



blueback herring

Angler Alert: Concerns and Issues of Lake Ontario

Now is a great opportunity for Sea Grant to work with sportfishing promoters to better inform anglers.

—Diane Kuehn

Sportfishers enjoying a day of leisure on the Salmon River, one of three rivers MacNeill will focus on in his fisheries workshops this summer and fall. MacNeill will educate anglers about population trends and regulation updates in the Salmon, as well as the St. Lawrence and Niagara Rivers.

In its 28 years of "Bringing Science to the Shore," New York Sea Grant has served as a vital source of information for the state's angler communities. A recently released NYSG publication based on statewide and Great Lakes angler surveys finds, though, that there are over 193,000 potential anglers in the region who are interested in fishing but do not partake in the sport. This may be because, as NYSG coastal tourism specialist Diane Kuehn points out, "These individuals think that they need a boat or special skills to fish here."

Kuehn, like NYSG Great Lakes fisheries specialist Dave MacNeill, uses outreach efforts as a means to more effectively capture the interest of potential coastal users. For MacNeill, *New York's Great Lakes Angler*, a 23-year-standing Sea Grant newsletter originally underwritten by charterboat groups, is the ideal tool to educate NYSG's lakeshore constituency. "Several years ago," he says, "I began receiving comments from numerous recreational anglers who were not necessarily charterboat captains requesting Sea Grant to reach out to the unaffiliated average angler. This necessitated several publication format changes, including a more generalized manner in which issues pertaining to fisheries of the Great Lakes and other freshwater systems of interest were addressed."

The *Angler* addresses a variety of Great Lakes and general fisheries news items as

well as the potential for impacts on the sportfishing industry by blueback herring and alewife as well as cormorants. The discovery of blueback herring in the Lake Ontario watershed and the potential invasive threat posed in Lake Champlain by its sibling species, the alewife, have raised some eyebrows in both the scientific and sportfishing communities. According to literature co-written by MacNeill, more than 9,000 blueback herring were collected in the Oswego River in 1994, followed by the capture of two juveniles in Lake Ontario during the fall of the next year. "This represents the first sighting of the species in the Great Lakes," MacNeill says, "and the furthest inland sighting in North America."

Because blueback herring are known to survive, reproduce and settle in land-locked settings, MacNeill adds, "Their presence raised some real concerns about the colonization potential in the region." Despite bluebacks being "somewhat of an oddity in the Great Lakes Basin," their potential for ecological impacts in the region is "a situation hauntingly analogous to that existing when zebra mussels were first discovered," MacNeill says. As cited in the March 1999 *Angler*, the discovery of bluebacks in Lake Ontario has raised some questions of the potential for food competition with the landlocked population on alewives, hardy competitors themselves.

Over the past decade, the alewife population has declined in Lake Ontario. Presumably a result of predator influence as well as food web nutrient-zooplankton disturbances, these population decreases suggest the possibility for bluebacks, which share a partial ecological overlap and considerable structural similarity with the alewife, to thrive. To remedy identification difficulties as this scenario plays out, MacNeill has created a Sea Grant brochure, *What is it: Alewife or Blueback Herring?*, to better educate both his coastal user and fisheries biologist constituencies on distinct key features of both species. Recently, NYSG Hudson River specialist Nordica Holochuck, with help from NYSDEC, updated this informative brochure to serve her own user group.



Photo by Diane Kuehn



Double-crested cormorants, which began nesting on Lake Ontario around 1945, were affected for many years by the use of organochlorine pesticides. After DDT and other like pesticides were banned, the waterfowl began to rebound in the 1970s.

Photo by NYS DEC

In June '98, MacNeill held an international blueback herring workshop attended by top North American experts and members from the New York State fisheries management and research communities along the Hudson and Mohawk Rivers and Lakes Erie and Ontario. At the close of the event, attendees collectively generated several proposals to address concerns of an increasing overlap in alewife/blueback herring populations. "While there is obvious potential for bluebacks to colonize in Lake Ontario," MacNeill says, "the conclusion left by the select panel was that their ecological impacts on the region, while unknown, are unlikely to be severe and may even be inconsequential."

In *Angler*, MacNeill also addresses disruptions in Lake Ontario's eastern basin ecosystem due to an increasing cormorant population. Today, the DEC reports that there are approximately 12,000 cormorant breeding pairs throughout the state, of which 7,500 nest on Little Galloo Island in Lake Ontario's eastern basin. Last summer, the Island was the site of two major cormorant shootings that left around 1,000 of the federally protected long-necked black birds dead. In April, 10 men from sportfishing communities along the lake's eastern shore pleaded guilty to charges, agreeing to serve six months of monitored home confinement and pay fines and environmental conservation contributions totaling \$7,500.

"This recent cormorant shooting is but a barometer of the escalating polarity between anglers, fish and wildlife managers, environmental interest groups and birding organizations," MacNeill says. The complex struggle stems from a somewhat paradoxical situation. On the one hand, a large number of cormorants thrive on a food source comprised primarily of smallmouth bass, yellow perch and three-spine sticklebacks, favorites of the sportfishing region's people. On the other hand, MacNeill says, "Despite this ongoing clash, increases in the cormorant population reflect the ecosystem's continually renewed state of health."

In 1994, MacNeill served as a technical advisor to the DEC's Cormorant taskforce, which was designed to develop a consensus management scheme for cormorants in Lake Ontario. "All parties were well represented," MacNeill says. "Even pro-birding interests agreed to support a cormorant control program if scientific data indicated that the birds were negatively impacting fish populations." With no such data available at the time, MacNeill adds, "The perception was that no action was being taken, so some anglers felt that civil disobedience was in order. Unfortunately, the shooting caused some environmental groups to take a position where in they are now unlikely to support a stringent control program."

—Paul C. Focazio

Cormorants— A DEC-itive Solution

In December 1998, DEC studies concluded double-crested cormorants annually consume an estimated total of 87.5 million three-spine sticklebacks, alewives, yellow perch and smallmouth bass in Lake Ontario's eastern basin. Based on these findings, the DEC has developed a five-year experimental management program to reduce the Little Galloo Island colony from 6,000 to 1,500 nesting pairs in five years, thereby improving the quality of smallmouth bass and other fisheries.

Under a federal wildlife permit, the DEC will send biologists to the Island to trap and kill 300 adult birds and dip their eggs in mineral oil before returning the eggs to the nests. MacNeill says, "While shooting cormorants creates openings for other birds to fill and smashing eggs will stimulate additional egg laying, oiling eggs smothers the embryo but does not inhibit the birds from breeding them anyway, thus limiting breeding periods."