

Not Just For The Birds: Double-Crested Cormorant Population Management In Minnesota

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Threats Posed By Cormorants

Cormorants can have numerous negative impacts. Their increase in population has been associated with the following problems:

- Aircraft strikes
- Increased in Newcastle Disease Virus in American poultry
- Losses in the fish farming and aquaculture industries
- Damage to vegetation, especially on unique island ecosystems
- Displacement of co-existing bird species (Ring-Billed Gulls and Caspian Terns)
- Aesthetically unpleasing to property owners

Abstract:
Phalacrocorax auritus, the Double Crested Cormorant, is under federal protection by the Migratory Bird Treaty Act, but its population in the Great Lakes Basin is growing rapidly. This is resulting in increasing negative consequences. Not only are they affecting human endeavors like the poultry industry and fish hatcheries, Double Crested Cormorant are causing negative impacts on native bird and fish populations as well as native vegetation. The question I address in my thesis is how do we best manage the population of these birds both to protect the species from disease and to protect the environment. Options within a population management plan could include lethal management, non-lethal management or a combination of both. I have conducted a literature review on the subject of Double Crested Cormorant population management and have interviewed experts in the field of wildlife management on efforts currently under-way at Leech Lake in Minnesota. I conclude that there is not one particular method to manage cormorant most effectively. Instead a plan must be carefully researched for each site and be drafted on a case by case basis to ensure maximum efficiency as well as minimizing costs.



Double Crested Cormorant
<http://morningjoy.wordpress.com/2009/01/26/one-lean-mean-fishing-machine/>



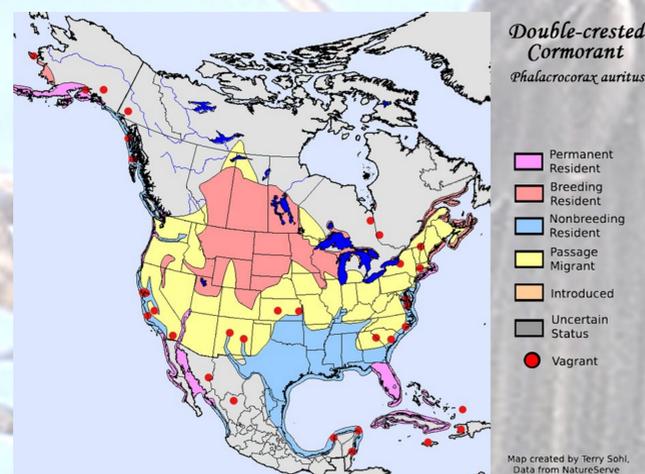
Caspian Tern; a species indirectly displaced because of Double Crested Cormorants.
<http://bc.lysveds.com/photo/caspian-tern-hydroprogne-caspia/perched-rock>



Double Crested Cormorant feeding.
<http://morningjoy.wordpress.com/2009/01/26/one-lean-mean-fishing-machine/>



Double Crested Cormorant swallowing its prey whole.
<http://morningjoy.wordpress.com/2009/01/26/one-lean-mean-fishing-machine/>



Double Crested Cormorant Range in North America.
http://sdskonbirds.com/species/maps/double_crested_cormorant_map.htm

	Method	Benefits	Barriers	Cost
Non-Lethal Methods	Exclusion Method	Excludes the birds from and protects the enclosed resources	Difficult to place nets around natural bodies of water and expensive to maintain	\$\$\$
	Destruction/ Removal of Nesting Material	Deters birds from returning to a roost location	Labor intensive and must be done annually	\$\$
	Auditory Frightening Tactics	Deters birds from returning to a feeding or roosting location and requires minimal maintenance	Displeasing to people in the surrounding area	\$
	Visual Frightening Tactics	Deters birds from feeding and returning to a feeding	Must be moved periodically to remain effective	\$\$
Lethal Methods	Sharp Shooting	Can physically reduce the population at a single location	Very labor intensive, requires expensive ammunition and can be dangerous to people in the surrounding area	\$\$\$
	Egg Destruction	Can physically reduce the population at a single location and only needs to be done once a year	Labor intensive	\$
	Capture and Euthanize	Labor intensive and requires placement and maintenance of netting	Labor intensive and often viewed as inhumane	\$\$
	Hunting Season/ Open season	Generate revenue, could be regulated and would reduce populations state-wide	Federal protection of the species and possibly safety	\$

Management methods and their benefits, barriers, and costs. (\$= inexpensive, \$\$=moderately expensive, and \$\$\$= expensive)

Methods:

To better understand the problems that Double Crested Cormorants can pose, I conducted a literature review which included documents drafted by the United States Department of Agriculture as well as by the United States Fish and Wildlife Service. I also conducted a telephone interview with Steve Lewis, Regional Non-game Bird Coordinator for the Mid-West Region for the U.S. Fish & Wildlife Service, to better understand why Minnesota had decided to manage Double Crested Cormorant. I then investigated Minnesota's management efforts further by speaking to Steve Mortensen, Fish and Wildlife Biologist for the Leech Lake Band of Ojibwe. Steve has worked as the Leech Lake Biologist for 29 years and has been integral to the management of Double Crested Cormorant on Leech Lake by both helping to get it started and by participating in management practices.



An example of the visual frightening tactics being employed on Leech Lake in Minnesota.
<http://staticinstants.files.wordpress.com/2012/04/wackywarning.jpg>



Two Double Crested Cormorant in their nest atop a dead tree.
<http://allthingsfish.blogspot.com/>

Conclusion:

The decision to manage Double Crested Cormorant should be made on a case-by-case basis. This decision should be based on population size, target populations size, the impact the birds are having on their environment and the colonies reproductive success. The term used by Steve Lewis of the U.S. Fish and Wildlife Service is "adaptive management" which involves the setting of a tentative goal and then adaption of the management practices based on the colonies reaction to management. These adaptive management plans will most often include a combination of lethal and non-lethal management practices. This combination will be based upon which practices will be most effective with the least cost.