

## Notes

### Do Barrow's Goldeneyes, *Bucephala islandica*, Breed South of the St. Lawrence Estuary in the Gaspé Peninsula, Eastern Canada?

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We report the first observations of Barrow's Goldeneyes south of the St. Lawrence estuary in typical breeding habitat during the breeding season. Until recently, the confirmed breeding locations for the species in Eastern North America were all located on the north shore of the Estuary and Gulf of St. Lawrence.

Key Words: Barrow's Goldeneye, *Bucephala islandica*, Chic-Chocs Mountains, Gaspé Peninsula.

The presence of the Barrow's Goldeneye (*Bucephala islandica*) in Eastern North America has been known for more than a century (Coues 1903; Dionne 1906), but little was known about this population until recently (Savard 1995; Savard and Dupuis 1999). For instance, its breeding area was only defined in the early 1990's (Robert et al. 2000a). Since then, the population has been designated as "of special concern" by the committee on the status of endangered wildlife in Canada (COSEWIC 2001) and is now protected under the federal Species at Risk Act. The Barrow's Goldeneye breeds in the boreal forest along the north shore of the St. Lawrence estuary and it has never been reported breeding on the south shore. Degradation of its breeding habitat was identified as a potential threat on the population (Robert et al. 2000b\*), but the actual extent of the breeding range is largely unknown. Most of our current knowledge of the delineation of Barrow's Goldeneye's breeding ground in Eastern North America was provided by radio-tracking and aerial and ground surveys (Robert et al. 2000a, 2002; SOS-POP 2009). The breeding location data, although accurate, are far from exhaustive. Also, there is still place for fortuitous discoveries. We report here on the first observations of Barrow's Goldeneyes south of the St. Lawrence estuary in typical breeding habitat during the breeding season.

#### Results and Discussion

Two lakes in high altitude in the Chic-Chocs Mountains, Lake Bardey (48°51'N; 66°42'W) and Lake Coleman (48°52'N; 66°42'W), were visited on 25 and 26 June and on 9 and 18 July 2009. On 25 June, an adult male Barrow's Goldeneye was observed on Lake Bardey and an adult female was observed on Lake

Coleman. On Lake Bardey, the male was accidentally flushed upon the observer's approach and landed in the middle of the lake. During the following ten minutes, it exhibited an alarmed attitude and was repeatedly seen calling, possibly suggesting the presence of another undetected individual in the area. On Lake Coleman, the female was engaged in preening activities during most of the 70 minute period it was observed. On 26 June, the male was not detected on either lakes but a female was observed roosting on the same outcrop on the bank of Lake Coleman. The individuals were found on different lakes located 300 m apart and were never seen together. Therefore, there are no indications whether the two individuals belonged to the same pair. Observations were conducted within 200 m of the birds in good light conditions with a Swarovski spotting scope of 80 mm fit with a 20-60× eyepiece. The male was in full breeding plumage and could not be mistaken with any other species. The identification of the female was ascertained afterwards by comparing field notes with close-up photographs of adult and juvenile female Barrow's and Common Goldeneyes (*Bucephala clangula*) archived at the Canadian Wildlife Service. On 9 July, an adult female was observed on Lake Bardey. On 18 July, no individuals were detected on either lakes. Since the individuals were not marked, we have no certitude whether our observations involved multiple females or repeatedly the same one. These observations constitute the first record of the presence of Barrow's Goldeneyes in breeding habitat during breeding season south of the St. Lawrence estuary.

The mountain guides affiliated to the Auberge de montagne des Chic-Chocs had noted the presence of pairs and ducklings of unidentified goldeneyes on the

exact same lakes repeatedly over the last few years (I. Blouin, unpublished data), which suggests that Barrow's Goldeneyes may have been nesting in this area for at least a couple of breeding seasons. The environment and features of lakes Bardey and Coleman fit well the description of the breeding habitat of Barrow's Goldeneyes in Eastern North America (Robert et al. 2006): Lake Coleman is a headwater lake lying at an altitude of 646 m and Lake Bardey is located 300 m downstream from Lake Coleman and is approximately 25 m lower in altitude; they are connected to the local watershed by a single stream cut by a 50 m high waterfall which may have prevented the colonization of these lakes by fish; both lakes are surrounded by steep slopes and a large proportion of their bank consisted of outcrops; they are free of riparian wetlands and no emergent vegetation was apparent at the date of our visit; and large snags are abundant in the landscape surrounding the lakes.

In our opinion, the most plausible explanation for the presence of the species in this area at this time of year is nesting. Other potential explanations include a migratory stop-over and a moult staging. But at the time of year when the observations were made (June and July), a migratory stop-over is very unlikely. Also, male Barrow's Goldeneyes moult in coastal environments and females moult on large lakes and both sexes winter at sea (Robert et al. 2000b\*). Therefore, despite the lack of direct evidence of nesting, our observations extend the probable breeding range of the Eastern North American population of Barrow's Goldeneye to the Gaspé Peninsula. Our discovery also indicates that the land use and natural resource management of the Chic-Chocs Mountains should take into account the presence of this species at risk.

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