

Lake Ontario Algae Workshop

On May 30, 2002, New York Sea Grant collaborated with Monroe County Department of Health and the Water Education Collaborative to sponsor a day-long workshop on the algae problem in Lake Ontario. The workshop, funded by the New York Great Lakes Research Consortium, examined the factors contributing to algae growth, problems associated with the algae blooms and potential solutions to this problem.

Residents in coastal areas along Lake Ontario have been dealing with nuisance algal blooms and the resulting mess and smell as the filamentous algae dies off and ends up on beaches or along rocky shoreline areas. **Helen Domske**, a New York Sea Grant Extension Specialist, was asked by **Margy Peet** of the Monroe County Health Department to help organize the workshop and identify speakers who could share information on algae and address the factors that contribute to increased algae growth and accumulation.

This workshop provided a first time opportunity for those who study the problem, manage the areas impacted by the algae blooms and coastal residents who must cope with the algae on their property to gather together to share information and learn from each other. The workshop had strong support from many local and county governmental agencies, environmental organizations and university faculty members who comprised the 95 participants from both sides of the border who attended.

The organizers brought together experts from the U.S. and Canada to address issues related to these problems. Subjects covered at the work-

shop included basic biology of algae growth, recent research and trends, Lake Ontario algae bloom history, overview of past efforts to manage algae, and new ideas being evaluated for algae management. The workshop included solicitation of ideas for solutions and future research needs.

The program began with an overview of the basic biology of algae growth that was presented by **Dr. Joseph Makarewicz** of SUNY Brockport. Makarewicz, who has completed many NYSG-funded research projects on ANS, also addressed zebra and related mussels and their impact on water clarity, which increases light penetration – encouraging algae growth. **Murray Charlton**, a research scientist from Environment Canada, focused on nutrients such as phosphorus and nitrogen and their role in promoting algae growth.

Chuck O'Neill, a Senior Extension Specialist from NY Sea Grant, provided information on physical factors impacting algal growth and identified different types of algae that can be found in these algal blooms, including *Cladophora*, *Ulothrix* and *Spirogyra*. *Cladophora* is a filamentous algae that grows in deeper water at warmer temperatures and is most commonly a problem during the summer months. O'Neill provided an historical overview of algal blooms that have impacted Lake Ontario for decades.

Other speakers included **Dr. Tony Vodacek**, of the Rochester Institute of Technology, who spoke about his findings from a study of the lake bottom using hyperspectral imaging. Speakers from Monroe County and the U.S. Army Corps of Engineers rounded out the presentations. A question and answer period that called upon the gathered expertise allowed participants to have their questions addressed. The group then broke up for small discussions to brainstorm potential solutions to the algae problem. Although no concrete solutions were offered from the breakout sessions, the groups indicated a need for additional research on the subject along with possible demonstration projects and educational activities.

— **Helen Domske**
NYSG Coastal Education Specialist



Cladophora, *Ulothrix* and *Spirogyra* are common forms of filamentous algae. Illustration by Cynthia Armstrong

Want to Learn More?

To address the need for research, organizers are hoping to help develop a research agenda and encourage agencies and organizations to seek funds to help answer questions concerning the algae problem. NYSG is developing workshop proceedings through its SUNY Buffalo office. For more, contact sgbuffal@cornell.edu.

For the related story, "Developing New Methods of Toxin Detection," see the Spring 2002 *Coastlines*. NYSG researcher Dr. Gregory Boyer is designing and developing cutting-edge technologies to detect toxins from algae in Lakes Ontario, Champlain, and other freshwater sources.



Chuck O'Neill, Coastal Resources Specialist and Director of Sea Grant's National Aquatic Nuisance Species Clearinghouse, provided an historical overview of algal blooms that have impacted Lake Ontario for decades. Photo courtesy of Monroe County Department of Health