Oneida Lake Association
PO Box 3536 Syracuse, NY 13220-3536
info@oneidalakeassociation.org

Greetings!

WHAT'S UP?

It is that time of year when anglers and lake watchers want to digest the seasonal change and observations - including the autumn migration of Double-crested cormorants (DCC). Tens of thousands of birds move across the lake in September and October. Annually, many questions are asked of the OLA Directors and their associates. So this issue is dedicated to the further understanding of an issue that has been challenged the OLA for over 20 years.

As those of you who attended the 2016 annual meeting heard from NYSDEC's David Lemon, the very day of the meeting a Federal Court halted DCC harassment. A court suspended all Depredation Permits and efforts across the Nation to manage this species, one whose population exploded and range expanded in the later half of the last century.

This suspension was of great concern to the OLA Board of Directors, Cornell University, and NYSDEC. It meant that no stomach contents could be analyzed. Cornell had, since 1957, a singularly premier biologic model compiled regarding the predator-prey relationship of walleye and perch. Diet samples from DCC were a part of this study for several years. Then, the round goby arrived, and scientist-managers wanted to know what, if any, change in diet would be reflected in the DCC stomachs. The Federal ban eliminated data collection for two years.

Your Directors, at the close of the March 2017 OLA Goose Workshop, cornered the Federal and State managers and Cornell's scientists. We advanced the need for a special permit to continue the now-missing critical component of the nation's longest walleye-perch study. It took a year, but in 2017 and 2018 NYSDEC was granted a permit to "take" 220 cormorants for scientific reasons.

Below you will learn a bit about the (now) nuisance bird, why it is of concern, why terns are our friends, and what effect the DCC presence is having on the most studied lake of its kind in the USA.

Management of Double-crested Cormorants in New York

from a recent NYSDEC Press Release

Double-crested cormorants *(Phalacrocorax auritis) are a common sight along our marine coastal areas and along the shores and islands of the Hudson River, Lake Ontario, St. Lawrence River, Lake Champlain and Oneida Lake. Their populations greatly increased across New York during the 1990s into the early part of this century. High densities of nesting cormorants are not without problems. For more than 20 years, DEC has carried out cormorant management programs to prevent conflicts at specific problem areas in New York. However, in May of 2016, a federal court decision canceled a US Fish and Wildlife Service (USFWS)* Depredation Order *which allowed DEC to manage cormorants to benefit uncommon birds, sensitive habitats, and fish populations. As a result, no management took place in New York in 2017. The USFWS completed an* Environmental Assessment *(EA) in late 2017. The EA allows for limited take (killing) of cormorants to reduce health and human safety risks, damage to fish hatcheries, impacts to federally-listed threatened or endangered species, and damage to property. The EA does not allow any take of cormorants to reduce impacts on free swimming fish. Visit DEC's* Double-Crested Cormorant Management page *for more information.*

Basis for Federal Depredation Permit's exclusion of sport fisheries

By Bryan Kluever, USFWS, Migratory Bird Program, Region 5

The fall migration of double-crested cormorants (hereafter cormorants) from Oneida Lake is a familiar scene. Although the seasonal presence of this species is a routine and consistent occurrence, management of cormorants in the area has undergone change. Cormorant populations have fluctuated dramatically over the past century. Like many bird species, their numbers suffered from unregulated killing and over-harvest in the early twentieth century and were again adversely impacted mid-century by DDT. The ban of DDT coupled with the 1972 addition of the species to those protected under the Migratory Bird Treaty Act coincided with population increases. As the number of cormorants on the landscape grew, so did management needs and human-wildlife conflict concerns.

The intentional and purposeful killing, otherwise known as lethal take, of birds and active nests protected by the Migratory Bird Treaty Act is prohibited unless authorized by the US Fish & Wildlife Service (Service). Two of the regulatory mechanisms that allow for such an authorization are Depredation Permits and Depredation Orders; depredation in this context refers to damage or loss caused by birds and can include agricultural damage, private property damage, threats to human health and safety, and threats to recovery of protected or sensitive natural resources. Depredation permits are issued for a specific number of individual birds or active nests associated with a specific site and carried out by a specific individual or entity. Depredation orders are undertaken usually by State and Federal agency staff with a goal of reducing economic loss associated with migratory bird depredation at a larger spatial scale and over a longer period than depredation permits.

A significant regulatory change tied to cormorant management in the Northeastern United States was the establishment of a public resource depredation order in 2003. This order allowed for greater cormorant management flexibility with the aim of reducing the occurrence of adverse impacts to public resources (e.g., fish, wildlife, plants, and their habitats). The depredation order applied to all lands and fresh waters in 24

states, including New York.

Allowing lethal take of migratory birds is a federal action, and the Service is responsible for maintaining compliance with the National Environmental Policy Act (NEPA), a statute that requires federal agencies to examine and assess the potential environmental impacts of their actions. In 2016, a federal court made a determination on a lawsuit filed by Public Employees for Environmental Responsibility. The court found that the Service violated the NEPA in authorizing the take of cormorants in 24 states east of the Mississippi without adequate analyses. More specifically, the ruling found the Services decision of managing cormorants through the depredation order to be arbitrary and capricious, that the claims of economic impacts engendered by cormorants were based on little substance, and that the purported negative impacts to natural resources by cormorants were tentative at best. This ruling resulted in the removal of the cormorant public resource depredation order as a management tool for this species. An additional cormorant aquaculture depredation order tied to the lawsuit and ruling was also vacated as a result of the ruling.

Since the ruling, the Service has taken several steps to address the cormorant conflict. In 2017, the Service released an Environmental Assessment (EA) released under the NEPA in consultation with the U.S. Department of Agriculture's Animal and Plant Health Inspection Service Wildlife Services. This EA evaluated options for issuing individual depredation permits to lethally take cormorants while ensuring the long-term sustainability of the population. The EA analyzed options for the issuance of depredation permits for cormorants where there is either significant economic damage to aquaculture facilities, significant damage to native vegetation, significant impact to a threatened or endangered species or significant human safety risks. This review did not include potential damage to recreational and commercial fishing by cormorants because the scale and complexity of the issues involving cormorant control to protect wild free-swimming fish populations is substantial, and not as easily assessed as the depredation issues addressed in the EA.

Currently, the Service is addressing the cormorant-free swimming fish conflict by utilizing a newly developed decision making tool for evaluating and responding to conflicts with migratory bird species. This approach, which is strongly rooted in adaptive management, allows the Service to investigate in a consistent manner scenarios where a protected migratory bird species is perceived to be negatively affecting a resource to the extent that intervention is necessary to reduce the effects. This process is designed to be biologically defensible and to promote efficiency, effectiveness, and coordination with stakeholders. As part of this process, the Service recently concluded four Cormorant and Free-Swimming Fish Information Gathering Workshops with Partner State and Tribal Natural Resource Management Agencies. The New York State Department of Environmental Conservation attended the Great Lakes Workshop on August 16, 2018, where the cormorant conflict at Oneida Lake was discussed in earnest.

As a next step in this process, the Service is collecting from our Partner agencies information on the cormorant-free swimming fish conflict and will be coalescing and analyzing this information. A next step following the analysis of the best available data and science is to determine management

options. Possible additional steps include the development of a biological assessment and NEPA documentation. As cormorants depart Oneida Lake this fall for their southerly wintering grounds, the Service will continue to make advancing progress toward resolving the cormorant-free swimming fish conflict a priority.

One Good Tern Deserves Another: Colonial Waterbird Management on Oneida Lake

by Paul D. Curtis, Professor, Cornell University

The common tern (*Sterna hirundo*) is listed as a threatened species in New York State. This is largely due to the loss of suitable nesting habitat, which is strongly correlated with landfill-subsidized increases in gull populations during the last few decades, because gulls also compete for similar nesting space. This, coupled with gulls arriving about three weeks earlier in spring than common terns, severely restricts nesting space for terns, adversely affecting them throughout the rest of the nesting season. Common terns, similar to other colonial waterbirds such as gulls and cormorants, nest on open, rocky, or shell-filled islands (Figure 1) away from the shoreline and potential mammalian predators. In addition to gulls, double-crested cormorants may also compete for limited nesting space on the Oneida Lake islands. Historically, terns nested on Wantry, Long, and Little Islands, and occasionally used Willard and Grassy Islands in high-water years. However, the common tern colony at Oneida Lake has been reduced to one nesting island, Little Island, which is reserved annually for the tern colony by researchers at the Cornell Biological Field Station. Cornell University staff have monitored and managed the colony since 1976, and continue implementing methods such as chick banding, adult recaptures, gull and cormorant management, and habitat enhancement on Little Island. To enhance tern nesting we have provided chick shelters, installed gull-exclusion wires in spring (Figure 2), and distributed grass clippings for nesting material. These tern management practices occurred during each summer field season.

The goals of the Cornell University research and management efforts are focused on encouraging nesting, and consequently raising tern numbers to sustain a stable, self-perpetuating inland population. The New York State Department of Environmental Conservation (DEC) management goal for the common tern colony on Oneida Lake is to reach stability with at least 500 nesting pairs each year. Due to Little Island's limited nesting space, this management goal is sporadically achieved. Since 1979 the goal of 500 nesting pairs has been achieved in only 6 years, but peak nest numbers have been close during an additional 7 years (Figure 3). With continued erosion from winter ice and summer storms on Little Island, there may no longer be enough suitable nesting space for 500 common tern pairs.

Although the peak nest count is valuable, what is really important is the number of surviving tern chicks produced each year (Figure 3). In 2015, we experienced the worst nesting season on record. Even though there were about 350 nests at peak count, only one banded chick was known to survive. A combination of high water, severe summer storms over-washing the island, and night-time predation from a great blue heron killed all but a single chick. The greatest threats to the common tern colony are high water

levels and associated storms, competition for nesting space with gulls and cormorants, and predation from other waterbirds such as gulls and herons.

Consequently in 2019, we may try to restore common tern nesting on part of Wantry Island to provide a second location on Oneida Lake with secure habitat. We attempted this in summer 2015, and actually had >60 tern nests started on Wantry Island. However, the severe storms that summer over-washed the island and destroyed all of the common tern nests. To be successful on Wantry Island, we will need to manage both gulls and cormorants to secure safe nesting space for the terns. We will put up gull-exclusion wires on part of the island, and install fencing to keep gulls and cormorants out of the tern nesting area. In addition, we will limit gull nesting to part of the island, and remove cormorant nests that we find to lessen competition with the common terns.

During 2013 and 2014, we deployed geolocators affixed to a colored plastic leg band on 10 different adult terns. Each tern we marked with a geolocator was previously marked with a USFWS aluminum leg band, and was actively nesting at the time of capture. The geolocators sense light levels and day length. Once the geolocator is set at a specific location, these day-length data can be used in a computer program to determine longitude and latitude of any point on the globe where the geolocator might be found. From terns recaptured on Little Island with geolocators in 2015 and 2016, we documented their migration routes and winter destinations (Figure 4). All the common terns with geolocators from Oneida Lake wintered in western Peru in South America. The mean distance traveled during autumn migration was ~7,553 km (4,720 miles), and during spring migration, the mean distance was ~7,640 km (4,775 miles). These are tough little birds, as we sometimes recapture banded common terns 12 to 18 years old that have made this long-distance migration many times. It is important to continue common tern management efforts each summer, because without protecting the remaining nesting habitat from gulls and cormorants, this unique inland tern colony could be lost.

Figure 1. Tern chicks and unhatched egg on Little Island. Photo by Jacqueline Doerr.

Figure 2. Poly-wire fencing grid used for excluding gulls on Little Island, Oneida Lake, New York. Photo by Paul D. Curtis.

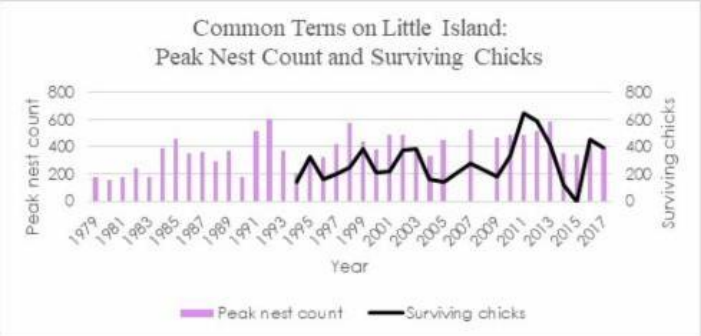
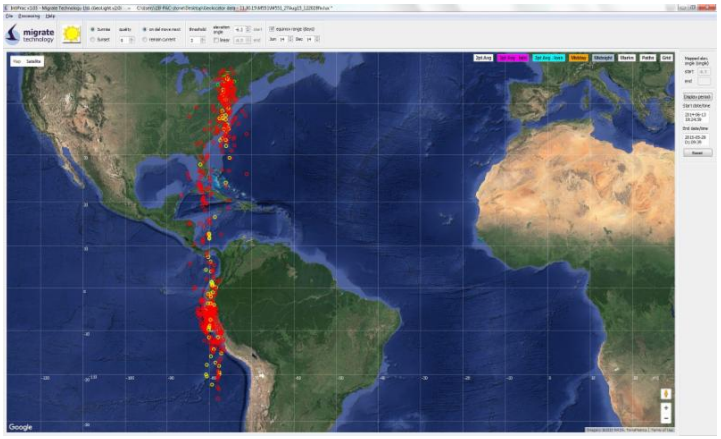


Figure 3. Long-term peak nest counts and number of surviving chicks for Little Island at Oneida Lake, New York, 1979-2017.

Figure 4. All data collected from one geolocator placed on a common tern during summer 2014, and recaptured summer 2015 on Little Island at Oneida Lake, New York.



INTERIM REPORT OF NYSDEC 2018 DCC HARASSMENT

David Lemon, NYSDEC R-7 Fisheries Manager

Efforts by the New York State Department of Environmental Conservation (DEC) to manage impacts of double crested cormorant on the sport fish of Oneida Lake started on May 1, 2018 and will continue through the end of the second week of October. As we had planned and as I reported to the OLA Board during the winter meeting at Constantia, we were on the lake 1 day/week in May, June, and July when bird numbers were low, 2 days/week in August and 3 days/week in September. In addition to non-lethal harassment, 200 cormorants have been collected by Department staff to gain a better understanding of the seasonal feeding habits of cormorants and evaluate the importance of round goby in cormorant diets.

Cormorant numbers in early May remained relatively low. The peak spring lake-wide count of 148 birds occurred on May 9, and less than 100 were present on the lake each week from May 29 through July 19. The lowest lake-wide count of 46 cormorants occurred on June 26. Early efforts to deter cormorants from using Long Island as a loafing/nesting location resulted in few nest building attempts and no eggs produced. It appears that efforts in recent years to haze cormorants in and around Long Island have discouraged cormorants from making serious efforts to utilize it as a nesting site. This is similar to what occurred during the years that USDA APHIS was actively managing cormorants on Oneida Lake. During the first three years immediately following cessation of APHIS efforts, there were no cormorant nesting attempts on Long Island.

Counts of cormorants averaged less than 100 total birds from May through July but, as is typical, the first transient birds arrived during the first week of August. The lake-wide cormorant count went from 112 during the last week of July to 492 on August 3rd. Cormorant numbers continued to increase through late August with the seasonal high count of 1,356 occurring on September 4. Counts have averaged around 1,200 birds/day for most of September but have declined to approximately 700 during the last week of September and the first week of October.

DEC cormorant hazing efforts and counts will continue, weather permitting, through the end of the second week of October.

PRELIMINARY RESULTS OF 2018 DCC DIET ANALYSIS

Randy Jackson, Cornell Biologic Research Station

As of September 7th, 2018, Cornell biologists had examined the diets of 122 cormorants collected for study by New York State DEC. The samples included 557 identifiable diet items representing 12 species of fish, as well as crayfish and mud puppy. Numerically, round goby were by far the most common species consumed by cormorants, representing 72% of identifiable diet items. Yellow perch ranked second, accounting for 15% of diet items, followed by gizzard shad at 7%. Walleye accounted for 3% of identifiable fish in diets. Diets have been fairly consistent through the year, and we have not seen the typical shift to gizzard shad observed in the late summer and fall in most years, with cormorants instead continuing to most commonly feed on round goby.

Prior to the establishment of round goby in Oneida Lake, cormorants commonly exhibited distinct summer and fall feeding patterns. In the summer, yellow perch were the most common species observed in diets, averaging over 50% of fish identified in diets across years. Walleye ranked second at just under 10% of diets. Logperch and sunfish were also common in summer diets. In most years, fall diets were dominated by gizzard shad, which accounted for 55% of diet items across years, followed by yellow perch at 20% and emerald shiner at 14%.

Round goby became an important diet item for cormorants almost immediately upon there establishment in Oneida Lake. By numbers, they were equally as common as yellow perch in cormorant diets in 2015 and 2017, and in 2016 round goby were 5 times more common in cormorant diets than yellow perch. Up until this year, we continued to see cormorants shift over to gizzard shad and emerald shiner in the late summer and fall, even with round gobies available. The continued dominance of round goby in cormorant diets in the late summer and fall of 2018, even with gizzard shad present, is a first for us, and only time will tell if this is going to be the new normal or whether this year will prove to be a unique exception to past patterns.

ALSO OF INTEREST

North America is not alone in its challenges by invasive fish species. Take a look here: https://scienmag.com/decline-in-native-fish-species-invasive-species-on-the-increase/
And then there is some new news regarding cyanobacteria - blue green algae. https://www.nationalgeographic.com/science/2018/10/news-cyanobacteria-photosynthesis-mars-extraterrestrial-life/

And just as NYS has ramped up the brewery-winery industry, hops and grape growers face a new threat. It is enough to drive you to drink!
Americans want their products cheap, and for the last two generations the rate of imported goods has satisfied them. But what of the future generations? Will our grandkids have enough to eat? Maybe our kids need to educate themselves sufficiently to educate our politicians to fund productive research so we can 'build a

wall' of the right sort. Nations need to curtail damage from pests and expansion that increasingly threaten our waters, forests, crops, and landscapes. Failing to do so will likely let the laws of biology and nature, rather than state and national capitols, rule.
https://www.bloomberg.com/news/features/2018-10-02/america-isn-t-ready-for-the-lanternfly-invasion?utm_campaign=news&utm_medium=bd&utm_source=applenews

QUESTIONS ASKED OF THE BOARD:

What can OLA do to assist us?

Sociologists at Cornell are conducting a study to try to determine how important wild food sources (fish, game, wild fruits and plants) are to the local community around Oneida Lake. While the economic value of the lake's resources to the local area have been studied by tracking expenditures related to angling, the broader importance of the area's resources as a source of food has not been looked at.

We are hoping readers of the OLA newsletter will be willing to follow the link below to complete an online survey on their use of wild food sources. The survey should take about 10 minutes, less if you do not hunt or fish. We would like to hear from a wide diversity of people, so please participate even if you do not hunt or fish.

https://cornell.qualtrics.com/jfe/form/SV_3yGUekrShAi7flF

Is the mussel density up this year, and if so, why?

We will ask the folks at Cornell and respond next month. Several anecdotal comments were heard from around the lake that small dressinid mussels (invasive zebra/quagga) were seemingly much greater in number than usual on docks and hoists pulled this fall.

Pay your dues, and HELP PROTECT ONEIDA LAKE!!!!

If you have an avocation and interest in serving OLA, please reach out to one of the Directors - our contact info is at our website.
The BOD anticipates that there will be at least one Director vacancy in

the next year or so. Directors meet once a month; each Director must serve on at least one standing committee, volunteer for special events, and anticipate advancement to an officer's position after serving for a few 2-year terms.

Talewaters: The NEW TRAFFIC CIRCLE is functional, along with new and sidewalks and pedestrian crossings. Watch your approach to Bridgeport for then new crosswalks, signage, and speed changes when you enter the round-about. Give the tractor trailers and larger vehicles a bit of space.

Under construction east of the bridge is a third lane expansion to accommodate gamblers turning into the casino. It should be paved and complete by the end of October.

Perch and walleyes are starting to display their autumn hunger! Work the 15-25' depths with small fatheads for perch, and prepare your stickbaits for the walleye "nighbite".

THANKS TO OUR VOLUNTEERS!

On Friday, Sept. 14 the fall Bartel Rd. Highway Cleanup took place. The OLA adopted this intersection in the NYSDOT program to keep NY highways clean (after inconsiderate litterers).

We had a light participant group of 5 hard core volunteers. Headed by myself and Warren Darby, Tom Giufre, Steve Drummond and my father George Sr. The grass was high so we could not venture too far off the road shoulder, though we managed to collect six quite full bags. The Park n'ride lot / fishing access area was cleaned up as well. I thank this group of reliable volunteers for their dedication to this effort. We look forward to the Spring 2019 event, as needed.

Respectfully submitted,
George.Reck

Pay your dues, recruit your non-member neighbors and friends, and HELP PROTECT ONEIDA LAKE!!!!

Donate

Help OLA function. Memorials and contributions to our program are most welcome.

OLA is a 501(c)4 organization serving protection of the Oneida Lake environment.

The Oneida Lake Association is a member of the New York State Conservation Council http://www.nyscc.com/ and the New York State Federation of Lake Associations http://www.nysfola.org/.

Report environmental violations. Please remember to obey all laws, rules, regulations, and codes of ethics as they pertain to boating, fishing, hunting, and management of Oneida Lake and its drainage basin. Be civil. ***1-844-DEC-ECOS (1-844-332-3267) or 1-800-TIPP DEC (1-800-847-7332)***

Edited by Scott Shupe and John Harmon.
Send us your notes and articles for use in future ENews!