MANAGEMENT OF COLONIAL WATERBIRDS AT TOMMY THOMPSON PARK

CORMORANT ADVISORY GROUP MEETING #6

www.trca.on.ca/cormorants

Tuesday, December 15, 2009
6:30 p.m. to 9:00 p.m.
Metro Hall, Room 303
55 John Street, Toronto
<table>
<thead>
<tr>
<th>Time</th>
<th>Agenda Item</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:35pm</td>
<td>Welcome and Introductions Review of Previous Meetings</td>
<td>Ralph Toninger</td>
</tr>
<tr>
<td>7:00pm</td>
<td>Review 2009 colonial waterbird data and 2009 cormorant management strategy</td>
<td>Ralph Toninger</td>
</tr>
<tr>
<td>7:40pm</td>
<td>Update on York University studies</td>
<td>Gail Fraser</td>
</tr>
<tr>
<td>8:00pm</td>
<td>Next Steps</td>
<td>Ralph Toninger</td>
</tr>
<tr>
<td></td>
<td>• Completion of the 2009 Cormorant Management Strategy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Moving into 2010</td>
<td></td>
</tr>
<tr>
<td>8:55pm</td>
<td>Wrap-up and next meeting</td>
<td>Ralph Toninger</td>
</tr>
</tbody>
</table>
PROCESS – DOUBLE-CRESTED CORMORANTS AT TOMMY THOMPSON PARK

• **November 2007:** TRCA embarked on a process to involve stakeholders and public in assessing need for management of cormorant populations

• **Goal:** to achieve a balance between the continued existence of a healthy, thriving cormorant colony and the other ecological, educational, scientific and recreational values of Tommy Thompson Park
GOAL

To achieve a balance between the continued existence of a healthy, thriving cormorant colony and the other ecological, educational, scientific and recreational values of Tommy Thompson Park

OBJECTIVES

• Increase public knowledge, awareness, and appreciation of colonial waterbirds

• Deter cormorant expansion to Peninsula D

• Limit further loss of tree canopy on Peninsulas A, B and C

• Continue research on colonial waterbirds in an urban wilderness context
## Public Consultation Summary 2008

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Details</th>
</tr>
</thead>
</table>
| **Advisory Group Meeting #1**                           | January 24 | • Values and interests of TTP  
• Conditions and concerns of DCCO colony  
• Need for management  
• Strategies to address concerns |
| **Advisory Group Meeting #2**                           | February 19| • Evaluate management options  
• Propose alternative approaches |
| **Cormorant Webpage launched**                          | March 3    | • Includes background materials, Advisory Group meeting notes and presentations, Public Meeting workbook and meeting notes, relevant links |
| **Public Meeting**                                      | April 3    | • Advertised in Toronto Star, The Mirror, TRCA website, TTP information board, TRCA distribution lists, some Advisory Group member websites  
• Canada Newswire press release, Global TV coverage  
• Presentations, facilitated round table discussion, individual workbooks for commenting |
| **Advisory Group Meeting #3**                           | April 23   | • Review public response  
• Discuss 2008 strategy |
| **TTP Spring Bird Festival**                            | May 10     | • Guided tours of cormorant colony  
• Public survey on TTP cormorants |
| **Authority Board**                                     | May 23     | • Present 2008 strategy for Authority action |
| **Advisory Group Meeting #4**                           | Dec 10     | • Review 2008 strategy and preliminary research results |
## Public Consultation Summary 2009

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisory Group Meeting #5</td>
<td>February 4</td>
<td>• Develop the 2009 Strategy</td>
</tr>
<tr>
<td>TRCA Authority Meeting</td>
<td>March 27</td>
<td>• Present the 2009 Strategy for TRCA Authority action</td>
</tr>
<tr>
<td>TTP Spring Bird Festival</td>
<td>May 23</td>
<td>• Guided tours of cormorant colony</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Public survey on TTP cormorants</td>
</tr>
<tr>
<td>Advisory Group Meeting #6</td>
<td>December 15</td>
<td>• Review the 2009 population data and monitoring program</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Review 2009 strategy and preliminary research results</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Being discussions on a strategic approach for 2010</td>
</tr>
</tbody>
</table>
### Strategic Approach 2009

<table>
<thead>
<tr>
<th>Pre-nesting Deterrents</th>
<th>Peninsula A</th>
<th>Peninsula B</th>
<th>Peninsula C</th>
<th>Peninsula D</th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td></td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Post-Breeding Deterrents</th>
<th>Peninsula B</th>
<th>Peninsula C</th>
<th>Peninsula D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enhanced Ground Nesting</th>
<th>Peninsula B</th>
<th>Peninsula C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Restoration</th>
<th>Peninsula A</th>
<th>Peninsula B</th>
<th>Peninsula C</th>
<th>Peninsula D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experimental Egg Oiling Follow Up</th>
<th>Peninsula A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*</td>
</tr>
</tbody>
</table>
Double-crested Cormorant: 7564 nests
Black-crowned Night-Heron: <50 nests
Herring Gull: <20 nests
Great Egret: 7 nests
Ring-billed Gull: 30,000 nests
Common Tern: 354 nests
## DCCO Nest Numbers
### 1998 to 2009

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>436</td>
<td>695</td>
<td>933</td>
<td>909</td>
<td>730</td>
<td>779</td>
<td>557</td>
<td>311</td>
<td>228</td>
<td>101</td>
<td>49</td>
<td>22</td>
</tr>
<tr>
<td>B</td>
<td>1307</td>
<td>1814</td>
<td>2071</td>
<td>3048</td>
<td>1844</td>
<td>1582</td>
<td>1241</td>
<td>1763</td>
<td>1535</td>
<td>1072</td>
<td>1050</td>
<td>917</td>
</tr>
<tr>
<td>B ground</td>
<td>344</td>
<td>990*</td>
<td>809</td>
<td>872</td>
<td>868</td>
<td>1302</td>
<td>1009</td>
<td>1957</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>0</td>
<td>0</td>
<td>30</td>
<td>282</td>
<td>625</td>
<td>633</td>
<td>2439</td>
<td>2728</td>
<td>3494</td>
<td>4584</td>
<td>4906</td>
<td>4668</td>
</tr>
<tr>
<td>Total</td>
<td>1743</td>
<td>2509</td>
<td>3034</td>
<td>4237</td>
<td>3543</td>
<td>3942</td>
<td>5046</td>
<td>5674</td>
<td>6125</td>
<td>7059</td>
<td>6717</td>
<td>7564</td>
</tr>
</tbody>
</table>

- Peninsula A =42, and Peninsula B =948
### BCNH numbers by Peninsula

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>B</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>163</td>
<td>255</td>
<td>278</td>
<td>270</td>
<td>145</td>
<td>146</td>
<td>81</td>
<td>38</td>
</tr>
<tr>
<td>C</td>
<td>803</td>
<td>988</td>
<td>1235</td>
<td>762</td>
<td>1040</td>
<td>904</td>
<td>601</td>
<td>610</td>
<td>504</td>
<td>730</td>
<td>455</td>
<td>579</td>
</tr>
<tr>
<td>Total</td>
<td>818</td>
<td>988</td>
<td>1235</td>
<td>762</td>
<td>1203</td>
<td>1159</td>
<td>879</td>
<td>880</td>
<td>649</td>
<td>876</td>
<td>536</td>
<td>617</td>
</tr>
</tbody>
</table>

**Note:** Peak count conducted on May 27- June 2  
Large scale abandonment occurred on between June 15- 30
Nests Numbers of DCCO and BCNH at Tommy Thompson

1999

[Graph showing the trend of DCCO and BCNH nests from 1980 to 2008 with a significant increase from 1999 onwards, reaching 7564 nests by 2008.]

- DCCO
- BCNH

~<50
Nests Numbers of DCCO and BCNH at Tommy Thompson

2002

DCCO

BCNH

7564

7000 6000 5000 4000 3000 2000 1000 0


~<50
Nests Numbers of DCCO and BCNH at Tommy Thompson

[Graph showing the numbers of DCCO and BCNH from 1980 to 2008, with a significant increase in 2006 reaching approximately 7564 nests.]
Nests Numbers of DCCO and BCNH at Tommy Thompson

2009

DCCO

BCNH


7564

~<50
The Change in Tree Health between 2006 and 2009

- **2006**
  - Live Trees
  - Tree in Decline
  - Dead or Dying Trees

- **2009**
  - Live Trees
  - Tree in Decline
  - Dead or Dying Trees
# Proposed Strategic Approach 2009

<table>
<thead>
<tr>
<th>Pre-Nesting Deterrents</th>
<th>Peninsula A</th>
<th>Peninsula B</th>
<th>Peninsula C</th>
<th>Peninsula D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Post-Breeding Deterrents</th>
<th>Peninsula A</th>
<th>Peninsula B</th>
<th>Peninsula C</th>
<th>Peninsula D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enhanced Ground Nesting</th>
<th>Peninsula A</th>
<th>Peninsula B</th>
<th>Peninsula C</th>
<th>Peninsula D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*</td>
<td>*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Restoration</th>
<th>Peninsula A</th>
<th>Peninsula B</th>
<th>Peninsula C</th>
<th>Peninsula D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experimental Egg Oiling (follow-up on nest attendance only)</th>
<th>Peninsula A</th>
<th>Peninsula B</th>
<th>Peninsula C</th>
<th>Peninsula D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Cormorant Conservation Zones
Restoration Planting on Peninsula A
Regulatory Signage to keep park users out of the colonies
Enhanced Ground Nesting

- Add structure
- Provide nest building materials
- Decoys
- Minimize disturbance
1074 tree nests over 1.3 Ha
= 0.1 nests/m²

1009 ground nests over 600m²
= 1.7 nests/m²
PENINSULA A - 2009 GROUND NEST ENHANCEMENTS

- Added natural structure with nest material
- Stakes with nest material and decoys
- York University study area
Peninsula B Ground Nest Colony
Peninsula B Ground Nest Colony
Peninsula B Ground Nest Enhancement
Peninsula A: woody debris for ground nest enhancement
Peninsula A: woody debris ground nest enhancement
Peninsula A: stakes & nesting material
Peninsula A: York University study area
Researcher access tunnel and blind on Peninsulas A & B
Peninsula A: stakes and tires with nesting material
Peninsula A: stakes and tires with nesting material
Peninsula A: ground nest enhancements
DCCO Decoy

DCCO decoy in tire with RBGU eggs
Peninsula A Ground Nest Enhancements
Live DCCO in the ground nest enhancement area on Peninsula A
Pre-Nesting Deterrents

- Least intrusive methods favoured
- Techniques will escalate if necessary
- Caution around other nesting species

- **Human Presence**
  - Public use
  - Staff activities

- **Artificial Predators**

- **Noisemakers**
  - Staff controlled
  - Automatic devices
• Deterrents took place April 14 - June 12
• Active Deterrents from April 14 - May 25
• Successful in preventing nesting at “tip”, but not from larger area
Monitoring Locations

• 74 person hours spring 2009
• 28 minute average session
  • pre-deterrent
  • active-deterrent
  • post-deterrent
Deterrent Escalation

Human Presence
- Carrying poles & moving low branches, tapping on trees
  April 16

Human Presence
- Waving arms, clapping, whistling
  April 15

Human Presence
- Running, shouting
  April 15

Human Presence
- Carrying poles & waving poles without tree contact
  April 16

Artificial Predators
- Raptors, scarecrows, raccoons, coyotes
  April 16

Inactive Nest Removal
- Removal of new nest materials
  *Will not to be done if eggs are present or cormorants do not leave the nest
  April 16

Noise Makers
- Raptors, scarecrows, raccoons, coyotes
  April 23
Removal of inactive nest materials
Artificial Predators
- Hawk Kite -

[Image of hawk kites in flight above a river]

[Image of a person holding a Hawk Kite at a wetland]
Artificial Predators

- Owl Decoy -
Artificial Predators
- Scarecrows -
Post-Breeding Deterrents

- Least intrusive methods favoured
- Techniques will escalate if necessary

- Human Presence
  - Public use
  - Staff activities

- Artificial Predators
- Noisemakers
  - Staff controlled
  - Automatic devices
Restoration

- Soil amendments
- Tree & shrub planting
- Herbaceous planting/seeding
- Plant tending until established
- Protection from herbivory, loafing
2009 Season Summary

- Prevented Expansion onto Peninsula D
- Ground nests increased by 94% from 2008 (from 14% to 26%)
  No nesting on Peninsula A
- Prospecting?
- Number of trees used increase however tree nests decreased
- Large scale abandonment by BCNH
Where are We Going

Enhanced Ground Nesting
Predator exclusion

Address BCNH Abandonment

Escalate Nesting Deterrents

Active Nest Removal
Thank you!

Gail Fraser
Chip Weseloh
Dave Moore
Ann Gray
John Almond
Patrick Hubert
Leslie Coates
Wayne Reeves
John Carley
Lynne Freeman
Mark Carabetta
Cathryn MacFarlane
Paul Scott
Glenn Coady
Liz White
Julie Woodyer