CORMORANT ADVISORY GROUP MEETING #14
Thursday, January 21, 2016
6:30 p.m. to 9:00 p.m.
Metro Hall, Room 303, 55 John Street, Toronto

FINAL MEETING NOTES

Attendees:
Karen McDonald, TRCA (chair)
Ralph Toninger, TRCA
Andrea Chreston, TRCA
Ryan Stephenson, TRCA
Lionel Worrell, TRCA
Gail Fraser, York University
Janette Harvey, City of Toronto
Ainslie Willock, Canadians for Snow Geese *
Barry Kent MacKay, Zoocheck Canada*
(* Denotes member of Cormorant Defenders International)

These notes reflect the general nature of the meeting discussion. If there are any errors or omissions, please contact Lionel Worrell at lworrell@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 14th Cormorant Advisory Group Meeting. She thanked everyone for attending.

2. 2015 highlights and public outreach
K. McDonald updated the group about 2015 media outreach, including the production of a Bell Local Media documentary (*The Spit*) which included a focus on Tommy Thompson Park's cormorants. Further, Reuters had prepared photographic and video features that highlighted the park's cormorants (*Earthprints: Leslie Street Spit*). The TTP colonial waterbird management plan was presented at two conferences in 2015 (*International Association of Great Lakes Research (IAGLR) conference* & *The Waterbird Society 2015 Annual Meeting*), and colonial waterbird hikes were featured at the Spring Bird Festival and were included as a component in many academic and agency tours TRCA undertook at TTP.

3. Review of 2015 colonial waterbird data and cormorant management strategy

a) 2015 Colonial Waterbird Data

K. McDonald reminded everyone of the goal and objectives of the TTP Double-crested Cormorant (DCCO) Management Strategy. She provided an update to the group about the number of colonial waterbirds at TTP in 2015 including 11,908 DCCO nests, 194 Black-crowned Night-Heron (BCNH) nests, 176 Common Tern (COTE) nests, 6 Great Egret (GREG) nests, and 35,000 *est.* Ring-billed Gull (RBGU) nests. Herring Gulls (HEGU) were not counted but appear to have similarly low numbers as in recent years. Caspian Terns (CATE) were unable to be reliably counted due to low resolution from drone photography.

DCCO ground nesting on Peninsula A significantly increased in 2015 to 541 nests, finally reflecting success in efforts to encourage ground nesting on this peninsula. K. McDonald noted that it is likely that the construction works taken to level out the topography of the peninsula played a role in attracting DCCO to ground nest.

DCCO ground nesting continued in several areas on Peninsula B with 7,608 nests counted. Nest numbers were slightly down from 2014, but K. McDonald noted that the aerial images taken in 2015 by a drone were of a poorer quality than those taken in 2014 from a helicopter. She explained that because of the lower-resolution images, potential nests that could not be confirmed from the photograph were not included in the count, but had these unconfirmed nests been included, then the number of DCCO ground nests on Peninsula B would have been higher and closer to the previous year's figure. Ground nesting density increased in 2015.

Tree nesting continued to exhibit a downward trend. Peninsula A nests remained unchanged from 2014 with 14 nests. Peninsula B had 1,184 DCCO tree nests and Peninsula C had 2,561 tree nests. K. McDonald explained that the presence of DCCO nests in trees was down in part because there were less standing trees for them to occupy.

Overall, the DCCO population decreased by 4 percent, notwithstanding the unconfirmed ground nests. Ground nesting continued to increase, with 68 percent of the population nesting on the ground.

G. Fraser informed the group that she had observed fledged DCCO chicks on Peninsula A, suggesting that the peninsula's ground nests had been successful.

B. MacKay inquired as to whether drones or helicopters were more intrusive for DCCO within their colonies. K. McDonald responded that neither drones nor helicopters were particularly disturbing to the DCCO colony. G. Fraser suggested that drone flights could be used to count nests within the park's gull colonies.

B. MacKay inquired as to what height DCCO prefer to build their nests at. R. Stephenson responded that he had observed DCCO nests at various heights, and in 2015 this included relatively low nests in a 15 foot tall Manitoba maple tree. R. Toninger noted that studies suggest that tree shape is implicated in nesting preference of DCCO, with Manitoba maples raking low in terms of DCCO preference and cottonwood trees ranking high. He also addressed the topic of DCCO nests located in some healthy cottonwood trees on Peninsula B that were too high to be removed by nest poking. He suggested that the use of an elevated work platform (cherry picker) could be revisited as a method for reaching these nests.

K. McDonald briefed the group about CATE, explaining that they fared poorly this year; possibly due to competition from DCCO. She suggested that adding pea gravel mounds to sites where CATE nested previously could be used to entice this species to nest. G. Fraser inquired as to where the proposed CATE mounds would be placed and what effect their height might have on the view of ground nesting DCCO that tend to prefer an open and clear view. She further inquired as to what size the proposed mounds would be. R. Toninger replied, indicating that an appropriate size would be about 6 meters long, half a meter tall with a subtle slope. K. McDonald added that if the mound results in DCCO being deterred from ground-nesting, the mound could be relocated or removed in 2017.

K. McDonald updated the group about BCNH nesting at TTP during 2015. She informed the group that a total of 194 nests had been observed, and that this number was down from the previous year. She indicated that BCNH had attempted to expand their nesting into new areas. G. Fraser noted that she had observed less pressure from DCCO to expand into BCNH sites than in 2014. R. Toninger reminded the group that the Cormorant Advisory Committee was initially created in part to address the impact of DCCO on BCNH numbers. He further said that these observations might suggest that BCNH might be less detrimentally affected by DCCO than originally thought.

B. MacKay inquired about the status of BCNH numbers throughout Southern Ontario. K. McDonald indicated that this species likely nests in small colonies in inland areas, and that the drop in nest numbers at TTP may not necessarily indicate a reduction in the overall local or regional population, but rather a preference for other nesting locations. G. Fraser indicated that she observed many BCNH early in the spring on Peninsula B and that these individuals appeared to be scoping out new nests, but that they did not all remain at TTP.

b) 2015 DCCO Management Strategy Review

The adaptive approach that has been employed over the course of DCCO management continues to be an effective model. Pre-nesting deterrents were used only as required to prevent DCCO expansion beyond their existing tree nesting areas. A total of 67 inactive nests were removed during the winter period using forestry poles. K. McDonald noted that the ground nest colony is now so well established that it is no longer necessary to relocate removed nests to the colony to encourage ground nesting. Ground nesting enhancements were undertaken on Peninsula A with the addition of straw bales to provide nesting material.

As in 2014, DCCO continued to try to expand their tree nesting areas, following BCNH into healthy forest. As a result more staff were required on the ground to ensure that tree nesting expansion did not occur – six staff were needed for a portion of the management period, rather than the typical crew of four. More active nest removal was required to prevent tree nest expansion following the protocol of not removing any nests greater than 10 days old. A total of 156 new nests trees were occupied by DCCO, however almost all the new trees were in areas where the forest had already been impacted by DCCO.

Post-breeding deterrents were not required as DCCO were not observed roosting in trees.

TRCA continued public outreach and education about TTP's colonial waterbirds at public events and special tours. Again this year only DCCO were able to be observed from the view blind as BCNH have moved to new nesting areas.

In summary, 2015 management included Peninsula A ground nest enhancements; pre-nesting deterrent and active nest removal on Peninsulas B and C; and a viewing blind on Peninsula C.

c) Tree Health

K. McDonald reviewed the tree health graphs for Peninsulas C and D. Data shows that average tree health is as follows (Peninsula C (DCCO) = 4.6), (Peninsula C (BCNH) = 1.3) and (Peninsula D = 1.6); 1 being a healthy tree and 5 being a dead tree.

4. Update on York University studies

G. Fraser provided an update to the group on her DCCO research; she did not have any students undertaking research projects at TTP in 2015.

G. Fraser advised the group that the average number of chicks produced by ground nesting DCCO pairs was 2 in 2015. She also noted that fewer instances of creching behavior were observed at TTP than in Columbia River DCCO colonies. She hypothesized that this was due to a lack of food pressure at TTP. She has also observed post-fledging parental care among DCCO at TTP, and explained that this is an activity that has not been recorded elsewhere.

G. Fraser indicated that she did not observe significant usurpation of BCNH nests by DCCO in 2015. K. McDonald noted that this might be a result of management actions undertaken by TRCA staff in 2015.

G. Fraser noted that she did not observe nest predation by raccoons in 2015. K. McDonald responded, indicating that the lack of predation by raccoons might have been the result of the harsh winter on raccoons at TTP that may have reduced their population.

G. Fraser provided the group with an update regarding her research and observations of European fire ants (*Myrmica rubra*) at TTP. She noted that *M. rubra* abundance had been tracked using pitfall traps. She provided the example of one pitfall trap located in a then forested area of TTP in 2009 that recorded over 12,000 ants. She explained that the same trap (now located in an area of dead trees – resulting from DCCO presence) had recorded virtually no ants. She suggested a possible link between habitat changes caused by cormorants and ant density.

K. McDonald discussed the fact that *M. rubra* populations in Europe do not display the invasive characteristics of introduced North American populations.

5. Proposed Strategic Approach for 2016

K. McDonald proposed the same management approach for 2016 as in 2015 with the addition of a second crew to work two shifts daily to undertake dusk and dawn deterrents. She explained that a similar approach was being employed at Presqu'ile Provincial Park and that this strategy appeared to be working.

G. Fraser indicated that she had not observed a negative impact on the DCCO colony due to nighttime activities. K. McDonald indicated that it was possible that the ambient light from the city of Toronto reduced the impact of nighttime disturbance.

R. Toninger reminded the group that an element of the TRCA's long-term strategy was to preserve forest canopy, and that re-planting areas such as the deforested parts of Peninsula C would provide additional forest cover. He suggested that areas deforested by DCCO on Peninsula C could be considered for targeted habitat restoration including replanting. K. McDonald noted her concern that such restoration could be targeted by DCCO for nesting material, but that it may be able to be mitigated through vegetation exclosures that limit DCCO access to new plants. J. Harvey suggested planting areas specifically to provide nesting material for DCCO. B. MacKay expanded on this noting that willow would be a species to be included in future restoration plantings within deforested areas on Peninsula C for DCCO nesting material.

A. Willock inquired as to what the impact of DCCO nest material gathering had been on the overall forest health in these areas. She suggested providing DCCO with nesting material as an option to reduce their impact on forest areas. K. McDonald and R. Stephenson indicated that they had both observed DCCO obtaining nest material from other areas of the park, including restoration plantings in Embayment B. K. McDonald noted that straw is provided on Peninsula A and is readily taken by DCCO for nest material.

A. Willock inquired as to why forest cover was a preferred habitat. K. McDonald responded, listing the benefits of forest cover including the provision of habitat for songbirds and other wildlife, the improvement of air quality, and the role of forests in carbon sequestration. She explained how this influenced DCCO management and the fact that a balanced approach is required. R. Toninger commented on the reduced size of Peninsula A due to erosion associated with the lack of vegetation. He noted that sand eroded from this peninsula had drifted to the coastline of Peninsula B. A. Willock inquired as to whether shoreline stabilization was planned for the peninsula's shoreline. R. Toninger replied, indicating that there was not currently an available budget for such stabilization, but that shoreline rehabilitation is included in the TTP Master Plan.

G. Fraser addressed the subject of soil acidification by DCCO guano. She inquired as to whether this could be counteracted by the addition of soil additives in order to raise the soil's pH. R. Toninger replied, indicating that studies about the efficacy of such soil amendments had been done elsewhere. A. Willock confirmed that this research had been performed at Stanley Park in Vancouver, BC. R. Toninger further suggested that the addition of a layer of organic material to the soil was an option that could be explored to counteract the effect of soil acidification.

6. Wrap-up and next meeting

K. McDonald reminded members that the Management Strategy will be taken to the TRCA Board on April 1, 2016 at TRCA Head Office at101 Exchange Ave., Vaughan. She reiterated that everyone is welcome to attend. She also invited the group to the annual TTP Spring Bird Festival on Saturday May 14, 2016 (International Migratory Bird Day).

K. McDonald thanked everyone for attending and for their ongoing commitment to the Cormorant Advisory Group. She announced that she has taken on a new role at TRCA and that A. Chreston will now be the primary contact for TTP.