

# REPORTER

Spring 2006



## BFS Welcomes Summer Interns

This years High School F. H. V. Mecklenburg Conservation Internships, now directly supported with BFS funding, have been awarded to **Kyle Stevens** from Schenevus Central School and **Sara**

**Zurmuhlen** from Richfield Springs Central. College undergraduate interns include; **Payne** and **Brian Butler** from SUNY Oneonta, recipients of Rufus J. Thayer Otsego Lake and Biological Field Station

internships, respectively. **Georgette Walters** and **Erika Reinicke** from SUNY Cobleskill Agricultural and Technical College, were awarded Robert C. MacWatters internships in the Fisheries Sciences. **Alex**

**Scorzafava**, a student at St. Bonaventure, received a Greenwoods Conservancy internship and **Caitlin Snyder** from Cazenovia College holds a Goodyear Swamp Sanctuary Internship.



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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.

Do we have your correct address?



## Otsego Lake On The Road To Recovery?

Areal Hypolimnetic

Oxygen Deficits (AHOD), a measure of the amount of oxygen used annually in the deep waters of the Lake, were the lowest this year since before 1992. That is very good news!

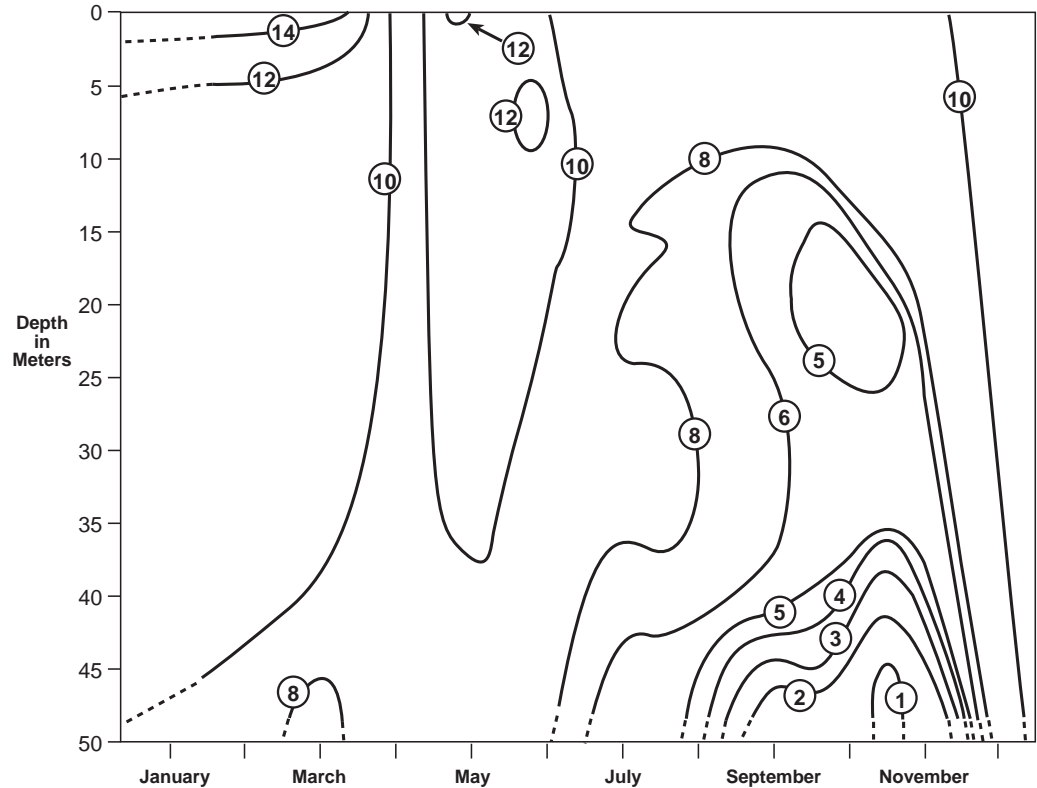
Total phosphorus averaged 9.6ug/l. No phosphorus was released from the sediments as had been suggested during monitoring in the mid-1990s. The latter occurs when oxygen concentrations get very low in bottom waters.

Large zooplankton populations (the critters that eat the algae) have steadily increased over the last five years. During the summer mean chlorophyll concentrations, at ~3ug/l, were among the lowest ever recorded, indicating lower algal populations during much of the summer.

More good news! Water transparency (May to October) averaged 3.3m compared to less than 3 when alewife populations were at their largest.


All the time, effort and resources of many people and organizations can be held responsible for at least a part of the present scenario. We don't know

2005 Otsego Lake oxygen (mg/l) profiles.



Otsego Lake oxygen profiles, 2005. Isoleths in mg/l. If you trace a vertical line on any date of interest you can note the oxygen concentrations at any depth at that time. For example, in August the 5mg/l isopleth is crossed at 45m of depth. Above that there is more oxygen, below less. Since lake trout need at least 5 mg/l to be "happy", they can live stress free from 45 m of depth to 12 m at the warm water interface (thermocline). In November, the entire cold water column below 38 m and a portion between 27 and 14m is inappropriate lake trout habitat. By December the lake water is saturated with oxygen as it circulates from top to bottom during turnover and the trout can go anywhere.

yet if the trends will continue, but to date, things look pretty good. We look forward to the days when our water transparencies average about 4.7 m as they did

during the 1980s, after the cultural pollution problems of the 1970s were solved and before the introduction of the alewife. 

**Bill,**

**I can put a graphic here to fill in the space, but it might be better used to add a reminder, say, about the summer Lake cleanup, etc.**

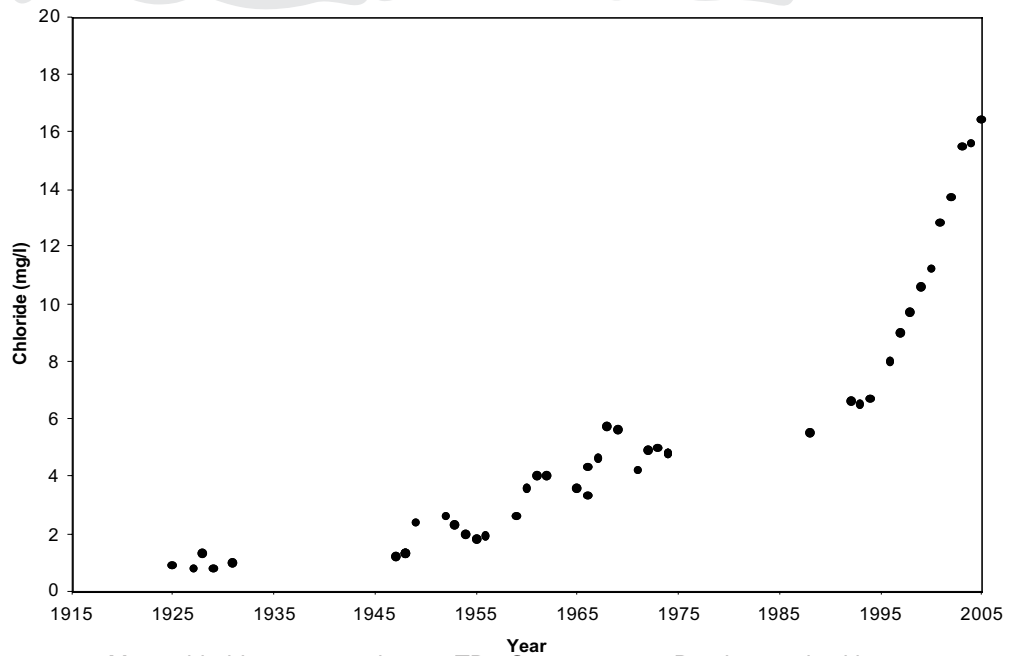
## Road Salting Impacts Gaining National Attention:

Recently, several articles have appeared in the national press voicing concern about increasing concentrations of chlorides in ground waters in the Northeastern and Central Atlantic States. It appears that road salting practices in many areas of urban sprawl are resulting in contamination levels high enough to be of concern regarding the viability of many aquatic invertebrates and even to human health. Locally, we have studied the nature of our road deicing practices and have recommended a mixture of sodium chloride and Ice Magic Plus, an organic

deicer, which together result in greatly reducing phosphorus loading to the lake and its tributaries compared to the mix of inorganic grit (sand) and salt historically used. Chloride levels in Otsego Lake vary around 15mg/l compared to about 180-200+ mg/l, most occurring naturally, in the

larger Finger Lakes (where environmental problems have not yet been documented). Therefore, our present chloride concentrations are of little concern. Nevertheless the long term trends are not good. Concentrations in Otsego, although relatively low, are increasing rapidly (See the nearby figure)

We hope to see a leveling off in the near future as the flux of chloride through the groundwater achieves a balance, but no one knows if or when that may occur. We are currently adding 600 tons of salt to our roads each year! Maybe we should not expect our roads to be as well taken care of as they now are?




Mean chloride concentrations at TR4-C, 1925-2004. Routine road salting started in the 1940s, the present "clean winter road" policies in the 1990s.

### We Need Your Help! Water Chestnuts Threaten Susquehanna Drainage.

We recently became aware of a colony of water chestnuts in a wetland draining into the Susquehanna near the junction of Routes 7 and 205 in Oneonta. In order to mount a rapid response the BFS has assumed costs of about \$5,000 to remove the chestnuts. We have made arrangements with adjacent property owners, the NYSDEC, and an herbicide applicator, Allied Environmental Services, to eliminate the plants. Quick action is necessary to prevent them from getting into and

infesting the entire drainage basin. A SUNY biology graduate student, Willow Eyres, is now conducting pretreatment monitoring and will continue assessing the situation for two years after application. Since this program was not budgeted, we would appreciate any financial assistance we can obtain. Any individual or organization interested in helping should contact Bill Harman or Matt Albright at 607-547-8778. Your help would be greatly appreciated.

# Updates

- Goodyear Swamp is the site of a geocache. A geocache is a container filled with a log and a diversity of items to collect and trade. Using a hand held Global Positioning System (GPS) geocachers locate the cache, log in, take an item and replace it with something else for the next individual. They then log in on [www.geochaching.com](http://www.geochaching.com) to let the world know of their adventures.
- We recently found a deer tick after having been in the woods near the Upland Interpretive Center on the Thayer Farm. This is the first record we know of *Ixodes serripularis* from Otsego County. It may have been brought in from downstate since clothes being worn that day had previously been used on Long Island
- **Michele (Van Dusen) Wunderlich** 91' a former BFS intern, worked for several years at SUNY Oswego doing PCB research and now is a senior planner with Cayuga County. Most of her work in now is involved with environmental planning.
- **Dan Turlington** 86' was at the BFS working with Dr. Robert MacWatters while a student in Cobleskill's Fisheries & Wildlife Technology program. He ended up in Louisiana and recently finished work for FEMA environmental, post hurricane NEPA review.
- **David Alfred** 05' has been employed as a nature interpreter in the Pre-college Field
- Trip programs and is helping with logistics as we begin to occupy newly constructed and renovated buildings on the Thayer Farm.
- **Becky Harman** was enrolled in two intensive courses at the BFS and held a internship in the late 1980s. Since graduating from Cornell University, she has worked several years as a laboratory technician at the Veterinary College there. An avid marathon runner and snowshoe competitor, she recently represented the United States in Ramsau, Austria, in the Atlas Snowshoes Dachstein Xtreme World Snowshoe Racing Championships. A longtime New York State Winter Games Snowshoe Champion, she ran to a to a second-place finish garnering the United States' first World Snowshoe championships silver medal.
- The second year of septic system inspections around Otsego Lake is about to start. In the first year, about 100 systems were checked; of those, 2/3 required upgrades and 1/3 needed complete replacements. While not a requirement, many upgrades are including phosphorus removal thanks, in part, to a grant from the NYSDEC. 

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:

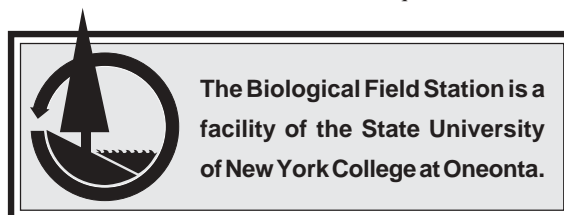
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As an academic program within the State University College at Oneonta, the Biological Field Station receives fund raising services through the College at Oneonta Foundation, a nonprofit charitable organization. All gifts and grants for the BFS are 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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