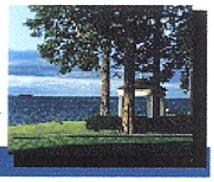
The CORNELL UNIVERSITY Biological Field Station At Shackelton Point



900 Shackelton Point Road, Bridgeport NY 13030

February 1, 2010

Dear Delegate

This letter outlines our understanding of the effect of an unmanaged double crested cormorant population on fish populations in Oneida Lake, New York.

In 2002, 2004, and 2008, we published papers in three of the most prestigious scientific journals in fisheries (Transactions of the American Fisheries Society, Canadian Journal of Fisheries and Aquatic Sciences) and ecology (Ecological Applications, published by the Ecological Society of America). These papers compared anglers and cormorants as sources of mortality, reviewed the evidence for the effect of cormorants on the walleye and yellow perch populations in Oneida Lake, and tested the hypothesis that cormorants increased walleye mortality using a fisheries assessment model. Walleye and yellow perch are the major contributors to the sport fishery on Oneida Lake; a lake that is second only to Lake Ontario in amount of sport fishing activity in New York State. Based on Cornell University's long term investigations of the fisheries and limnology of Oneida Lake funded mainly by New York DEC, we were able to show the following:

1) the increase in cormorant numbers on Oneida Lake coincided with documented declines in both walleye and yellow perch populations;
2) there was an increase in sub-adult mortality (age 1 to age 3) of walleye and yellow perch during the decline phase;
3) cormorants selectively feed on age 1 to age 3 yellow perch and walleye;
4) the consumption of sub-adult walleye and yellow perch by cormorants was high enough to account for the observed increased mortality of both species, and this increased mortality was sufficient to account for the decline in yellow perch and about half of the decline in walleye;
5) there were no other changes in the lake that could explain the increased mortality of sub-adult walleye and yellow perch.

Therefore, we concluded that cormorants were the main cause for the decline in yellow perch and one of the main causes for the decline in walleye observed in the 1990s. The decline in walleye was attributed to two mechanisms: cormorants causing increased mortality of sub-adults and increased mortality of young walleye during their first year of life (which is not caused by cormorant predation).

Because of the availability of the long term data set on Oneida Lake and the careful evaluation of alternative hypotheses, these studies are considered some of the best available anywhere showing negative impacts of cormorant predation on sport fish populations in inland lakes, and are cited as such world wide.

The cormorant control program that was instigated on Oneida Lake in 1998 and funded mainly by the federal government through APHIS is important for the walleye and yellow perch populations in Oneida Lake. This control program represents a whole lake management exercise and is a great example of adaptive management in action. The results so far have been positive for the fish populations, as both walleye and yellow perch have increased since a low in the late 1990s. This supports our earlier

conclusions of a cormorant effect, and would lead us to conclude that discontinuation of the control program will result in declines of both walleye and yellow perch.

Thus, based on our current understanding of the effects of cormorants on the walleye and yellow perch populations, we feel continued control of cormorants on Oneida Lake is required to prevent declines in populations of both species. We strongly support the Oneida Lake Association's efforts to reinstate funding for this program.

Sincerely,

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Director, Cornell Biological Field Station
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James R Jackson
Senior Research Associate
Leader of the Cornell Warmwater Fisheries Unit

References:

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