

REPORTER

Fall 1996

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Spotlight on Graduate Students

Matt Albright received his Master of Arts in Biology last spring. He has been deeply involved in the development of *The State of Otsego Lake, 1936-96*, his own work on nutrient budgets and papers and presentations on the impacts of powerboats on nutrient availability in the Lake. He continues to act as an invaluable administrative assistant/research technician and interpreter. We hope funding will permit him to continue.

Mead McCoy has completed his field work. We are now waiting for the thesis. His project involved documenting the limnology of Moe Pond relative to its fisheries management potential.

Dave Ramsey is now analyzing data collected on the distribution, abundance and productivity of Otsego Lake algae which have

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Dutch Yardsticks

A new approach to nutrient management. Edited for the *Reporter* from a contribution by Mark Ritchie and Jim Kleinschmit, Institute for Agriculture and Trade Policy, 1313 5th St. SE, Suite 303, Minneapolis, MN 55414.

Throughout the world, many farmers face the challenge of finding ways to farm profitably while protecting the environment. The Dutch have come up with innovative management tools called "yardsticks". They are designed to help farmers first measure and then reduce the negative impacts from nutrient runoff and leaching from farms.

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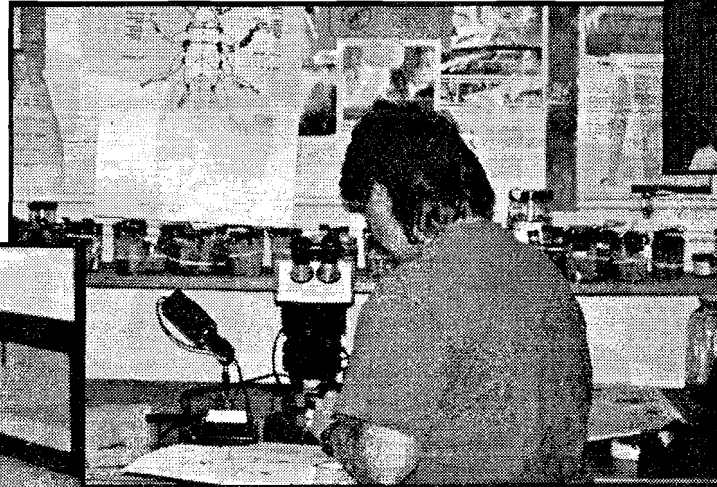
Do we have your correct address?

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.



Spotlight on Graduate Students, cont.



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changed since the exotic fish *Alosa pseudoharengus* (alewife) was introduced.

Scott Stanton has spent the summer monitoring the movement of salmonids (trout) in the Delaware River in a project supported by Trout Unlimited and the NYSDEC.

Jeane Bennett-O'Dea has been characterizing the terrestrial vascular plant communities at Greenwoods Conservancy. She has developed quite a respectable herbarium including specimens collected over the last several summers by **Linda Taylor, Ann Mary Meyers, Emily Simpson** and **Darcy King**.

Dave Warner worked all summer to develop a model of zooplankton/alewife/lake trout population dynamics in the Lake. We are looking forward to reviewing his work on Otsego with **Lars Rudstam** from Cornell's Field Station on Oneida Lake. Lars is an expert on the use of

acoustics in modeling fish communities in large lakes.

Lorrie Trotta works as a fish hatchery manager for John Foster at SUNY Cobleskill. She just joined our team and has not yet defined an area of study. ❖

Dutch Yardsticks, cont.

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Cooperators use simple forms to keep track of nutrient (nitrogen, phosphorus and potassium) brought onto their farms in the form of feed, purchased fertilizer, nitrogen fixing crops and livestock. At the end of the season they determine the quantity of nutrients that were removed by marketed crops, livestock, milk and other farm products with the difference being the amount of nutrients "lost" to the environment. This nutrient balance sheet gives them baseline information needed to evaluate

how their current practices are affecting the environment. Once a baseline is determined, farmers can then make rational decisions about how to decrease nutrient losses.

At the end of the following season, farmers use the nutrient yardsticks to measure their progress in reducing nutrient loss and to compare achievements with goals.

This system has been in place in the Netherlands for six years, with remarkable results. Farmers have cut

costs, while at the same time reducing nutrient losses to the environment. They praise the tools for their simplicity and for the independence it gives them in making management decisions

Minnesota has begun adapting nutrient management yardsticks for use and is planning to introduce them in selected areas in late 1996. Agencies or individuals who are interested in learning about pilot projects should contact IATP (see above). ❖

Volunteers Needed

Most people don't realize that the Field Station does not have a secretary. That means a busy professional staff has to devote time to mailings, copying, collating and other clerical work. If we can create a pool of clerical volunteers to relieve us of that burden, it would do much to improve BFS efficiency. We don't expect any one person to devote more than four hours per month. Please call 547-8778 if you can help.

Updates, cont.

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with an updating of Schuyler County's "Aquatic Vegetation Control Program". Lamoka and Waneta are small lakes between Keuka and Seneca in the Central Finger Lakes region.

- **Matt Albright** and **Bill Harman** attended the North American Lake Management Society meetings in Minneapolis this November. Matt presented a paper on "The relative effects of recreational boating and wind conditions on perturbation of sediments on littoral substrates in Otsego lake" while Bill made "A

comparison of the Otsego Lake macrobenthos communities between 1935 and 1993".

- **The Lake and Valley Garden Club** provided intern support and materials to improve and enhance Goodyear Swamp Sanctuary this summer. **Tavis Austin** and **Eric Jorcak** built new steps, treated the walkways with wood sealer, covered all woodland trails with wood chips, made wood duck houses, repainted the benches, started the development of a brochure, updated (with **Jennifer**

Lopez) the trail guide and removed a lot of trash from the old Goodyear dump site. Future plans include purple loosestrife control, new signage and a host of innovative ideas. Many thanks!

- The local **Water Quality Coordinating Committee** has provided resources for planting riparian vegetation along Hayden Creek for erosion and sediment control. **John Foster** and his students will actually do the planting. BFS personnel were involved in the planning aspects of the work. ❖

Updates

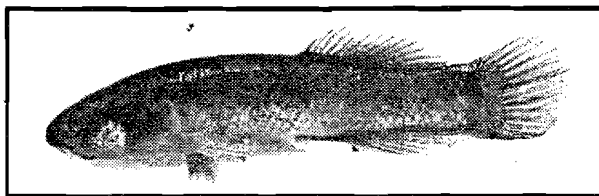
- A new fish find for the Otsego lake watershed. **Mary Miner** and **John O'Connor** collected several specimens of the central mud minnow *Umbra limi* in Cripple Creek last August.

- The final version of the *State of Otsego Lake, 1936 - 1996* was sent to the printer in September. Copies are available for loan at the Cooperstown Public Library and the BFS.

- Otsego Lake average summer water clarity (June - August) has continued to decrease over the last three years (1994 - 2.8m, 1995 - 2.5m, 1996 - 1.9m). In 1996 an August bloom of the noxious algae *Anabaena flos-aqua*, indicative of eutrophic conditions, raised concerns about water quality.

- **Estelle Goodelle** and **Bill Harman** provided a series of workshops at Bassett Hospital, the BFS and on Otsego Lake and the Susquehanna

River to local teachers **Amy Williams, Cheryl Boise, Deborah Waner, Jeannine Groff, Donna Brown, Larry Schoff, John Bussone, Edward Gnau, Amy**



The central mud minnow

Dobler, Dedra Bronner, Gary Parese and **Clinton Zimmerman** this summer. Some of those involved will be testing the BFS board game "Sink or Swim" in their classrooms this fall.

- This was a tough summer on outboard engines. The 1979 60hp Johnson threw a rod and was replaced with a four year old Evenrude; the 1977 Chrysler just wore out and was replaced by a new Honda 4-stroke; and our 1982 90hp Mercury needed extensive repairs.

The Field Station has a long-term commitment to replace older, 2-stroke engines with cleaner, newer ones or with 4-stroke engines such as the Honda.

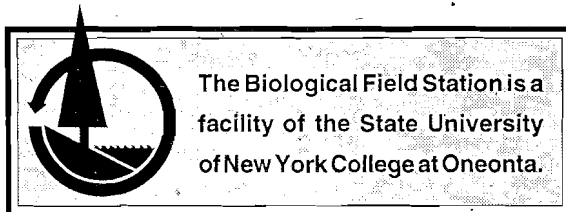
- Since early spring **Dan Rosen** has been writing columns describing the stresses on Otsego Lake, their causes and impacts. Taken together, the articles provide an easy-to-understand scientific overview of the problems. A management plan, with inputs by affected parties, is being developed to mitigate those stresses. The remaining columns will discuss that plan.

- BFS personnel have received funding from the Schuyler County Soil and Water Conservation District to conduct surveys of the macrobenthic invertebrates of Lamoka and Waneta Lakes. The work is being done in conjunction

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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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