

Trawl Workshop an International Exchange

In November 2011 New York Sea Grant (NYSG) and the US Geological Survey brought acclaimed expertise in the design of marine trawls to the Cornell University Biological Field Station on Oneida Lake. It was an award-winning partnership that earned co-organizer and NYSG Fisheries Specialist **Dave MacNeill** a USGS Great Lakes Science Center Certificate of Appreciation.

MacNeill described the workshop, funded by a Great Lakes Regional Research Information Network grant, as an unprecedented opportunity for a marine-Great Lakes exchange with **Dr. Paul Winger** and his internationally-respected fishing gear and marine trawl evaluation team from the Memorial University of Newfoundland's (MUN) Centre for Sustainable Aquatic Resources.

Dr. Winger directs the MUN's state-of-the-art facility with the world's largest indoor flume tank that simulates real-world conditions for the testing of trawls. A week's worth of testing models in the tank can save months of work on the water with full-size trawls. "We are here to share what we know about fishing gear design and how you can increase both trawl and fuel efficiencies, reduce ecological impacts, and obtain the quality of data you need for fisheries science" Dr. Winger said.

Collecting fish samples with large underwater nets (trawls) provides essential information for understanding food webs and managing valuable fisheries resources. Spring-fall trawls have been cooperatively conducted by U.S. federal and state and Canadian provincial agencies on Lake Ontario since the 1970s.

The MUN Centre works with government and science agencies and commercial fisheries interests and has more than 120 different net/trawl designs and 75 sets of trawl doors for configuration testing.

Dr. Winger, his team members: **George Legge**, **Philip Walsh** and **Tara Perry**; and Great Lakes Science Center Statistician **Jean Adams**; presented models, video and data at the workshop that attracted 35 American and Canadian researchers and research vessel personnel representing all five Great Lakes. Some were newcomers to trawling; others have been trawling for 30 years and still want to know more.

"I am impressed with the diversity of responses we received about how important this work is. People are passionate about learning about trawling," said workshop co-organizer **Dr. Brian Weidel** with the USGS Great Lakes Science Center, Oswego, NY.

NYSDEC Research Biologist (and former NY Sea Grant Scholar) **Mike Connerton** Cape Vincent, NY, said, "The mussels in Lake Ontario have forced us to change the gear we use. We are looking for the very best data so we can anticipate the fishery 30 years into the future." **Gary Czapinski** of US Fish & Wildlife Service in Ashland, Wisconsin came to learn a technique for catching Asian carp which have the ability to evade the trawl. **Michael Keir** of Environment Canada came to learn how the mechanics of trawling can be used to study contaminants in fish populations.

The three-day intensive workshop included hands-on trawl exhibits that filled a yard at the Biological Station and classroom time on design configurations, hydrodynamics, fish behavior impact on catch efficiency, environmental variability, and new opportunities for evaluating trawl designs for use in the Great Lakes.



The November trawl workshop featured trawl scale models such as this one being tested in the Memorial University of Newfoundland flume tank, the largest in the world.

Dr. Brian F. Lantry, director of the USGS Lake Ontario Biological Station at Oswego, NY, called this workshop "the best and most useful I have ever attended. This type of work makes a realistic, practical contribution to science." Said MacNeill, "The trawl program well-illustrated NYSG's commitment to providing sound scientific information and its ability to form effective partnerships among agencies and the research community. Scientists from the USGS Biological Station worked hand-in-hand with us to bring this workshop to fruition."

New York Sea Grant has provided leadership in educating fisheries researchers and assessment biologists about trawl design and dynamics in the Great Lakes and abroad. After a 2008 workshop organized by NYSG with MUN and Rhode Island Sea Grant, **Dr. Tomas Juza** from the University of Southern Bohemia's Hydrobiology Institute, returned to the Czech Republic where he applied the training to designing a new trawling vessel and trawl now in use there and in several other European Union countries.

—Kara Lynn Dunn

NYSMEA's 'Share-A-Thon' A Success

New York Sea Grant and longtime partner New York State Marine Education Association (NYSMEA) share the value of the "train-the-



Attendees of NYSMEA-NYSG's teacher "Share-A-Thon" included (l-r) NYSG Long Island Sound Study Outreach Coordinator **Larissa Graham**, hydroponics gardening and sustainability presenter **Shakira Castronovo** from Manhattan Childrens School, NYSG Hudson Estuary Specialist **Nordica Holochuck** and I FISH NY's **Melissa Cohen**.
Photo by Paul C. Focazio

trainer" approach to teaching marine science. A recent joint venture was the March 2012 Marine Science Share-A-Thon held at Columbia University's Teachers College, where teachers shared and acquired innovative lesson plans and other materials for students while earning professional development credits.

As chair of NYSMEA's Education Committee, NYSG Hudson Estuary Specialist **Nordica Holochuck** coordinated the event which featured lessons from over a half-dozen presenters, from an elementary "Sing Along to the Ocean" to "Beneath the Sea's Marine Careers and Scholarship" program for upper level students. Teachers checked the Hudson River's "vital signs" using near real-time data and traveled beneath the waves using Google Earth Ocean. I FISH NY's **Melissa Cohen** played a version of Go Fish! with

cards illustrated with New York State fishes which teach students about fish diversity and classification. NYSG Communications Manager **Barbara Branca** offered tips for bringing hot research topics to the classroom (see p. 3 article).

"This pilot program is a good opportunity to network with colleagues and for NYSMEA members new and old to learn some unique educational techniques," says Holochuck. She sees this event as a catalyst to inspire similar resource sharing events throughout the NY Harbor Estuary watershed and along LIS.

In May 2012 Holochuck was honored for her contributions made to NYC science education through her work with NYSMEA. "I was very pleased to be nominated for and receive the 2012 Science Council of New York City (SCONYC) Resnick Award by NYSMEA, a longtime Sea Grant partner and one of SCONYC's nine member organizations," said Holochuck.

—Paul C. Focazio