New York's "Least Wanted"

We asked Chuck O'Neill, Diane Oleson and Dave MacNeill of the SUNY Brockport office, home of the Clearinghouse, to give Coastlines' readers an idea of some of New York's "Least Wanted" aquatic nuisance species.

Stakeholders interested in the introduction, spread, impact, prevention, and control of invasive aquatic nuisance species (ANS) need timely, reliable scientific information and fast, easy access to ANS research. Established in 1990, Sea Grant's ***National Aquatic Nuisance Species Clearinghouse*** is the home of North America's most extensive library of publications pertaining to the zebra mussel and almost 30 other invasive species of freshwater and marine molluscs, crustaceans and fish, as well as biological macrofouling and invasive species policy issues.

The Clearinghouse mission is to: facilitate ANS information sharing among researchers and policy-makers; provide timely dissemination of ANS research findings and facilitate ANS prevention and control technology transfer between researchers and end user audiences.

Information is accessible via mail, electronic mail, fax, telephone, or visits to the Clearinghouse's Web Site. A database of the Clearinghouse library is keyword and "plain English" searchable on the Clearinghouse's World Wide Web site. Interlibrary loan documents may be ordered directly on line.

The Clearinghouse web site also presents other ANS-oriented information such as detailed maps charting the range expansion of zebra and "quagga" mussels; information on educational materials available from the Clearinghouse; PDF versions of ANS fact sheets; announcements of ANS meetings and activities; and an extensive annotated links page.

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New York's "Least Wanted"

Aquatic Invaders, the Clearinghouse quarterly digest, presents research summaries and state, national and international ANS policy initiatives. It also features new acquisitions to the library, highlights exciting ANS web sites, and presents ANS meeting announcements.

The Clearinghouse is a major link between the research community and a wide array of university, government agency, industrial, and special interest stakeholders. It is a primary nexus for identifying aquatic nuisance, nonindigenous, and invasive species research activities, and links researchers with similar interests. The Federal Aquatic Nuisance Species Task Force, the U.S. Army Corps of Engineers, regional panels on aquatic nuisance species, and numerous other federal, state, and international agencies and institutions utilize the Clearinghouse as a major channel for extending information to interested audiences.

— Diane Oleson
National Aquatic Nuisance Species Clearinghouse

Lake Champlain Sea Grant "Stop the Spread"

More than 20 aquatic invaders including zebra mussels, Eurasian watermilfoil, and water chestnut have made their way to Lake Champlain as seen in *Stop The Spread*, a new Sea Grant video. "It hasn't taken long for these invaders to spread to over 100 lakes in Vermont and in the Adirondacks," says Mark Malchoff, Aquatic Resource Specialist for Lake Champlain Sea Grant in Plattsburgh.

The Lake's abundant water chestnuts are a particular nuisance. They jam boat motors and hamper fishing. To reduce their numbers, mechanical harvesters helped pull 1,000 dump truckloads of the unwelcome hitchhiker out of Lake Champlain's southern end at a cost of $250K to taxpayers. That's a heavy price to pay and should motivate boaters to avoid the further spread of these species. The video suggests making sure that all water and plants are left behind at the lake when exiting canoes, kayaks, sailboats, and other recreational vehicles to avoid their transport between water bodies.

— Paul C. Focazio

Aquatic Invaders THE DIGEST OF
NATIONAL AQUATIC NUISANCE SPECIES CLEARINGHOUSE

www.aquaticinvaders.org

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Angling Around New York's Marine District

These metropolitan-based outreach programs are being offered in areas that are not usually associated with fishing, however, they include minority communities where fishing is often deeply rooted in the cultures.

Integrating Sea Grant Outreach

Sea Grant funded research helps us to understand the vulnerability and interconnectivity of our marine ecosystems. This knowledge is being shared with New York residents through outreach programs that are mostly achieved in partnership with many of the programs, associations and agencies mentioned. Information packets, posters, brochures and websites are developed around the funded research and in consultation with published literature. By working in tandem with other groups we are reaching a wider audience outside of academic circles, and the extension program serves to bridge the gap between researchers and stakeholders, including the general public. Sea Grant outreach is multi-purpose, balancing informal science and environmental education, while being conducted in a fun atmosphere. The goal is to educate our residents so that they can make better decisions about sustainable uses for the marine resources, and Sea Grant helps to safeguard the sport's future through its outreach to youth groups.

— Antoinette Clemetson, NYSG Fisheries Specialist

Contact 631.727.3910 to find out more about the angling programs mentioned in Clemetson's article.

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 workshop 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.

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

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.