Researchers Identify Ways to Improve Lake Ontario Sportfishing

Largemouth bass

In a time when "tourist" anglers, those from out-of-state, are less likely to travel long distances to fish, researchers from two NYSG-funded studies agree that increasing the fishing activity of residents along New York's Lake Ontario shoreline is especially important to sustaining the region's coastal businesses.

Earlier this year, findings from one project were published in the *Tourism in Marine Environments* journal article "Assessing the Economic Importance of Recreational Fishing for Communities along Lake Ontario." This article, based on 2007-09 research from Cornell University's **Tommy L. Brown** (now retired) and **Nancy A. Connelly**, synthesizes results from a 2007 survey that found tourist anglers spent $43 million in communities along the Lake's shoreline. The estimated indirect and induced economic impacts of those recreational fishing expenditures to shoreline communities were on the order of $60 million and were associated with approximately 1,000 jobs.

"Essentially, we assessed the last 30 years of data on human and biological factors that affect angler effort in order to develop the best possible understanding of what has most strongly influenced the Lake's fisheries," said Connelly. The team then modeled those factors to forecast the next three to five years of angler effort, estimated at a loss of 32% over five years. "Armed with this information, local communities can choose to be proactive and try to counteract the trend predicted by the model," said Connelly.

For example, NYS Department of Environmental Conservation biologists suggested that some anglers have adjusted their fishing techniques to catch more bass. Bass, which are in great abundance, feed in part on the plentiful round goby, an invasive species that anglers catch more times than they would like to. "If other anglers are able to change and adopt these new techniques," Connelly suggested, "harvest of bass could increase, perhaps reducing the predicted decline from 32 to 19%." Although this would still result in a predicted loss of $11 million and 196 jobs, it's considerably less than the $19 million and 330 jobs estimated if no action were taken. Additional strategies for increasing sales revenues might be targeted at trout and salmon anglers to further reduce downward trends, since they make up a large percentage of Lake Ontario anglers.

In a current two-year investigation, researchers **Diane Kuehn** and **Valerie Luzadis**, and Sea Grant Scholar **Matthew Brincka** at the SUNY College of Environmental Science and Forestry in Syracuse, NY are targeting 7,000 residents who fish within the seven counties bordering Lake Ontario.

"We're providing information to coastal businesses and tourism promoters about the fishing preferences and motivations of Lake Ontario resident anglers that can be used to help increase fishing activity," said Kuehn.

Preliminary data indicate that, of the responding anglers who identified a preference for a type of fish, smallmouth bass and largemouth bass are the preferred species to catch. "Because of its existing popularity with residents, bass fishing provides an excellent opportunity for businesses and tourism promoters to tap into the large resident market group," said Kuehn. Redirecting promotional and business efforts to further increase the activities of these anglers, therefore, is key.

Further analysis is underway to estimate the percentage of residents who fish or may be interested in fishing in the future, the fishing-related expenditures of resident anglers in 2009, and the factors that motivate and constrain the fishing activities of resident anglers. A Sea Grant fact sheet containing the results of the study will be available next summer.

—Paul C. Focazio

Scientists and managers discuss nitrogen in NY Bight at workshop

The New York Bight ranges from Cape Cod, MA, to Cape May, NJ and includes New York Harbor and a large number of estuaries. Each of these water bodies is unique; collectively, they make the region America's "urban sea." Over the last 50 years the Bight region has experienced varying degrees of negative impacts from anthropogenic nitrogen loading from sewage treatment plants, stormwater runoff, groundwater input, and atmospheric nitrogen. While many nitrogen controls are in place, improvements have been limited and many additional controls would require major investments.

In a two-day workshop held in Manhattan in July 2010, scientists and managers discussed the issues surrounding nitrogen and nitrogen controls in the New York Bight and its associated estuaries. The workshop was planned by the New York Bight Regional Ocean Science Council which is charged with developing a research plan that coordinates and integrates regional research activities within the New York Bight. The workshop was led by **Jim Ammerman**, New York Sea Grant Director and chair of the workshop committee.

Said Ammerman, "Scientists need to know if they are providing the right information to managers of our coastal resources. By structuring our meeting with both scientific and management presentations as well as breakout group discussions, the managers in attendance were able to form new partnerships with the scientists."

There were 15 presentations and two breakout sessions, the first session limited to scientists or managers, and second a combination of the two groups of attendees. Many presenters gave overviews of the major scientific or management concerns of particular estuaries, including the NY/NJ Harbor Estuary, the Long Island South Shore Estuaries, the Peconic Estuary, Long Island Sound, and others. Most presentations focused on nitrogen inputs and impacts for each estuary, as well as current and potential future management options for some of them. One speaker presented new developments in our understanding of the nitrogen cycle and another, a novel engineering approach to ammonium removal that will be implemented in Jamaica Bay.

The workshop results and report will be incorporated into the planning process of the New York Bight Regional Ocean Science Council as it develops plans for ecosystem-based management in this region.

—Barbara A. Branca

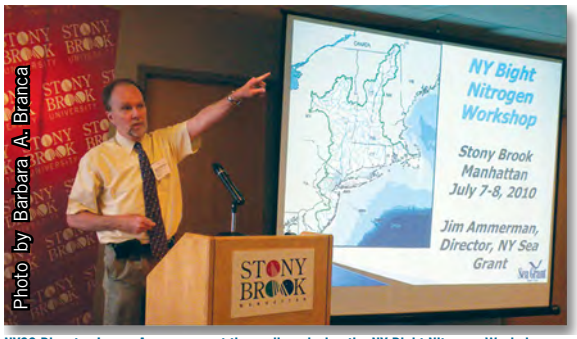

Photo by Barbara A. Branca

NYSG Director James Ammerman at the podium during the NY Bight Nitrogen Workshop