Breeding Range Update for Three Seabird Species in Labrador

KEITH G. CHAULK1*, GREGORY J. ROBERTSON2, and WILLIAM A. MONTEVECCHI3

Abstract - Recent data (1998–2003) collected during field surveys for nesting Common Eider (Somateria mollissima L.) along the Labrador coast have confirmed nesting by Black-headed Gulls (Larus ridibundus L.) and Double-crested Cormorants (Phalacrocorax auritus Lesson), and suggest possible nesting by Caspian Terns (Sterna caspia Pallas). It appears that both Double-crested Cormorants and Caspian Terns have previously nested in Labrador, whereas nesting by the Black-headed Gull represents a recent range extension.

Introduction

Expanding and contracting breeding ranges of marine birds often reflect large-scale oceanographic and ecological change. Many species of marine birds have extended their breeding ranges into eastern Canada in recent decades. For example, Northern Fulmars (Fulmarus glacialis L.) and Manx Shearwaters (Puffinus puffinus Brünich) have established North American range expansions in Newfoundland and Labrador (Montevecchi et al. 1987, Storey and Lien 1985). The fulmar’s range and population have been growing slowly since the 1970s (Garthe et al. 2004; Stenhouse and Montevecchi 1999a,b), while Manx Shearwaters have not expanded further, and their breeding population has remained small (Robertson 2002).

Many other marine species are at the limits of their ranges in Newfoundland and Labrador. These ranges are strongly influenced by the Low Arctic oceanographic regime, which, in turn, is driven by the Labrador Current (Nettleship and Evans 1985). Many changes are to be expected in an environment such as this, in which natural and anthropogenic influences are having profound effects on the marine environment (Massaro et al. 2000, Montevecchi 2002, Montevecchi and Myers 1997, Regehr and Montevecchi 1997, Stenhouse and Montevecchi 2000). Therefore, it is important to monitor trends in marine bird populations and distributions.

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In this paper we address the status of three species of marine birds in Labrador whose breeding ranges have been changing recently in eastern North America: the Black-headed Gull (*Larus ridibundus* L.), the Double-crested Cormorant (*Phalacrocorax auritus* Lesson), and the Caspian Tern (*Sterna caspia* Pallas).

**Study Area**

More than 4000 islands lie along the Labrador coast (Sebert and Munro 1972). The observations presented in the results section of this paper were mainly from Groswater Bay and Lake Melville, Labrador. The islands discussed in this paper are typical of the Lake Melville Ecoregion, which is marked by humid, cool summers and cold winters. The mean summer and winter temperatures are 8.5 and -13 °C, respectively, and the average annual temperature is approximately -2 °C. Annual precipitation is in the range of 800–1000 mm. This ecoregion is classified as having a high-boreal ecoclimate (Meades 1990) and a low-arctic oceanographic regime (Nettleship and Evans 1985).

**Methods**

Islands were visited by boat and surveyed on foot using standard ground survey methods used by the Canadian Wildlife Service (CWS) (Nettleship 1980). Surveys were carried out during June–August, 1998–2003. The data were collected incidentally during surveys for nesting Common Eider (*Somateria mollissima* L.). For each species, efforts were made to confirm nesting and to estimate the total number of adult birds of each species present on each island. Geodetic information was collected using a hand-held Garmin GPS III (Global Positioning System). Location data were recorded and are presented in latitude and longitude, decimal degrees, North American Datum 1983 (NAD 83).

**Results**

The first evidence of nesting by a Black-headed Gull in Labrador was obtained in July 2002. One pair of adult Black-headed Gulls was observed in a Common Tern (*Sterna hirundo* L.) colony on Edwards Island in Lake Melville (Table 1). The Black-headed Gull nest containing three eggs was located and photographed.

We observed nesting by Double-crested Cormorants on two islands in Groswater Bay from 2001–2003 (Tables 1 and 2). The islands are known locally as the Watch and Chain and Gull Island (Tables 1 and 2). In this study, Double-crested Cormorants were only found on the eastern most Gull Island (Tables 1 and 2). Nesting cormorant numbers in 2002 may have been reduced in response to a delayed spring season,
which occurred as a result of factors such as cold weather and heavy ice (K.G. Chaulk, unpubl. data). In addition, Chaulk observed 30 Double-crested Cormorants in St. Peter’s Bay, located on the southernmost coast of Labrador in June 2001, and adult cormorants have been observed in numerous locations throughout Labrador over the past several years (Table 2).

Between 2000 and 2002, Caspian Terns were observed on two islands in Lake Melville, known locally as Grassy and Gull Island (Table 1). In this study, Caspian Terns were found only on the western most Gull Island (Table 1). Lock (1983) also reported Caspian Terns nesting in Lake Melville on Gull Island. Up to 10 Caspian Terns have been observed on Gull Island, and as many as four were observed on Grassy Island. Ground searches of Gull Island were conducted three times (i.e., 20 June and 15 July 2001, 21 June 2002), and each time Caspian Terns were observed on the ground in the same 50-m² area. In 2002, fresh nest

Table 1. Geographic coordinates of specific locations mentioned in the results section. Coordinates in latitude longitude decimal degrees, NAD 1983. Species codes follow the North American four-letter system.

<table>
<thead>
<tr>
<th>Island name</th>
<th>General area</th>
<th>Latitude (North)</th>
<th>Longitude (West)</th>
<th>Species of interest</th>
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<tr>
<td>Edwards Island</td>
<td>Lake Melville</td>
<td>53.6623</td>
<td>60.0092</td>
<td>BHGU</td>
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<tr>
<td>Watch and Chain</td>
<td>Groswater Bay</td>
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<td>57.8705</td>
<td>DCCO</td>
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<td>57.9047</td>
<td>DCCO</td>
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<td>Labrador Straits</td>
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<td>55.6956</td>
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<tr>
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<td>54.0123</td>
<td>58.9229</td>
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</tr>
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<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Day</th>
<th>No. Adults</th>
<th>Comments</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>April</td>
<td>30</td>
<td>1</td>
<td>Spring staging</td>
<td>North West River</td>
</tr>
<tr>
<td>2001</td>
<td>May</td>
<td>15</td>
<td>3</td>
<td>Spring staging</td>
<td>Metchin River</td>
</tr>
<tr>
<td>2001</td>
<td>June</td>
<td>10</td>
<td>30</td>
<td>Nesting (not confirmed)</td>
<td>St. Peter’s Bay</td>
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<tr>
<td>2001</td>
<td>June</td>
<td>22</td>
<td>400</td>
<td>Nesting (confirmed), incubation</td>
<td>Watch and Chain (Groswater Bay)</td>
</tr>
<tr>
<td>2001</td>
<td>June</td>
<td>23</td>
<td>200</td>
<td>Nesting (confirmed), incubation</td>
<td>Gull Island (Groswater Bay)</td>
</tr>
<tr>
<td>2002</td>
<td>June</td>
<td>19</td>
<td>200</td>
<td>Nesting (confirmed), incubation</td>
<td>Watch and Chain (Groswater Bay)</td>
</tr>
<tr>
<td>2002</td>
<td>June</td>
<td>20</td>
<td>100</td>
<td>Nesting (confirmed), incubation</td>
<td>Gull Island (Groswater Bay)</td>
</tr>
<tr>
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<td>August</td>
<td>10</td>
<td>5</td>
<td>Adult only</td>
<td>Goose Bay</td>
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<tr>
<td>2002</td>
<td>August</td>
<td>10</td>
<td>1</td>
<td>Adult only</td>
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<tr>
<td>2003</td>
<td>June</td>
<td>20</td>
<td>300</td>
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<td>Watch and Chain (Groswater Bay)</td>
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<td>21</td>
<td>300–400</td>
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<td>Watch and Chain (Groswater Bay)</td>
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<tr>
<td>2003</td>
<td>September</td>
<td>5</td>
<td>2</td>
<td>Fall staging</td>
<td>North West River</td>
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bowls (without eggs) were discovered, but no nests with eggs were confirmed. One adult Caspian Tern was observed flying over Grassy Island with a fish in its bill during June 2001. During surveys of Gull Island in August 2001, several adult Caspian Terns dived repeatedly at the field team, most likely in defense of nests.

Discussion

Montevecchi et al. (1987) reviewed the status of Black-headed Gulls in Newfoundland and Labrador and reported several sightings of juveniles in Labrador. A Black-headed Gull recovered in northern Labrador in 1932 had been banded in the Netherlands (Gross 1935), and many banded Black-headed Gulls recovered in Newfoundland were banded in Iceland (Montevecchi et al. 1987). However, the only known breeding records for the province are from insular Newfoundland. Black-headed gulls nest in low numbers in western Newfoundland (G.J. Robertson, unpubl. data). Black-headed Gulls were recorded nesting only once on the Québec north shore, in the Mingan archipelago (50.20°N, 63.62°W) in 1988 (Chapdelaine et al. 2003). They have also nested consistently in small numbers in the Magdalen Islands, the only other known nesting site in Québec (Chapdelaine et al. 2003). Anecdotal information from long-time residents of North West River, Labrador, suggests that Black-headed Gulls are very rare, and the first sightings may have occurred in the late 1990s. It is unclear how long Black-headed Gulls have been attempting to breed in Lake Melville, Labrador.

Based upon the published literature, the status of Double-crested Cormorant breeding in Labrador is unclear. Brown et al. (1975) and Hatch and Weseloh (1999) did not include Labrador in the breeding range of Double-crested Cormorant. However, Godfrey (1986), Todd (1963), and Austin (1932) included Labrador as part of the species’ breeding range. Residents of Lake Melville and Groswater Bay report the occurrence of cormorants for at least several human generations (where they are referred to by the local name “Shag”), and many islands on the Labrador coast are named Shag Rock or Shag Island. These latter two sources imply that cormorants occurred historically in Labrador, but, owing to low numbers and lack of survey effort, they were not systematically documented.

This report documents the first confirmed nest record for Double-crested Cormorant in Labrador. Double-crested Cormorants are a common nesting species on the Québec North Shore west of St. Mary’s Islands (Chapdelaine et al. 2003). In 2001, Double-crested Cormorants were confirmed breeding on the Northern Peninsula of Newfoundland in Hare Bay (Spring Island, 51.23°N, 55.83°W; CWS, unpublished data). The data presented here supports the notion of a range expansion by
Double-crested Cormorant; however, there appears to be a gap in their breeding range between the eastern portion of the Quebec North Shore and the central Labrador coast. This gap is probably the result of insufficient survey effort in recent years, and we recommend additional surveys to accurately document the breeding range of Double-crested Cormorant in Labrador.

The first documented evidence of nesting by Caspian Terns in Labrador was provided by Lock (1983), when he observed four adult Caspian Terns in a Ring-billed Gull (Larus delawarensis Ord.) colony (54.00 °N, 58.72 °W) on an island in eastern Lake Melville. However, Cuthbert and Wires (1999) and Wires and Cuthbert (2000) have questioned whether Caspian Terns continue to breed in Labrador.

Based on discussions with local aboriginal elders, Caspian Terns are rare in this area. The evidence reported here suggests that Caspian Tern numbers in Lake Melville are low, but it seems likely that they have been attempting to nest and that their numbers might be increasing. Similarly, Caspian Terns are rare breeders in Atlantic Canada. The only consistently used breeding colony in Quebec is on Fog Island (50.30 °N, 59.78 °W), but nesting has not been confirmed there since 1995. In Newfoundland, between 80 and 100 pairs nested on Ladle Island (49.40 °N, 54.05 °W), Hamilton Sound, in 2001, but were not seen breeding on this island in 2002 (CWS, unpubl. data). Further, two pairs bred singly within two different Ring-billed Gull colonies in St. John Bay (50.83 °N, 57.17 °W) on Newfoundland’s Great Northern Peninsula in 2001 (CWS, unpubl. data). Future monitoring is recommended to document nesting, population status, and possible range extension.

The observations reported here suggest that recent breeding by Double-crested Cormorants in Labrador is likely due to a re-colonization. The observation of the Black-headed Gull nest likely represents a recent range expansion and may indicate a general amelioration of conditions in Labrador, as Black-headed Gulls are a temperate breeding species. While the authors did not definitively confirm Caspian Tern nesting, it seems likely that they have been nesting in Lake Melville since Lock (1983) first observed them in 1980, and their numbers appear to have remained low.

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Literature Cited


