Environmental Science & Biology

Thinking about majoring in ENV but unsure about which concentration to choose? This may help!

Aquatic Ecology/Biology—prepares students for graduate school or employment in limnology and oceanography (physical, chemical and biological processes in freshwater and marine systems), marine biology, fisheries, water pollution studies,

environmental analysis, etc.

Terrestrial Ecology/Biology—prepares students for graduate school or employment in wildlife ecology and management, conservation biology, plant ecology, terrestrial vertebrate biology, animal behavior, etc.

Environmental Chemistry—prepares students for graduate school or employment dealing with chemical analysis for pollution assessment, pollution prevention methods, development of remediation methods, environmental safety & health issues, toxicity testing, etc.

Earth Sciences—prepares students for graduate school or employment dealing with the geosphere (soils, erosion) and atmosphere (processes, pollution), watershed and wetland studies, environmental geochemistry, etc.

Environmental Science and Biology Graduate Students

The following students are working under the direction of Dr. Joseph Makarewicz.

Sarah Wasson (MS, in progress, BS '04)

Sarah is a first year graduate student. Over winter break, she attended the Third Annual US Dept. of Agriculture Scientific Workshop regarding the Conesus Lake watershed management project, which was hosted by SUNY Brockport. She spoke about her proposed thesis topic concerning pharmaceuticals and personal care products in wastewater and their potential effects on aquatic organisms or humans. Sara takes weekly and event water samples from Conesus Lake for the USDA grant project that focuses on watershed management techniques to improve water quality.

Bill Guenther (MS, in progress, BS '04)

Bill is a first year graduate student. He is working on a research project, funded by the National Oceanic and Atmospheric Administration, together with Research Associate Ted Lewis and Dr. Makarewicz. Bill, Ted, and Joe are researching toxic species of algae, specifically monitoring and responding to blooms of harmful algae that appear in freshwater lakes in the lower Great Lakes region and the nation. Bill's thesis project is to develop and implement a program to successfully monitor harmful algal blooms (HAB) by utilizing phycocyanin pigments as an indicator of bloom toxicity. Bill says, "I am not only receiving education at a high level but also invaluable skills that will allow me to be competitive for jobs in many different areas."

Daniel White (BS '02, MS '05)

Dan has been working on a grant for the last two years with Drs. Makarewicz and Noll studying water-sediment interactions in the profundal sediments of Irondequoit Bay. Dan's MS thesis is on phosphorus fluxes and storage in the deep-water sediments of the Bay. Dan has high praise for the education he has received at SUNY Brockport and specifically in Environmental Science. "I have achieved a strong foundation in aquatic ecology, limnology, water quality, and biogeochemistry. I have presented my research at conferences for the Geological Society of America and the Great Lakes Research Consortium. My education at SUNY Brockport has prepared me to enter the professional workforce."

SUNY Education Still the Best Buy

Recent economic studies have shown that in the very near future paying for higher education will become even more difficult for many students because of rising tuition and smaller student loans. However, there is a light on the horizon for students – SUNY. Despite recent and proposed

tuition increases, SUNY is still a bargain among similar state universities.

The College at Brockport offers many scholarship opportunities for incoming and current students. The ES&B Department specifically offers the *Kenneth E. Damann Research Award* (for a senior who has conducted, and prepared a report on, a research project in aquatic science) and the *O'Reilly Scholarship* for a talented incoming first-year student. Please visit SUNY Brockport's scholarship web page (<http://www.brockport.edu/scholarship/>) for details about these scholarships and other opportunities at SUNY Brockport.

Scholarship and Award News – ENV Faculty

Drs. Haynes and Zollweg submitted a research proposal for \$21,239 to the US Department of Interior Fish and Wildlife Service for **Distribution of Host Fishes for Listed and Rare Freshwater Mussels in the Erie National Wildlife Refuge**. Dr. Haynes also received \$135,368 from NSF for another year of his training project, **Disseminating Successful Strategies for Undergraduate Science Education**.

Dr. Makarewicz submitted a proposal for \$70,600 for **The Mitigation of Agriculturally Related Degradation of Water Quality in Conesus Lake**; successfully led the College's effort to secure a \$148,755 member item from Cong. Tom Reynolds for the Lake Ontario Natural Resource Center; received \$8,000 for the **Conesus Lake Watershed Fish Creek Study**; received \$100,120 of year 3 support from NOAA for the **MERHAB** subcontract from SUNY ESF; received \$217,543 from the US Department of Agriculture for **Experimental Manipulation of Entire Watersheds Through BMP's**; and received \$25,634 from Livingston County Planning for a Water Quality Management Plan.

Dr. Norment applied for two grants: \$27,626 from the NY State Biodiversity Institute for **Shrubland Bird Habitat Relations and Migration in the Lower Great Lakes Plains of NYS**, and \$13,651 from the Iroquois National Wildlife Refuge for **Shrubland Bird Habitat Relations and Management**.

Scholar's Day Presentation Titles and Topics

Scholar's Day will be held Wednesday, April 13 from 8 a.m. to 5 p.m. on campus. Please join us for one or all of the talks by ES&B students indicated below. If you live off campus, please call or email Deborah Dilker, 585-395-5975 or ddilker@brockport.edu, for directions.

Timothy Crockett (ES&B)
Habitat Selection and Landscape Ecology of the Blanding's Turtle

William Guenther (ES&B)
Monitoring and Event Response for Harmful Algal Blooms

Kristie Klees (ES&B)
Analysis of Factors Affecting Predation Rates on Artificial Grassland Bird Nests in Western New York

Lindsay Laczak (ES&B)
Mosquitofish and the Perils of Independent Research

Sarah Lazazzero (ES&B)
A Landscape-Level Analysis of Grassland Birds in Jefferson County, NY.

Brendan McCabe (ES&B)
Lipid Stores in Plumage Morphs and Sexes of White-throated Sparrows During Migration

Sarah Wasson (ES&B)
Pharmaceuticals: A Double Edged Sword—Tracing Pharmaceuticals in Our Watersheds

Sara Wellman (ES&B)
MustelaVision: Using Videotraps to Compare Mink Population Abundances

Sarah Wellman (ES&B)
MustelaVision: The Secret Life of Mink (and
Whoever Else Went By)

Scott Wells and Ross Abbett (ES&B)
Identification and Life History of Longear Sunfish in
New York State.

Daniel White (ES&B)
Sediment Phosphorus Fluxes During
Hypolimnetic Anoxia in Irondequoit Bay, NY

Saskia Windig (ES&B)
Grassland Bird Nest Predation and Artificial
Nest Use

For Our "Mature" Students!

**"The excitement of learning separates youth from old
age. As long as you're learning you're not old."**

-- Rosalyn S. Yalow

A previous student of mine came up to me yesterday and asked me my age. The look I gave must have prompted an explanation because she said she wanted to know where she should be in her academic career based on my age. There is no deadline for education and you should not feel intimidated or guilty for being older or having taken a different life path. Some people go to school right after high school with a defined career goal, and some do not. If you decide, at 45, that your job is not all that you had envisioned, then make that leap and switch careers. Going back to school may seem like a scary venture for many, but once you jump in you'll find that college isn't that menacing .

My former student happened to be a year younger than me and was frustrated at her lack of standing in her academic career. However, the past ten years had her holding down several jobs just to keep her head above water. During that phase of her life, school just wasn't in the cards. We all have a life that gets in the way sometimes of our desire to go to school, travel, read a book, write a poem, etc. That shouldn't mean that when it is time to set your course to school, you should feel intimidated, or pressured to be finished before you barely start. When I interviewed three

years ago to become a candidate for a master's degree, my advisor told me that there are benefits to being older. For one, you have life experience, and quite often, you have work experience too. Lessons learned by life experience are not lost on the older student, and motivation can be a powerful driving force.

During my undergraduate work, the older students were always the people in the front of the class, asking all of the questions, keeping us in class over time. Well, during my graduate work, I was the student sitting in the front row, asking all of the questions. And it has paid off. I may not have been laughing during all the trials and tribulations during my non-school years, but I certainly am grateful for them and all that I have learned from them. So, to all you students, who are 'older' and feel like they should be finished with their schooling, relax. You'll get there. Just remember, there is no timeline that you need to follow.
- Hilary Richardson

Fall 2005 Class Schedule

ENV/BIO 111	M/W/F	8:15-9:15
ENV 201/202	M/W/F	1:15-2:15
Labs	W	9:30-11:45, 6:00-8:15
ENV/BIO 303	T/R	9:45-11:15
Lab	M	2:30-5:30
ENV 405/BIO 505	M/W/F	1:15-2:15
ENV 419/BIO 519	T	6-9:15
ENV 421/BIO 521	R	12-5:00
ENV 427/BIO 527	M/W	1:15-2:45
ENV 459/BIO 559	T/R	9:45-11:15
Lab	F	1:15-5:00
ENV 490/BIO 590	T	12-5:00

ENV Club -BEAN

Brockport Environmental Awareness Network

The Brockport Environmental Awareness Network members celebrated America Recycles Day on November 15 in the College Union. America Recycles Day is an event held annually in November since 1997. The purpose

of is to place an emphasis on recycling and to educate the campus on the benefits of buying recycled products. BEAN celebrated the event by handing out informational flyers on recycling, playing a fun quiz game with prizes, handing out compost packets, and by taking pledges from people who stated that they would recycle and consider buying recycled products. For more information on America Recycles Day, visit <http://www.americarecyclesday.org>.

The spring semester is going to be a very busy semester for BEAN. We are planning a trip to a solar house in Canandaigua, and we want to start a lecture series to help educate Brockport students about sustainability on the campus and in the surrounding area. BEAN also is planning for the 35th anniversary of Earth Day, which is April 22. If you are interested in helping us to raise environmental awareness on campus or in any of the events, feel free to contact BEAN President Patrick Kendall at pken0917@brockport.edu or come join us Mondays at 4:30 p.m. in the Lennon 108A Student Lounge.

ES&B Faculty and Staff

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We would love to hear from you!

If you have any suggestions or comments on
this newsletter, please email
ddilker@brockport.edu.

Alumni please drop us an email on what you
are doing. Thank you!

