

REPORTER

Winter 2006



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Cooperation on Pollution from Road Salting

Snow removed from urban environments contains a host of pollutants, including highly elevated concentrations of phosphorus. However, it often can pose a logistical challenge when decisions

are made to choose a spot to stockpile it in order to keep roads and parking lots clear. In response to a request made by the Water Quality Coordinating Committee, the Village of Cooperstown and the Clark Foundation

have agreed to work together to keep those pollutants out of Otsego Lake. The newly created wetland south of the Village (part of the Army Corps wetland restoration project) will soon begin to receive

snow from the village. The wetland is expected to remove most of the pollutants before the outfall to the Susquehanna River. The BFS plans on measuring the efficiency of that process. J

Located in Cooperstown and founded in 1968, the Biological Field Station is a unique facility serving the Upper Susquehanna Watershed, Otsego County and the immediate Cooperstown area. It is primarily a teaching and research center for undergraduate and graduate students from across New York, the United States, and Canada. Directed by Dr. Willard Harman and staffed with talented, experienced professionals, the Biological Field Station is presently the focal point for information about issues affecting Lake Otsego and the Susquehanna River.

Do we have your correct address?

Cooperstown Receives Grant for Nutrient Removal from Lakeside Septic Systems

Win McIntyre (Watershed Coordinator), **Doug VanDeusen** (with Lamont Engineers) and **Matt Albright** collaborated on a grant proposal written on behalf of the Village of Cooperstown and successfully secured about \$76,000 from the NYSDEC. The money will be used to subsidize the incorporation of nutrient removal technologies for near-lake septic systems which did not pass the recent inspections conducted under the auspices of the Watershed Supervisory Committee. We know that such systems contribute considerable amounts of nutrients to the lake. The BFS has funding to monitor the effectiveness of these systems, and what we learn may have far reaching implications. J

Susquehanna Wetlands

Research Support Specialist **Scott Fickbohm** completed work investigating the effects of the U.S. Army Corps wetland restoration work in Otsego County. Results show that substantial improvements in water quality are possible, but are heavily dependent on initial site conditions as well as fluctuations in annual precipitation and temperature. Additionally, increases in avian biodiversity were observed in the 1st two years post-restoration while vegetative and amphibian/reptile communities were slower to respond. “Unfortunately the funding of the project was cut prematurely, but we think the results clearly show that this type of work, if appropriately applied, has definite benefits for our watershed.” As part of the development of NY States (Chesapeake Bay) Tributary Strategies, Scott is currently working with the BFS and the Upper Susquehanna River Coalition, an umbrella organization representing 13 regional Soil and Water Conservation Districts, to document and expand water quality monitoring efforts taking place in the Upper Susquehanna and Chemung River Basins to help NY reach its nutrient and sediment reduction goals by 2010 and contribute to the clean up of the Chesapeake Bay. J



2005 Intern Research

Tom Somerville and **Eric Reynolds**, (SUNY Cobleskill), both R. C. MacWatters interns continued the littoral trap netting to census warm water fish populations at Brookwood Point and Rat Cove. This work began in 1979. Tom also evaluated predation on walleye during stocking. Eric was also involved in water quality monitoring in Otsego’s watershed. **Kyle Dresser**, (SUNY Oneonta) the 2005 BFS Intern, was responsible for the Moe Pond monitoring project associated with the changing fishery there. **Holly Meehan** (Univ. of Rhode Island) held a Rufus J. Thayer Otsego Lake Research Assistantship. She developed a streamlined user’s manual and laboratory protocols for using the Lachat autoanalyzer, and conducted continuing research on purple loosestrife control in Goodyear Swamp Sanctuary. **David Alfred** (SUNY Oneonta) worked for Bill Harman sponsored by an Oneonta Faculty Research Grant. He evaluated arthropod herbivore densities and their impacts on Eurasian milfoil in Otsego Lake and monitored zebra mussel veliger migration down the Susquehanna River from Goodyear Lake. **Emily Bauer** (Wayland Cohocton Central School) was a F.H.V. Mecklenburg Conservation Fellow responsible for water quality monitoring in the Susquehanna River at and south of Cooperstown. **Sara J. Zurmuhlen** (Richfield Springs Central School) was also a F.H.V. Mecklenburg Conservation Fellow. She studied Chlorophyll a concentrations in Otsego Lake as a proxy for estimating the densities of phytoplankton populations. J

Updates, cont. from p. 4

- 1 **Matt Albright, Mark Cornwell, Scott Fickbohm, Bill Harman, Tom Horvath and Wesley Tibbits** exhibited posters on BFS current research at the most recent SUNY Oneonta Faculty Research Show.
- 1 **Bill Harman, Lee Hingula and Claire MacNamara** published a paper in the Journal of Aquatic Plant Management this fall titled “*Does long-term macrophyte management in lakes affect biotic richness and diversity?*”
- 1 The new Upland Interpretive Center (UIC), which is replacing the old sap house above the Getman Barn on the Thayer Farm, should be ready for use this spring. It looks similar to the original

but has a complete basement and utilities suitable for year around occupancy. Part of the cost of the building was provided by a grant from Senator James Seward. The UIC will serve faculty and student researchers and be the focus of the BFS pre-college field trip programs which now serve over 1,200 students annually. The building has a state of the art septic system featuring both phosphorus and nitrogen removal. The system is constructed so we can sample effluent at various stages of treatment to determine its effectiveness over years of service.

- 1 Alewives were recently discovered in Lake Champlain

in northeastern NY and western Vermont. **Bill Harman** presented a talk “*Trophic impacts of alewife on Otsego Lake, NY*”, and contributed to a “Lake Champlain Alewife Impact Workshop”, sponsored by Lake Champlain Sea Grant, the Lake Champlain Basin Program and the Lake Champlain Wildlife Management Cooperative.

- 1 **Tom Horvath and Bill Harman** received a grant of \$115,000 from the National Science Foundation last year for a sophisticated computerized optical system consisting of several microscopes and digital image analysis hardware and software linked together that we have been using to identify, count and measure microorganisms important to our increasing understanding of Otsego Lake ecology. The grant also provided the resources to purchase a Lachat autoanalyzer which enables us to now chemically analyze 100s of water samples daily.
- 1 **Wesley Tibbits** successfully completed his thesis defense and comprehensive exam for the Master of Arts in biology degree this fall. He is now employed by the Washington

State Department of Fish and Wildlife monitoring salmon populations in the Columbia River Basin.

- 1 We have just heard that **Bill Harman** has received a grant of \$120,000 from the National Science Foundation to begin work on the renovation of the Hop House on the Thayer Farm. It will become the “Administrative Center” on the farm housing a reception area, two offices, a small meeting room and two class room/laboratory spaces. It will have a full basement and utilities suitable for year around occupancy.
- 1 **Willow Eyres and Kathy Souza** are just beginning their work for the MA in biology. They join **Todd Paternoster** and **Karen Teitlebaum** in the program. Willow is a full time student at Oneonta. Kathy is an engineer at Delaware Engineering, Todd is a teacher at Sidney Central High and Karen provides laboratory experiences at SUNY Delhi.
- 1 **Tom Horvath** published a case study for use in limnology courses in the “Journal of Science Teaching” titled “*A killer lake*”.

Otsego Lake Still Free of Zebra Mussels

BFS volunteer divers (**Brian Benjamin, Dale Webster, Lee Ferrara, Jerry Munrett, Ed Lentz, Jim Ainslie, Chris Hanna, and Paul Lord**) with their tenders **Cyndi Benjamin** and **Tom Horvath** conducted intensive zebra mussel surveys in Otsego Lake this summer, supplementing Tom’s veliger sampling and our intern manned artificial substrate sample collections. No zebra mussels were found. In addition we heard nothing from Otsego Lake Association members involved in their “Drop a brick” zebra mussel activities. However, we are now seeing a large population of adult zebra mussels in Goodyear Lake and in the Susquehanna River immediately downstream of the Colliersville dam.

Updates

1 **Ken Soeder** 79' is now representing several different companies in a diversity of water treatment issues including cooling and boiler treatment technologies at both SUNY Oneonta and Hartwick College and PCB removal from General Electric discharges along the Hudson River. He and his wife **Lisa** 80' have recently purchased and renovated two historic Bed and Breakfast inns on Nantucket Island.

1 The BFS was approached by **Paul Solomon**, a landowner in the Cherry Valley Creek watershed, about doing some water quality work in that stream. We will be sampling at 5 locations over the spring and summer to document any pollution. Thus far, the OCCA and the WQCC have pledged financial support.

The work of the Biological Field Station is strengthened and enhanced by private financial support from individuals, foundations, businesses, corporations and civic organizations. In fact, these contributions are necessary for the continued success of the Biological Field Station and all of the services provided to the community. For more information, call or write:

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1 **Tavis Austin** and his spouse **Erin (Collins)**, both former BFS interns, are now living in Logan, Utah where Tavis works as a planner and Erin is home with their two children, Gareth and Rylie. They were married in Good-year Swamp Sanctuary in 2002.

1 **David Parker** 85' has since received two more degrees, a BS in fisheries and a MS in Fisheries Oceanography from the University of Alaska Fairbanks. He has been working with sockeye salmon and continues to live in Fairbanks with his wife and two boys



1 **Matt Albright** and **Holly Meehan** attended the North American Lake Management Society conference in Madison, WI in November. Matt currently

represents our region on the Board of Directors and has been reviewing manuscripts submitted to the Society's journal "Lake and Reservoir Management".

1 Large numbers of Otsego Lake walleye were observed spawning last spring. We have yet to accurately determine successful reproduction. We have collected walleye 28

inches in length, and heard rumors of one caught recently that was over 30 inches long.

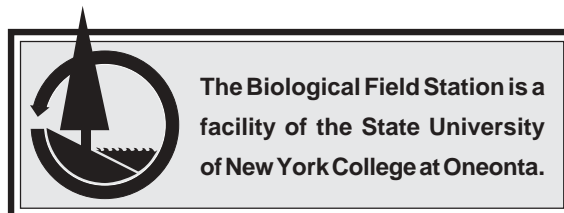
1 We have been observing bald eagles regularly on Otsego Lake and Moe Pond (on the BFS Upper Site above the Farmer's Museum). In July interns **Tom Summerville** and **Eric Reynolds** spotted two adults and a fledgling on Moe Pond.

1 **Scott Fickbohm** and **Wei-Xing Zhu**, Scott's mentor at Binghamton University, recently had the paper "Exotic purple loosestrife invasion of native cattail freshwater wetlands: Effects on organic matter distribution and soil nitrogen cycling" accepted for publication in the journal "Applied Soil Ecology".

Continued on page 3

As an academic program within the State University College at Oneonta, the Biological Field Station receives fund raising services through the College at Oneonta Foundation, a nonprofit charitable organization. All gifts and grants for the BFS are tax deductible. They are managed by the Foundation and used expressly for the purposes for which they were given. Estate planning gifts such as bequests and trusts are also sought and appreciated. More information is available by contacting:

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