BIOLOGICAL FIELD STATION

REPORTER

Fall 1999

Spotlight on Current Research

Faculty:

•**Bill Harman**, working with **Matt Albright**, **Paul Lord** and several interns, continues his involvement implementing the Moraine Lake Aquatic Macrophyte Management Plan. This study coordinates activities by the BFS, the Moraine Lake Association, the Madison County Planning Department, Cornell University, the New York State Dept. of Environmental Conservation and Enviroscience, a consulting firm providing herbivores in an attempt to control Eurasian milfoil. He is also working with graduate students and interns on plant communities in 13 Oswego County lakes comparing the present condition to that of about 10 years ago. Information from that study, included with material from several other New York lakes and intensive data from Otsego Lake, will be utilized to provide a synthesis of the dynamics of the nature of aquatic vascular plant communities in the Northeast.

- **Bruce Dayton** provided advice and expertise to **Tavis Austin**, **Henry Adams** and several high school interns determining the impact of power line right-of-way management on vascular plant communities on and along the Marcy South line in Greenwoods.
- **Robert Phillips** has worked with his wife **Phyllis** and advised **Michael Gray** and **Stephanie Paul** regarding bird and other vertebrate censuses to determine responses to right-of-way management.
- **Bill Butts** spent a considerable amount of time helping **Craig Scott** with an arthropod study in the same area.
- **Len Sohacki** has been monitoring water quality in the Upper Susquehanna River between Otsego Lake and Otego to compare with baseline information he collected in the early 1990s.
- **Bob Johnson**, Manager of the Cornell Ponds and BFS Visiting Researcher, continues to analyze the Otsego Lake aquatic plant community and Eurasian milfoil herbivore data collected last summer. Additionally, he is assisting our staff and interns identifying herbivores and signs of their damage.

Staff:

- **Matt Albright** has been monitoring changes in water quality in streams following mitigative efforts.

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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.

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Sites include Shadow Brook, the basin of which has had a number of Best Management Practices implemented, and Willow Brook, to evaluate any changes associated with using Ice Ban® as a road deicer in Cooperstown. Much of his time is taken up with supervision of intern research.

Post-graduate:

- **Dave Warner** continued monitoring alewives, and their impacts on water quality, in Otsego Lake. This database could be very important for measuring any changes that may accrue when and if walleye stocking resumes. He has also done some work on Moe Pond to follow-up on some of **Mead McCoy's** research there.

Graduate:

- **Paul Lord** is evaluating the plant communities we have observed in several Otsego, Madison, and Oswego county lakes as well as identifying potential lake trout spawning locations in Otsego Lake. He continues to supervise diving activities that are aimed at determining Otsego Lake groundwater seepage sources.
- **Scott Stanton** is wrapping up his work on salmonid distribution in the Delaware River.
- **Jeane Bennett-O'Dea** continues to refine her botanical survey/vascular plant collections at Greenwoods Conservancy. She spent considerable time this summer helping faculty and interns working on projects associated with the NYSPA Marcy South power line where it crosses Greenwoods Conservancy.
- **David Ramsey** is finishing up his thesis work on Otsego Lake algal productivity.
- **Lorie Trotta** is just beginning her work on salmonid aquaculture at SUNY Cobleskill.

College undergraduate interns:

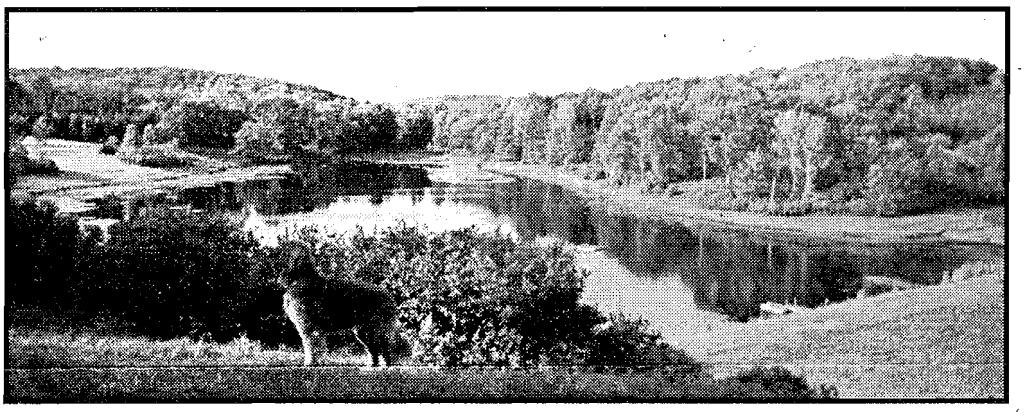
- **L. Duane Herring III** studied distributions of fecal bacteria in Otsego Lake. The Otsego County Water Quality Coordinating Committee (OCWQCC) asked the Field Station to do this work in preparation for testing lakeside septic systems, as called for in the Otsego Lake Watershed Management Plan.
- **Erin Collins** monitored water quality at 23 sites throughout the watershed enabling us to determine which stream stretches are candidates for mitigation as well as tracking water quality changes over time. This work is related to the implementation of Agricultural Best Management Practices used to facilitate the "Otsego Lake Watershed Management Plan" in cooperation with the OCCA, USDA-NRCS and the OCWQCC.
- **Darcy King** continued her work of last year in evaluating herbivory on milfoil by aquatic insects in Moraine Lake. She was also involved in mapping aquatic plants in 13 Oswego County Lakes. We thank **Tom Gergel**, geography Professor Emeritus, for his help by taking aerial photographs of the lakes. The County will use this information in its plant management planning.
- **Tavis Austin**, **Henry Adams**, and **Craig Scott** surveyed vascular plants, evaluated forest edge dynamics, and surveyed arthropods associated with the Marcy South power-line right-of-way. These studies will evaluate the effects of corridor management on community succession. Thanks to **Bruce Dayton**, **Robert Phillips**, **William Butts**, and **Jeane Bennett-O'Dea** for providing guidance and data to these interns.
- **Michael Gray** surveyed breeding and migrating birds on and around Otsego Lake throughout May. He also surveyed terrestrial birds at three sites adjacent to the lake and spent considerable time involved in fisheries-oriented work with **Dave Warner** on the lake and Moe Pond.

Undergraduate directed research:

- **Pilar Conde** is surveying invertebrates in the Susquehanna River near Oneonta. She will focus on mollusks, but will include all invertebrates and will look for patterns of distribution.
- **Stephanie Paul** has identified a number of amphibians and reptiles never before documented at Greenwoods. Her collecting continues.
- **Valerie Colsantie** has spent the summer in several Long Island estuaries determining the distribution and abundance of selected intertidal mollusks.

Each year in America urban and residential sprawl consumes 400,000 acres of forests, fields, wetlands and other natural areas. It also increases pollution, worsens traffic jams, raises the cost of government services and decreases the quality of life for local residents.

— Sierra Club, 1999



Paradise Pond at Greenwods Conservancy

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- **Diedre Willies** is continuing last year's work seeking to identify sources of groundwater into Otsego Lake. Her efforts indicate an apparently strong (though variable) subterranean flow near Three-Mile Point.

High School interns:

- **Sarah Groff**, working with the Greenwoods team, studied wetland plant communities on the Marcy South right-of-way at Greenwoods.
- **Briana Wilson** worked to determine changes in the food web dynamics of Moe Pond following the unauthorized introduction of large-and small-mouth bass.
- **Adrienne LaPierre** examined the zooplankton community in Otsego Lake to gain a better understanding of the role of alewives in shaping the lake's food web.
- **Ward Stevens** evaluated herbivory on Eurasian milfoil by insects in Otsego lake. Milfoil is less of a problem in Otsego than expected, apparently due to the presence of several organisms that feed upon it.
- **Michaela Dietz** monitored physical and chemical water quality parameters in the Susquehanna River, as well as fecal coliform concentrations to assure that Cooperstown's sanitary waste disposal system has minimal impact.
- **Stephanie Rudd** profiled chlorophyll *a* concentrations in Otsego Lake throughout the summer in order to document the dynamics of algae populations.

Updates, cont.

divers team. Diving has been associated with BFS research since our earliest days. In the past, it was provided by researchers and their students. Training and liability issues prompted a review of our procedures. The result was a recommendation for formal appointments of qualified individuals as BFS Volunteer SCUBA Divers. Some of our most consistent volunteers have no other association with the Field Station, but relish the challenge. They range in age from 17 to 48 and hold a vast variety of occupations. We gratefully note their contributions.

- Accolades to **Brianna Wilson** and **Adrienne LaPierre**, BFS high school interns, who took charge after a power-boat full of kids overturned near their work site, provided life jackets and transported children to safe locations. **President Donovan** has recognized their efforts with letters of commendation.

News from Oneonta

- The Biology Department now has endowments for student awards and scholarships for biology majors, biology majors with environmental science minors and environmental science majors.
- Recruitment: Freshman applications have increased by 30% in the last three years, the highest in SUNY. The Fall 1999 freshman class profile shows as average SAT score of 1039, a gain of 42 points in the last three years, well above the national and NY average scores of 1017 and 998.

Updates

Alumni

- **Dave Warner**, who recently received his MA in biology at the BFS, is beginning a doctorate program at Cornell University this fall. He will be a Sea Grant Scholar working with **Ed Mills** and **Lars Rudstam** at Cornell University's Biological Field Station on Oneida Lake on a project entitled: "*Cercopagis* - A new exotic cladoceran to the Great Lakes". We wish him the best of luck.

- **Mead McCoy**, MA in biology '99, is now working at the United States Geological Survey, Great Lakes Research Center, Ann Arbor, Michigan. He recently presented a paper on Moe Pond (BFS Upper Site) fisheries ecology coauthored by **Madenjian, Adams, Harman, Warner, Albright** and **Sohacki**. The paper "Trophic dynamics and nutrient flux in a standing water body in upstate New York: A working trophic cascade hypothesis" was presented at the 84th Annual meeting of "The Ecological Society of America" in Spokane, Washington.

Happenings

- The **Susquehanna River Basin Commissioners** were given an educational tour aboard the RV *Anodontoides* during their annual meetings in Cooperstown in July.

- Over 1,200 pre-college students have visited Otsego Lake, Rum Hill and the Upper Site while attending BFS field trips since this spring.

- **Bill Harman**, with **Paul Lord's** assistance, offered three concurrent, three-week intensive field courses in aquatic biology at the BFS for high school, upper level college undergraduates and graduate students during July.

- **Otsego Lake Cleanup Day** netted two truckloads of lake trash including two boats, and from the bottom of the lake: a cash register and chain saw. It was sponsored by the **Glimmerglass Coalition** and the **BFS.**

- The **Annual Boat Census**, sponsored by the **OCCA** and conducted in July, tallied 1,317 boats, down slightly from last year.

- The purple loosestrife in **Goodyear Swamp Sanctuary** is beginning to show signs of decline due to the introduced beetle *Galrucella*. In 1997, 100 beetles were released in cooperation with the **Cooperstown Lake and Valley Garden Club** and **Cornell University.**

- **The Lake and Valley Club** donated a second section of aluminum dock to provide better boat access to Goodyear Swamp Sanctuary. The Club also purchased three benches for the observation platform constructed last year.

- **Dan Rosen** kicked off the Lake Otsego Septic Initiative (LOSI) at July's Lake Forum. This is a program to get lake- and stream-side homeowners to voluntarily have their septic systems tested before a compulsory inspection outlined in the Lake Management Plan.

- **Susanna Membrino** has provided BFS personnel access to the top of Rum Hill. We will be erecting a gate and posting the 60-acre parcel which is adjacent to our present Rum Hill holdings.

- **Jeff Back, Erin Collins, Katie Kehoe, Darcy King, Craig Scott, Brian Sydow, Dale Webster and Paul Lord** (BFS Divemaster/Instructor) make up the BFS volunteer

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Fiscal challenges in recent years have constrained the work of the Biological Field Station. Private gift support from individuals, foundations, and corporations is essential and an investment in the Biological Field Stations' continued success and services to the community. For more information, call or write:

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The College at Oneonta Foundation receives and manages gifts for the Biological Field Station. All gifts are used expressly for the purposes for which they are given and they are tax-deductible. Information is available through:

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The Biological Field Station is a facility of the State University of New York College at Oneonta.