

Bada Bang, Bada Boom: Dispersal of fall migrating cormorants to protect sportfish on Oneida Lake, New York

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Abstract: The interior population of double-crested cormorants (*Phalacrocorax auritus*) continues to increase. As a result, conflicts between human interests and cormorants have intensified. The impacts of nesting, roosting, and migrating cormorants include predation at aquaculture facilities, interspecific competition with rare species including common terns (*Sterna hirundo*), and impacts to private property. In addition, heightened public and scientific debate regarding cormorant impacts on sportfish has accelerated the need for effective, socially acceptable methods for managing local conflicts. In 1998 and 1999, USDA, APHIS, Wildlife Services; the New York State Department of Environmental Conservation; and USGS, New York Fish and Wildlife Research Cooperative collaborated on a pilot project to investigate prospective methods and strategies for reducing predation of yellow perch (*Perca flavescens*) and walleye (*Stizostedion vitreum*) by fall migrating cormorants on Oneida Lake, New York. The goal of the cooperative program was to reduce stopover time, thereby reducing predation on fish stocks by migrating cormorants. A lakewide integrated non-lethal harassment and roost management program was initiated to disperse local and migrating cormorants from September to October each year. A variety of methods were used to manage cormorants including: electronic guards, propane cannons, mylar tape, human effigies, pyrotechnics, and dispersing birds with a boat. Harassment was focused on birds loafing on the water as well as day and night roosting sites (8 day and 2 night roosts). A total of 52,840 cormorants was dispersed (in many cases individual birds were harassed multiple times) using 1,518 pyrotechnics and 649 staff hours on the lake during the 2 years of the program. Surveys documented a 61%-98% reduction of the cormorants population on Oneida Lake compared to mean counts during the same time period from 1995-1997. Estimated total annual fish consumption by cormorants was reduced by 30% in 1998. Some off-site impacts of the program were seen with increased flocks of cormorants documented on nearby lakes.

Key words: aquaculture, double-crested commorants, *Phalacrocorax auritus*