

CORMORANT ADVISORY GROUP MEETING #12
Tuesday January 14, 2014
6:30 p.m. to 9:00 p.m.
Metro Hall, Room 314, 55 John Street, Toronto

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| MEETING NOTES |
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Attendees:

Ralph Toninger, TRCA
Karen McDonald, TRCA
Nikita Moores, TRCA
Gail Fraser, York University
Jim Quinn, McMaster University
John Carley, Friends of the Spit
Lynne Freeman, Toronto Ornithological Club
Barry Kent Mackay, Zoocheck Canada*
Paul Scott, Aquatic Park Sailing Club
Cathryn MacFarlane, Aquatic Park Sailing Club
Liz White, Animal Alliance of Canada*
(*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

K. McDonald welcomed the group to the 12th Cormorant Advisory Group Meeting. She thanked everyone for being flexible with the rescheduled date due to poor weather conditions the week prior.

2. Review of 2013 colonial waterbird data and the 2013 cormorant management strategy
a) 2013 Colonial Waterbird Data

K. McDonald stated that the goal and objectives set out for the TTP DCCO Management Plan are continuing to work and will remain the same for 2014. She then proceeded to present the results of the 2013 colonial waterbird monitoring and DCCO management strategy. All seven species of TTP colonial waterbirds nested in 2013. Ring-billed Gull (RBGU) nest estimates appear similar or slightly **higher than last year's estimated at approximately 35,000 nesting pair**. Herring Gull (HEGU) nests were not counted, but as in recent years remain low in number. Common Terns (COTE) attempted to nest on the reef rafts and the Cell One tern island, however predation continues to be an issue and nest sites were largely abandoned. A total of 98 Caspian Terns (CATE) nests were counted on Peninsula B and TRCA is optimistic that they will newly created nesting islands in Embayment D in the future. Great Egret (GREG) numbers were half what they were in 2012, with four nests observed.

TRCA is pleased with the results from the 2013 Strategic Approach. In 2013 a total of 11,990 cormorant nests were counted on three peninsulas, which represents an increase of 2.12 percent from 2012. Peninsula C had a total of 4934 nests, a 25 percent decrease from 2012 and the second year in a row that tree nesting declined, while nest density increased slightly. This likely represents a decrease in nest availability, that is, that the forest on Peninsula C can no longer support the same number of tree nests as in previous years because of the decline in forest health; **as well as TRCA's success at** keeping DCCO from expanding their nesting areas beyond their traditional areas.

Peninsula B had a total of 1310 tree nests, which is 33 percent increase from 2012. Thirteen new nest trees were colonized and G. Fraser suggested that this could be related to the relocation of the trail barricade which was completed in late 2012. The trail barricade, which instructs visitors to stay away from the colony, was moved further away from the nesting area to provide a larger buffer around the Black-crowned Night-Herons (BCNH) that co-nest with DCCO. This may have provided an opportunity for DCCO expand their tree nesting without the pressure of human presence. Unfortunately, only three BCNH nests were observed on Peninsula B in 2013. TRCA will monitor the BCNH nesting on Peninsula B and relocate the trail barrier closer to the colony should BCNH nest in low numbers again so that public presence deters DCCO expansion.

The DCCO ground nesting population on Peninsula B increased by 20 percent from 2012 for a total of 6986 nests. The ground nesting colony now represents 58 percent of the entire TTP DCCO population. Interestingly, ground nest density decreased, suggesting that if allowed, DCCO will take more space for nesting. Lower nest density will likely result in fewer territorial disputes and a safer environment for chick rearing. In 2013 the two ground nesting sub-colonies were finally joined through a narrow band of nests to make one large ground nesting colony. Additionally, a new ground nesting sub-colony of ten DCCO nests appeared on the opposite side of Peninsula B. This new location is near the new CATE nesting area. J.Quinn outlined some concerns regarding impacts DCCO may have on CATE. In his experience at Hamilton Harbour territorial behaviors were observed between DCCO and CATE that may have resulted in increased CATE chick mortality. K.McDonald and R.Toninger noted that this is only the second year of CATE nesting on Peninsula B and TRCA will monitor the situation before taking any management actions. It is also hoped that they will colonize the new islands built as part of the Embayment D wetland restoration project.

Tree nesting on Peninsula A decreased by 62 percent, five nests were counted in one tree and no ground nesting was observed.

The declining BCNH nest trend continued in 2013 with a total of 297 observed on Peninsulas B and C, down from 410 nests from 2012. As in 2009, some of the BCNH colony on Peninsula C moved away from their traditional nesting area, across the clearing and closer to the trail systems. There was only speculation as to why this move occurred, much of it relating to the decline of tree health and the need for a healthy forest canopy and nest trees, as well as interspecific competition with DCCO. J. Quinn explained that BCNH prefer leafy trees and the movement of the population within TTP could be a result of declining forest health. If DCCO continue to follow BCNH to new nesting areas there will be a constant shift because of the negative effect the DCCO have on tree health. K. McDonald went on to say that the future of BCNH at TTP is uncertain, and that although there is ample shrub habitat at the tip of Peninsula C for nesting, they seem to be attracted to the trees. G. Fraser noted that shrub nesting could increase raccoon predation. J. Carley expressed concern regarding the decreasing BCNH population. R. Toninger noted that there are likely many factors related to the population decline and TRCA will continue to monitor and seek solutions.

b) 2013 DCCO Management Strategy review

The adaptive approach undertaken in 2012 was repeated again in 2013, where pre-nesting deterrents were used only as necessary to prevent DCCO expansion beyond their existing nesting areas. Inactive nest removal took place during the winter, prior to the 2013 breeding season. 115 inactive nests were removed with the usual method of forestry poles from Peninsula B and C and placed in the ground nesting area on Peninsula B. Although the pre-nesting deterrents remained scaled back, they were required to prevent DCCO from occupying new trees. Active nest removal was required to deter expansion; 130 active nests were removed from Peninsula C and 42 from Peninsula B following the protocol of not removing any nests greater than 10 days old. Expansion was prevented on Peninsula C; however DCCO tree nests did increase on Peninsula B. This area will be closely monitored in 2014. A total of 82 new trees were occupied by either BCNH and/or DCCO, with overall DCCO tree occupancy decreasing by 21 percent.

There was some discussion about nest removal practices, regarding the monitoring of nest re-building attempts, as well as forestry poles and nest height. K. McDonald explained that all of the nest trees are tagged and trees where nests have been removed are monitored to stop attempts at nest re-building. R. Toningher noted that nest height is a limiting factor for management; DCCO adapt their nesting strategy by nesting higher in the trees where they cannot be reached. J. Quinn inquired as to why we would ever have nests later than 10 days if we closely monitor them and continue to return and poke rebuilt nests. K. McDonald explained that weekends, especially long weekends, when no management occurs are also factors. During this period nests are not monitored and staff have a significant amount of monitoring and nest removal to catch-up when they return to work. C. MacFarlane expressed concern about DCCO that could potentially nest on Peninsula D and how TRCA would manage them if they nest higher than the forestry poles can reach. R. Toningher assured her that TRCA will act quickly if DCCO begin nesting on Peninsula D to prevent nesting, adding that nesting is unlikely given the human activity on the Peninsula.

There was also discussion about the pre-Christmas ice storm. K. McDonald noted that there was storm damage, but it does not appear there was any significant impact to the colony trees. R. Toningher added that it is usually harsh February winds that do the most damage to the colony trees.

Ground enhancements continued on Peninsulas A and B. Straw and audio playback were deployed on Peninsula A, along with a tarp to exclude gulls off the targeted ground nest area. The tarp was difficult to secure and keep anchored due to the wind, so will not be used in this location again. In fall 2013 soil was added to low areas on Peninsula A with the aim of making the Peninsula elevations constant, and therefore more attractive to ground nesting cormorants. Enhancements on Peninsula B included placing nests removed from trees on the ground; specifically between the two ground nesting subcolonies to join them.

K. McDonald shared a presentation of aerial photographs taken by TRCA in September 2013 of all the Peninsulas and the Embayment D wetland restoration project.

TRCA continued public outreach and education about colonial waterbirds at TTP public events, special tours and via the webcam. Unfortunately the webcam had technical glitches that TRCA will continue to try to resolve. K. McDonald also noted that due to the location shift of the BCNH to the new nesting area the viewing blind was moved further away from the colony edge provide a larger buffer around the BCNH.

In summary, 2013 management included Peninsulas A and B ground nest enhancements; pre-nesting deterrents and active nest removal on Peninsulas B and C; and public interpretation with a webcam on Peninsula B, a viewing blind on Peninsula C and at TTP public events.

c) Tree Health

K. McDonald reviewed the graph outlining tree health on Peninsulas C and D. Since most of the colony nest trees are dead, as in 2012 only a subset of trees within the nesting areas were assessed, as well as the control plot on Peninsula D. Data shows that average tree health within the colony continues to decline (Peninsula C = 3.4), and that the trees within the control plot also declined in health (Peninsula D = 2.5); 1 being a healthy tree and 5 being a dead tree.

P. Scott expressed concern about the health of the trees on Peninsula D. R. Toning explained that cottonwood trees are not a long-lived species and it could be that those trees are just declining in health due to their age. P. Scott also expressed concern regarding the overall health of the TTP canopy, and suggested that an inventory be completed for the entire TTP canopy in order to have a better understanding of the overall health of the trees at TTP. R. Toning suggested a health survey for all the trees in the entire park would be too much of an undertaking, and that TRCA uses Ecological Land Classification (ELC) to document vegetation communities. ELC data are updated periodically and a TTP ELC update is planned for 2015. P. Scott requested clarity regarding where DCCO are permitted to nest and the health of those trees. At the next Advisory Group meeting TRCA will present more detailed information regarding areas already impacted by DCCO and the areas that are being protected from DCCO expansion.

3. Update on York University Studies

a) Double-crested Cormorants

G. Fraser continued with her productivity research for both tree and ground nesting DCCO. She followed 53 ground nests, selected from different areas, including both edge and interior habitats. 96.2 percent of these nests successfully fledged chicks; the average number of chicks fledged per nest was 2.6 - a very productive colony. G. Fraser also shared photos taken from the same vantage point of the Peninsula B ground nests from 2009 and then again in 2013, which illustrates the tremendous growth in the population over the past 6 years. There was discussion about predators within the ground nesting colony, including the potential impact of coyotes. J. Quinn noted that from a coyote perspective it would probably be safer to prey on RBGU versus DCCO. Also, coyotes would need to pass through the gull colony, and therefore potential prey, to reach the DCCO.

On Peninsula C, 62 nests in six trees were followed. 82 percent of these nests successfully fledged chicks; the average number of chicks fledged per nest was 2.1. G. Fraser noted the extension of the nesting season in 2013; some DCCO are nesting later in the season, with individuals on nests as late as October.

G. Fraser, with TTP Bird Research Station Coordinator Nigel Shaw and TTPBRS volunteers, banded 78 chicks with aluminum bands and colour bands that are unique to TTP (black band with white lettering). A total of nine observations of banded adults were made by G. Fraser in 2013 and one individual was observed in 2013 in the exact nest it was observed in in 2012. Observations of banded DCCO provide valuable information including nest site fidelity, as this data indicates.

J. Quinn inquired about the impact the banding has on DCCO. G. Fraser answered each chick is returned to the same nest it was taken from, and that some of the chicks crèche, but the overall impact is minimal.

b) Black-crowned Night-Herons

G. Fraser monitored a total of 77 nests in 36 trees. 47 nests in 20 trees were in the traditional nesting area and 30 nests in 16 trees in the new nesting area. In the traditional BCNH nesting area 9 of the 20 trees had 91 cm predator guards, while none of the trees in the new area had predator guards. Productivity in the traditional nesting area was 0.41 in the trees with no predator guards and 0.32 in the trees with predator guards. BCNH in the new nesting area experienced 100 percent nest failure, likely due to predation as evidenced by egg remnants on the ground. The vegetation community in the new nest area differs from the traditional area as the dominant tree species are non-native black alder and European birch. Both species have plentiful low branches that provide climbing predators, such as raccoons, with easy access to nests.

The 2013 nest usurpation rate for BCNH was 6.4 percent for the 47 BCNH nests that were followed. This was higher than the 2012 usurpation rate of 1.6 percent. L. White inquired which species returns first in the spring. G. Fraser replied that DCCO return before BCNH. She also noted that despite the reduction in BCNH nesting habitat they benefit from DCCO co-nesting by eating DCCO regurgitations.

c) Raccoon occupancy - camera trap study

Trail cameras were installed on Peninsula C in the spring and fall to capture images of mammals present in the colony. G. Fraser showed trail camera images of coyotes and an opossum. There were more opossum observations in 2013 than in previous years, which may increase predator pressure on colonial waterbirds. G. Fraser has several years of trail camera images and hopes to have a student analyze the images. Although a population size of predators cannot be determined, if individuals are identifiable, the percent occupancy can be estimated.

There was a discussion about European red ants and the impact they may have on waterbirds. G. Fraser noted that in her research at TTP, the presence of European red ants had no significant difference in nest productivity.

J. Quinn then provided a brief summary of the colonial waterbirds nesting in Hamilton Harbour.

4. Proposed Strategic Approach for 2014

K. McDonald proposed a similar strategic approach for 2014 as in 2013:

- 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.

TRCA will monitor BCNH colonization on Peninsula B and if they nest in low numbers will relocate the trail barricade closer to the colony to encourage public use and discourage DCCO expansion. This will be noted in the 2014 Strategic Approach TRCA Board communication.

K. McDonald requested input from the group regarding the use of audio DCCO playbacks on Peninsula A. It is possible that the audio is not heard by DCCO given the noise from nesting RBGU.

TRCA will request a permit from the MNR to remove active nests as was done in 2011, 2012 and 2013.

5. Wrap Up

K. McDonald reminded members that the 2014 Strategic Approach communication will be taken to the TRCA Board on January 31, 2014 at Black Creek Pioneer Village. Everyone is welcome to attend. She also invited the group to the annual TTP Spring Bird Festival on Saturday May 10, 2014, International Migratory Bird Day. The festival will be similar to previous years and may include an open-air book launch on DCCO.

K. McDonald thanked everyone for attending and for their ongoing commitment to the Advisory Group. The next meeting is expected in January 2015.