CORMORANT ADVISORY GROUP MEETING #11
Tuesday December 4, 2012
6:30 p.m. to 9:00 p.m.
Metro Hall, Room 303, 55 John Street, Toronto

FINAL MEETING NOTES

Attendees:
Ralph Toninger, TRCA
Karen McDonald, TRCA
Andrea Chreston, TRCA
Nikita Moores, TRCA
Gail Fraser, York University
Janette Harvey, City of Toronto
Ainslie Willock, Canadians for Snow Geese*
Barry Kent MacKay, Zoocheck Canada*
Anne Marie Leger, Toronto Ornithological Club
(*Denotes member of Cormorant Defenders International)

These notes reflect the general nature of the meeting discussion. If there are errors or omissions, please contact N. Moores at nmoores@trca.on.ca.

Comments contained herein reflect the opinion of the individual and do not necessarily reflect the position of the organization they represent.

1. Welcome
R. Toninger opened the meeting by welcoming everyone to the 11th Cormorant Advisory Group meeting. He noted that there were quite a few regrets including J. Quinn and J. Carley. R. Toninger proceeded to introduce N. Moores, an Environmental Field Labourer at TRCA who worked in the DCCO colony in 2012. He then passed the chair over to K. McDonald to present the results of the 2012 strategy.

2. Review of 2012 colonial waterbird data and 2012 cormorant management strategy
a) 2012 Colonial Waterbird Data
K. McDonald stated that the goal and objectives set out for TTP DCCO Management Plan are continuing to work and will remain the same for 2013. She then proceeded to present the results of the 2012 colonial waterbird monitoring and DCCO management strategy. All of the colonial species returned to nest with the reappearance of Caspian Terns (CATE), which last attempted nesting at TTP in 2006 and experienced a complete failure. Approximately 5 nests were observed on Peninsula B amongst the Ring-billed Gulls (RBGU) early in the season, however a peak nest count was not obtained. Herring Gulls (HEGU) were estimated at less than 20 nests. Great Egret (GREG) numbers were at an all-time high, with 8 nests. Common Terns (COTE) had another bad breeding season in 2012. They were slow to colonize the rafts in Cell 2, possibly due to the high water level and mink predation events in 2011. This year they nested and had chicks on the raft in Embayment D, however

there was a raccoon predation event in mid-June that devastated the colony and all nests were lost. It appears that some of the COTE from Embayment D did move to the Cell 2 rafts and fledglings were observed, but an accurate population count was not conducted in an effort to minimize disturbance.

TRCA is pleased with the results of the 2012 DCCO management strategy. There were a total of 11,741 nests; only a three per cent increase from 2011. The tree nest numbers on all peninsulas have started to decline, and tree nesting density appears to have peaked in 2011 and has started to decrease. It is expected that tree nesting density will continue to decrease as tree nesting sites become more limited due to tree loss. Tree occupancy on Peninsula A declined 35.6 per cent, Peninsula B declined 22.2 per cent and Peninsula C declined 11 per cent. The ground nesting colony on Peninsula B grew this year by 27.8 per cent, representing 50 per cent of the entire TTP DCCO population. The ground nesting colony had a population of 5,812 nests, with a density of 1.35 nests per square metre. The density has been fluctuating since 2005, and G. Fraser speculated that this could be due to the spatial expansion of the colony that provides increased space per nest in newer nesting areas. R. Toninger commented that the entire TTP DCCO population could be supported in the ground nest colony with the 2005 nesting density, though a benefit to a lower density is less chick injuries.

Black-crowned Night-Herons (BCNH) numbers are holding steady with 410 nests, located primarily on Peninsula C. The shift away from Peninsula B likely indicates that the habitat is no longer suitable for BCNH. Interestingly, the BCNH nest numbers have been stochastic between the 1980s and mid-2000s at TTP, but since 2009 their nest numbers have stabilized, albeit in much lower numbers.

b) 2012 DCCO Management Strategy

As was decided in the last DCCO Advisory Group meeting on January 19, 2012, TRCA took an adaptive approach to the 2012 Strategic Approach, only utilizing pre-nesting deterrents to prevent DCCO expansion beyond the existing nesting area. This adaptive approach was used to help TRCA determine whether deterrents were having an effect on increasing the ground nest population on Peninsula B.

Inactive nest removal took place during the winter, prior to the 2012 breeding season, where 183 nests were removed with forestry poles from trees that could be reached in the deterrent areas on Peninsulas B and C. Most pre-nesting deterrents were not required; however, active nest removals to prevent DCCO from nesting in healthy trees in target areas on Peninsulas B and C took place. 99 active nests were removed from Peninsula C and 46 active nests were removed from Peninsula B. The same protocol from previous years for active nest removal was followed. All active nests were closely monitored to ensure that eggs greater than 10 days were not removed.

A. Leger looked for clarification on the subject of no eggs greater than 10 days old being removed. K. McDonald confirmed that this was a conservative estimate based on current scientific literature on embryo development for altrical waterbirds from the Humane Society of United States. She also outlined the float test method that is used if a nest is removed with eggs in it. The older the egg the higher it will float in the water column due to embryo development leaving a larger air pocket inside the egg as it matures. K. McDonald reaffirmed that the nest age is very closely monitored to limit any removals of eggs older than 10 days.

In summary, 2012 management included Peninsula A and B ground nest enhancements; prevention of DCCO expansion into healthy trees on Peninsulas B and C; and public interpretation with a webcam on Peninsula B and a viewing blind on Peninsula C. Unfortunately, although the webcam on Peninsula B captured some great shots, there were many technical glitches with uploading the photos to the

website due to the volume and size. TRCA is working to resolve these issues for better public viewing in 2013. K. McDonald shared a presentation of pictures taken from the Peninsula B cormorant camera. The interpreted photos will be posted on the website for the public to view.

3. Update on York University Studies

a) Conspecific attraction experiment

G. Fraser continued with the conspecific attraction experiment on Peninsula A in 2012, though without a graduate student, detailed observations were not recorded. Based on results from previous years, G. Fraser worked with M. Brady to change the setup design. Two circles of nests were arranged near the lone nesting tree. One circle was without decoys and the other had decoys at 50 per cent occupancy with half of the decoys in pairs. DCCO vocals were played between the two plots. This setup may have merit as M. Brady observed returning DCCO fly over the enhancement area at least twice upon their spring arrival. Without detailed observations the success cannot be reported, however, a visit to the site part way into the breeding season found that DCCO had been using the area to retrieve straw nesting material. No nesting took place.

b) The impact of raccoons on tree nesting BCNH

This year G. Fraser concentrated her raccoon impact study on BCNH only. 12 trees were wrapped with the same 91 cm long predator guards as used in previous years. Foil was wrapped above the predator guard to gauge the effectiveness of the guard. 61 nests followed within the 12 trees. The predator guarded trees had a 61 per cent nest productivity, with 37 that fledged young. Of the 24 failed nests, none of the failures were due to raccoon predation. K. McDonald asked why the nests failed. G. Fraser explained that she identifies a nest once construction begins with only a few twigs, so in some cases the nest building is not completed [no eggs were ever laid]; wind and weather may also be a factor. A. Leger sought clarification that the measure is of nest success rather than bird success. G. Fraser confirmed that it was the nest success that was recorded. The productivity over the years have varied greatly, however, this year's results were very similar to the results of 2011. G. Fraser thinks that the 91 cm predator guards are proving to be very successful in keeping raccoons from climbing the trees. R. Toninger asked if raccoons are being seen in the area. G. Fraser replied that raccoons are being sighted along with predated chicks.

c) Raccoon occupancy – camera trap study

Trail cameras were once again set up on Peninsula C close to the ground to catch images of mammalian predator presence in the colony. Due to the study methodology, the population size cannot be determined, though if individual raccoons were to be identifiable, a per cent occupancy could be calculated with a minimal population estimate. G. Fraser has several years worth of trail camera footage and she hopes to have a student analyze it in the new year so she can present results to the group in 2013. Preliminary review of the footage shows that many images caught by the trail cameras are DCCO searching for sticks and other nesting material; some of whom have legible leg bands. K. McDonald inquired as to whether there is any information regarding the specific individual shown. G. Fraser answered that the band is one of C. Weseloh's, black writing on a white background and that he should be contacted for more details. It could have been a bird that was banded as a chick in the ground nest colony on Peninsula B, although this colour combination was also used in other colonies.

d) DCCO work

G. Fraser followed 88 nests on Peninsula C in 6 trees in 2012. Of the 88 nests, 65 chicks fledged and 23 of the nests failed, resulting in productivity at 74 per cent, which G. Fraser concluded to be fairly high. The number of chicks per nest was very similar to previous years with an average of 2.1.

46 nests in the ground colony on Peninsula B were followed, of which 93.5 per cent successfully fledged with an average of 2.7 chicks. There has been a high productivity from the followed nests on the ground since 2009. Last year G. Fraser began banding DCCO chicks from the ground colony with bands with colours white writing on black background, a unique colour combination for TTP. This year with the help of N. Shaw and TTPBRS volunteers, 41 chicks were banded.

Usurpation of DCCO taking over BCNH was at the lowest since the study began with only one nest usurped, though G. Fraser does not expect that this is statistically significant. The TTP colony has the lowest usurpation of BCNH by DCCO among all examined colonies in the lower Great Lakes region. K. McDonald inquired whether studies have been done on the correlation between usurpation and human disturbance. G. Fraser replied that she has not looked at this yet, but that it would be interesting, though with only a sign at TTP asking the public to stay out of the colony, actual disturbance by public use is not known. R. Toninger would like to review TRCA's population data to compare productivity with species movement around the colony. A closer look at which trees are occupied by only DCCO, and which trees are occupied by only BCNH, may give an indication as to how the birds are moving around the colony. It seems that BCNH have given up their former core nesting area and are now only nesting on the periphery of the colony. G. Fraser confirmed that a only few BCNH nest in the DCCO area. In conclusion, both the tree nesting populations and the ground nesting population are doing extremely well in terms of nest productivity goes.

4. Proposed Strategic Approach for 2012

K. McDonald proposed a similar strategic approach for 2013 as 2012:

- Maintain the same DCCO conservation areas as well as deterrent areas;
- Remove inactive nests from Peninsula B and C;
- Continue ground nesting habitat enhancements on Peninsula A and B; and
- Continue without active deterrents except to prevent expansion.

To prevent expansion into healthy trees, TRCA will request a permit from the MNR to remove active nests as was done in 2011 and 2012.

K. McDonald posed the question: should TRCA continue to set out the decoys on Peninsula A? They get soiled fairly early in the breeding season and may actually be a nesting deterrent instead of an attractant. G. Fraser suggested removing the decoys, but keeping the audio, stakes and straw. In the research conducted in 2009, there were more visits to the areas where there were decoys set up, however, there was no nesting. It's possible that it is difficult to attract them to nest on the ground on Peninsula A due to the live ground nesting colony directly across the water. B. MacKay suggested that the decoys could be set up to look like dead birds, a strategy that works for crows, to prevent DCCO from nesting in certain areas. He also suggested leaving the decoys out for a shorter period so that they are removed before their condition deteriorates and that fewer decoys could be set up. G. Fraser voiced some concern of removing the decoys because if DCCO ever do nest on Peninsula A it will be young, inexperienced individuals attempting to nest later in the season. In previous years, individuals who have been observed in 'nesty' behaviours have been immature. R. Toninger suggested that the decoys be deployed later after the most of the ground nest locations on Peninsula B have been

occupied to attract the young birds. G. Fraser suggested that the vocals should still be put out early but liked the idea of deploying the decoys later in the season.

B. MacKay wondered if putting out decoys of a comfort species, such as RBGU would be beneficial. G. Fraser replied that there are already RBGU actively nesting on Peninsula A. R. Toninger inquired as to whether there was any estimate of RBGU density. G. Fraser informed him that no, there was no density determined, however, there are lots of nests everywhere on the Peninsula and they love the straw that is put out as enhancement for DCCO.

It could also be that Peninsula A will never be nested on; there could be a factor such as climate that prevents the area from providing suitable ground nesting. B. MacKay explained that at Point Pelee's Middle Island there is altitude zonation where gulls nest on the low lying areas and DCCO nest on the higher areas, and suggested building up the land at TTP. G. Fraser added that the blind on Peninsula B was moved back to allow the birds to occupy the higher areas and seems to have helped with the amalgamation of the two sub-colonies. R. Toninger noted that the two sub-colonies are located on slightly higher ground with a knoll between. He outlined that sightlines are extremely important to the birds for nest locations as they like to see what or who is coming. R. Toninger suggested that the nest material be replenished at a later time as well. K. McDonald explained how the shoreline restoration projects in Embayment B had been planted with willow and dogwood whips, and during the season was destroyed by DCCO collecting material for their nests. G. Fraser offered that it might be beneficial to look into the breeding chronology to make some decisions regarding dates. K. McDonald agreed that could be very helpful.

R. Toninger suggested that more of a concentrated effort should be applied to the most likely nesting areas, such as high spots. G. Fraser added that a successful method of keeping vegetation out of the area is to lay a tarp out and then take it off when the time is right. K. McDonald agreed, and further added that early May would be the ideal time to remove the tarp. G. Fraser concluded that more data review should take place before a decision is made. A. Leger inquired as to whether woody material could be supplied for the DCCO. K. McDonald replied that it is a great thought, but that it is very hard to acquire woody material. A. Leger suggested that the city could maybe supply it from their pruning trucks. J. Harvey didn't think that would be an option as the material from those trucks is usually chipped and made into mulch. G. Fraser explained a method of trapping adults that she has been trying to perfect. It consists of a carpet made from sticks and blue tape with a leg noose. So far it has not been successful as the adults are skittish of the blind, however, optimism is high.

B. MacKay inquired as to whether there are opossums on the Spit and if so are they a significant predator. K. McDonald answered that there was one observed with young in its pouch earlier in the year and no, there is no indication that opossums are a significant predator at this stage. R. Toninger expressed his concern about the raccoon population. They seem to be impacting multiple populations of birds at the park. G. Fraser stated that she doesn't necessarily think that the population is growing due to illegal raccoon releases, she is aware of research that shows raccoons returning to where they were taken from, and would be curious to know if released raccoons do make their way further into the park. It would be beneficial to understand the distribution of raccoons throughout the area. R. Toninger offered that TTP is a decent food source, with all of the nesting birds, as well as the APSC garbage bins. G. Fraser reinforced that the ground nesting DCCO seem to be unaffected by the raccoons.

R. Toninger speculated that perhaps DCCO ground nesting on Peninsula A is limited by coyote predation, especially since the land is wider and is an easier route to navigate compared to Peninsula

B. G. Fraser replied that there is a theory that coyote have a much better chance at predating RBGU than DCCO, given their location on the peninsula.

A. Leger asked whether invasive European fire ants are more prevalent on Peninsula A. K. McDonald answered no, they seek out areas with lots of woody material and sand. The lack of fire ants occupying Peninsula A is observed as being a good thing and is one of the important reasons that material brought onto the peninsula should be limited to avoid establishing an ant population.

5. Wrap Up

K. McDonald announced that the 2013 Strategic Approach will be taken to the TRCA Board on January 25, 2012 at Black Creek Pioneer Village, and all DCCO Advisory Group members are welcome to attend. There will likely not be a presentation, just a report. She also invited the group to the Spring Bird Festival on Saturday May 11, 2013, International Migratory Bird Day. The festival will be similar to previous years, including guided colonial waterbird hikes. The groups K. McDonald took on the hike last year absolutely loved the blind and didn't want to leave the area.

A. Willock inquired why the strategy is going to the Authority Board earlier in 2013 than previous years. K. McDonald replied that DCCO have been returning to the Spit earlier each year and that waiting until the end of March creates a very tight timeline. There are plans to present a larger report to the Board, if the tree nesting population continues to decline, in 2014.

R. Toninger concluded the meeting and thanked the Advisory Group members for their ongoing commitment. TRCA wished everyone a happy holiday season and the best for 2013.