

THE BRODIE CLUB



Established 1921

Website: <http://thebrodieclub.eeb.utoronto.ca>

THE 1,118th MEETING OF THE BRODIE CLUB

The 1,118th meeting of the Brodie Club was held on Tuesday, 19 March, 2019 in Room 432 of the Ramsay Wright Laboratories of the University of Toronto.

Chair: Katie Thomas

Secretary: Kevin Seymour

The meeting was called to order at 7:35 pm and was attended by 34; 27 members and 7 guests.

Roll Call:

Present: E. Addison, R. Addison, Bacher, Beadle, Bryant, Coady, Curry, Daniels, Dengler, Dunlop, Dunn, Hussell, Hutchinson, Iron, Kortright, Martyn, McAndrews, Moldowan, Peter, Pittaway, Reading, Riley, Rising, Seymour, Slessor, Stones, Thomas

Guests: Andrew Gavloski, Laurence Packer and Ron Jenkins (guests of the Club), Clara Thaysen, Katie Ziebarth and Jessica Leivesley (Moldowan), Sharon Hick (McAndrews)

Regrets: Abraham, Bertin, Crins, Dunlop, H. Juhola, King, Kotanen, LaForest, Lindsay, Obbard, Rapley, Tomlinson, Sutherland

Minutes:

Motion to approve the minutes of the February meeting made by Curry, seconded by Rising, all in favour, motion passed.

Committee Reports:

Program: E. Addison reported that the April speaker will be Chris Wilson from MNR Peterborough, who will be speaking on fish (no title at this time). The May meeting will be held on the usual third Monday, May 21st.

Field Trip: Thomas reported that the field trip this year will be to Darlington Provincial Park on Sunday, June 9. Being a Provincial Park, there will be a day use fee. The committee has reserved a roofed shelter for cooking and seating. There are 4 trails of various lengths to hike and the possibility of Piping Plovers on the beach. The Park Naturalist, Gord Vogg, has been engaged to speak to us.

Announcements:

Moldowan noted that the Algonquin Provincial Park Research Station is celebrating its 75th anniversary with a fundraising get together on the weekend of Sept 14th-15th. All alumni and fans of the station are encouraged to attend. He also brought note cards for sale at the meeting, a project to help raise funds for the station.

Curry announced that the Hamilton Naturalist Club is celebrating its 100th anniversary on Nov 2 with a get together, at which Michael Runtz will be the speaker. In addition, both OFO and FON will hold their annual meetings this fall in Hamilton.

Bacher noted that the Province has opened up the Far North Act for reconsideration, and the fear is that more land will become available for mining.

SPEAKER:

Ed Addison introduced the speaker, Dr Gail Fraser, Associate Professor of Environmental Studies at York University



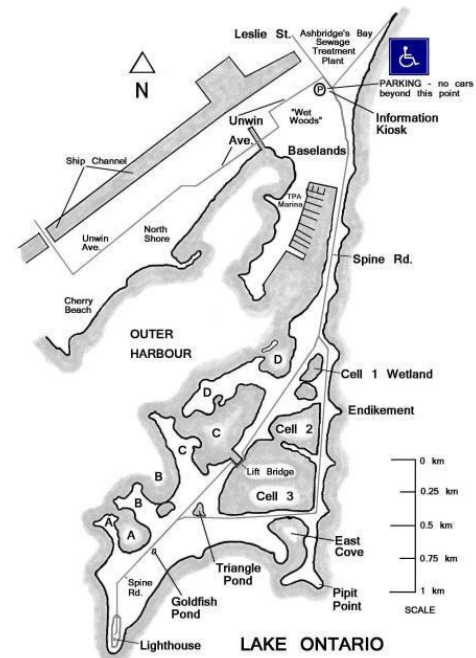
The Double-crested Cormorants of Tommy Thompson Park

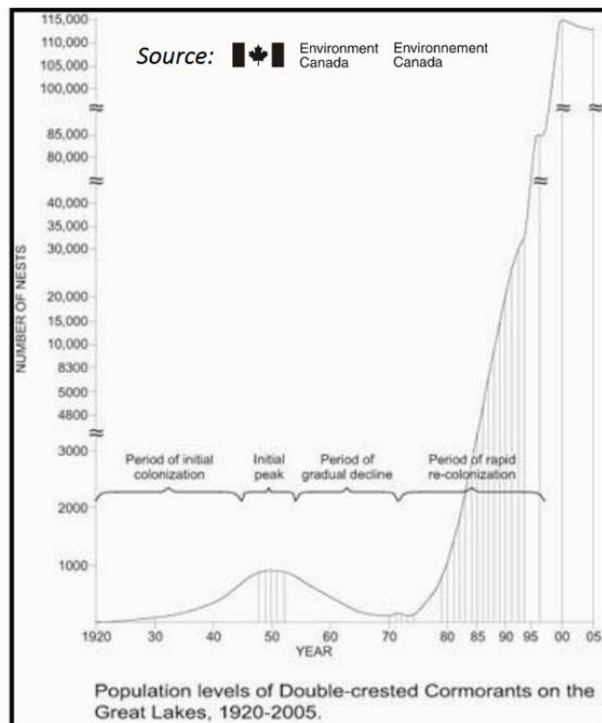
The Double-crested Cormorant (*Phalacrocorax auritus*) has five breeding sub-populations on this continent. Although a native species to North America, it seems to have been present in low numbers on the Great Lakes prior to 1913, although there is some controversy about this idea. There was a low population in the 1920's on the Great Lakes which increased by the 1950's, when DDT and hunting took a toll. Since 1980, numbers have increased dramatically. In Toronto there were 89 nests at Tommy Thompson Park (TTP) in the 1980's, and that number has grown to 38,000 nests today.

Cormorants display away from the nest, showing off the blue lining to their mouths. They nest in trees or on the ground, and both parents are needed to successfully raise any chicks. They breed at age 2 or 3, with an average life expectancy of 6 years. Cormorants nesting in trees kill them off in about 10 years because of guano accumulation on leaves and alteration of soil. Cormorants feed their chicks primarily Alewife fish and also Round Goby. They use sticks and any available garbage to build their nests and will steal what they can from a neighbour's nest. Nests are re-used year after year.

Because there are potential conflicts between humans and cormorants due to the birds' effects on fisheries, habitat and other water birds, the Toronto Region Conservation Authority (TRCA) set up a Cormorant Advisory Group. This body identified management action that did not include a lethal cull for TTP. This was a new idea, as 300,000 cormorants were culled across 24 U.S. states between 1998 and 2012, mostly by fish farm operators. The TRCA management approach was to encourage the birds to nest on the ground so they would not kill trees, as that had been identified as the biggest public objection to the species in Toronto.

This was accomplished by knocking down tree nests (before there were chicks) and setting up decoys on Peninsula A to try attracting the cormorants to nest on the ground there. This largely worked, as by 2016 there were several hundred nests on Peninsula A (see map at right). Diurnal access by humans to the ground nesting colony was barred and observations were made from blinds, to minimize disturbance. Nest counts were done at night, again to minimize disturbance. Currently counts are taken using aerial photos.





In addition to the cormorants nesting on Peninsula A, between 2008 and 2016 there was an 899% increase in number of ground nests on Peninsula B. The TTP colony is now the largest in North America for this species.

Since 2002 there has been a decline in the number of Black-crowned Night-Herons nesting at TTP. Do cormorants have a negative impact on this heron species? This is difficult to determine. The researchers have only rarely seen direct interactions between the species, even when they are nesting in the same trees. Predators of the herons seem mainly to be raccoons. Despite the increase in cormorants nesting at TTP, the numbers of Great Blue Herons and Black-crowned Night-Herons have not been negatively impacted on a regional scale.

Although coyotes visit the colonies, cormorants themselves are most vulnerable to Bald Eagles, and flush immediately when one comes near. Gulls commonly forage on the ground beneath the colony, eating fallen chicks or regurgitated food falling from above, but evidently do not impact the cormorants.

The European Fire Ant is now established at TTP, and it seems that this ant -- as well as the cormorants -- are responsible for a reduction of arthropod and plant species richness at TTP. Even Herring Gull chick growth is impacted by the ants. Ant abundance and cormorant nest density were studied according to habitat type, and it was found that forests transformed to open areas by cormorants negatively impacted the ant population.

Questions following the presentation:

Bacher – What is going on with the latest proposed cormorant hunt?

Answer: This hunt was proposed by politicians without any input from MNR staff. MNR does not support this proposal.

E. Addison: Are coyotes the main predators of the cormorant at TTP?

Answer: Although coyotes will take cormorant chicks, they seem to prefer gull chicks. Increasingly, Bald Eagles take cormorants, and the increase of eagles seems to correlate with an increase of nest mortality for these birds.

Reading: What is the origin of the Fire Ant population?

Answer: Unknown, but it seems to have appeared about 1988.

Riley: As a comment on early history of cormorants in Great Lakes: Early bird surveys done by astute observers (Agassiz, Hynes, McCallum, McIlwraith) found no cormorants in Ontario. In addition, Savage's 'Faunal Osteoarchaeology' book found no cormorant remains in midden sites in Ontario. [Editor's Note: Riley later re-checked these sources; Savage's *Birds from the Ground*

documents one (1) bone of Double-crested Cormorant, from the site of a year-round village of Late Woodland/Neutral age in the NE corner of Brant Township, Brant Cty]

Dunn: Is there any raccoon control at TTP? Can trained birds of prey be used to control cormorant numbers?

Answer: There is no raccoon control at TTP. Trained birds of prey are too expensive. It is easier and cheaper to simply shoot birds.

Reading: Are cormorant eggs used as a food item?

Answer: No, they reportedly taste fishy. (Dunn, who has tried them, concurred.)

R. Addison: Are there any studies on Alewife and the impacts of cormorants on the populations of this fish?

Answer: No

Dunn thanked the speaker for her interesting and informative talk.

As there were no **Field Observations** reported, the meeting was adjourned to refreshments at 8:55.

