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Cormorant Research in Eastern Lake Ontario Leads to Improved Fish Stocking Methods; Other Findings Raise Concerns About Predation

USGS research laboratories in Cortland, New York, and Wellsboro, Pennsylvania, have found that by altering fish stocking methods, the number of trout and salmon lost to predation by double-crested cormorants can be substantially reduced. However, new findings by these laboratories and the New York Department of Environmental Conservation raise concerns about predation on smallmouth bass.

Tim Reese, The Syracuse Newspapers

Cormorant roost in eastern Lake Ontario.

Growing populations of the double-crested cormorant in the eastern basin of Lake Ontario have caused concern among natural resource managers and the general public because cormorants eat fish, including game fish. Many worry that an overabundance of the birds will adversely affect fish populations and may change the ecology of the lake.

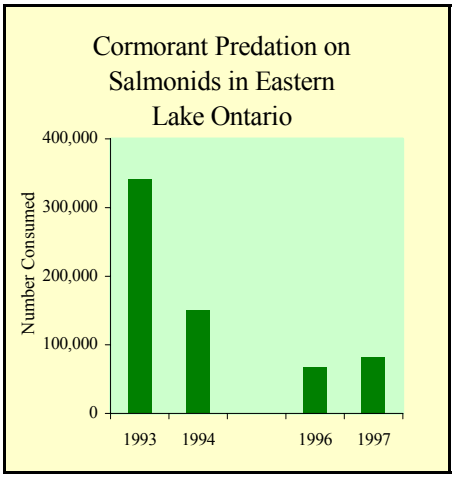
Scientists at the USGS Great Lakes Science Center's Tunison Laboratory of Aquatic Science in Cortland, New York, and the USGS Leetown Science Center's Research and Development Laboratory in Wellsboro, Pennsylvania, have been studying cormorants in Lake Ontario since 1993. Early investigations were designed to document cormorant diet and to quantify the number of recently stocked salmon and trout eaten by the birds.

The studies showed that most predation on stocked salmon and trout occurred within the first 24 hours after stocking, and that a substantial number of the stocked fish (about 11%) were eaten by cormorants within four days. Subsequent research revealed that predation can be significantly reduced when fish are either stocked at night or released offshore. These results have led the New York Department of Environmental Conservation (NYDEC) to modify its salmonid stocking strategy, thereby increasing the survival of stocked fish.

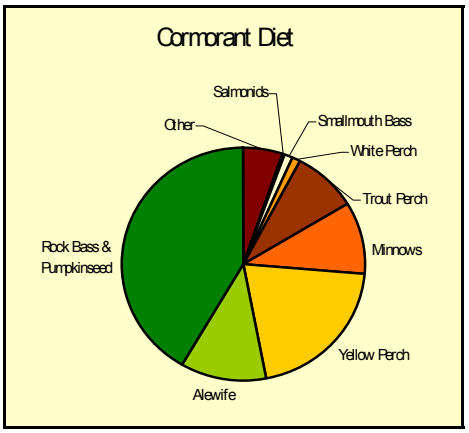
Smallmouth bass populations in eastern Lake Ontario appear to be declining and cormorant predation has been suggested as one possible cause. As a result, recent USGS studies of double-crested cormorant food habits have focused on smallmouth bass.

In 1997, USGS scientists studied cormorant diet on Little Galloo Island in eastern Lake Ontario. Of the 128.5 million fish estimated to have been eaten by cormorants, it was found that smallmouth bass accounted for about 1 percent.

A large cooperative study in 1998 by the NYDEC and USGS had similar findings and showed that 1.3 million smallmouth bass were consumed by cormorants. Increasing mortality of younger smallmouth bass was correlated with the exponential growth of nesting cormorants at Little Galloo Island. In addition, the NYDEC found that angling quality for smallmouth bass deteriorated in eastern Lake Ontario, but not in areas of the lake outside the feeding range of the eastern basin cormorants. Taken together, these findings constitute the first scientific evidence that double-crested cormorant predation can adversely impact a fish population. It raises serious concern for the smallmouth bass population in eastern Lake Ontario.



Double-crested cormorants have eaten fewer salmon and trout stocked in the eastern basin of Lake Ontario since stocking methods were modified in 1994.



Double-crested cormorant diet averaged over four years, 1993, 1994, 1995, and 1996. Prey fish make up 60% of the diet, while game fish make up less than 2%.

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