An aerial photograph of a vast, forested landscape. In the foreground, a winding river flows through a dense forest of evergreen trees. The river's surface is calm, reflecting the surrounding greenery and the sky. In the middle ground, the forest continues, with some areas appearing more open or recently cleared. In the far distance, a large, wide lake or reservoir is visible, surrounded by a thick forest. The sky is overcast, with soft, diffused light. The overall scene is a natural, undisturbed wilderness.

First Documentation of
Black Scoter
Breeding in Ontario

Kenneth F. Abraham, Donald M. Filliter and Donald A. Sutherland

Figure 1. Lakes on which the first documented brood of Black Scoters was found 25 July 2006, 8 km east of Peawanuck, Ontario, Lat: Long recorded by GPS 55° 00' 12.9" N, 85° 18' 08.3" W.

Photo: Jean Hall-Armstrong.



Introduction

The Black Scoter (*Melanitta nigra*) is a large sea duck that breeds primarily in boreal and subarctic regions of North America, and winters on the Atlantic and Pacific coasts. There are two relatively discrete breeding segments, the eastern and the western populations (Bordage and Savard 1995). Black Scoters in Ontario are representative of the eastern population, documented breeding for which is centered in northern Québec (Ross 2007). Small numbers migrate

through and winter on the Great Lakes, but the primary presence of the species in or near Ontario are the flocks of moulting males in July and August along the coasts of James Bay and Hudson Bay (Ross 1983, 1994).

Breeding in Ontario has long been assumed, but not confirmed (Ross 1994, 2007; Sandilands 2005), and is believed to be limited to the Hudson Bay Lowlands. Observations of pairs in apparently suitable breeding habitat during June waterfowl surveys have been the basis of

breeding status assessment and population estimates (Ross 1994, 2007, pers. obs.) but no nests have been found, and until the observations reported here, neither were there any brood records.

In this paper, we describe the first observations of Black Scoter broods confirming breeding in Ontario. They occurred after the field work for the recent Atlas of the Breeding Birds of Ontario (Cadman *et al.* 2007) was completed. We refer to one non-definitive observation during the atlas period.

Observations of Black Scoter broods in Ontario

Observation 1: 8 km east of Peawanuck, Ontario, 40 km south of Hudson Bay. Location recorded by GPS: 55° 00' 12.9" N, 85° 18' 08.3" W; 16 608584 6096508 NAD83.

On 25 July 2006, during a helicopter flight after a day of goose banding on the Hudson Bay coast east of the Brant River, we were on a direct flight to Peawanuck, recording wildlife observations as we went. At 20:21 EDT, a duck brood caught our attention and we circled back to look. As we circled lower, Ken Abraham (hereafter KFA) caught a glimpse of the head and bill markings of the female through his binoculars and tentatively identified her as a Black Scoter. The sun was illuminating the yellow on her bill to such an extent that he was perplexed (most illus-

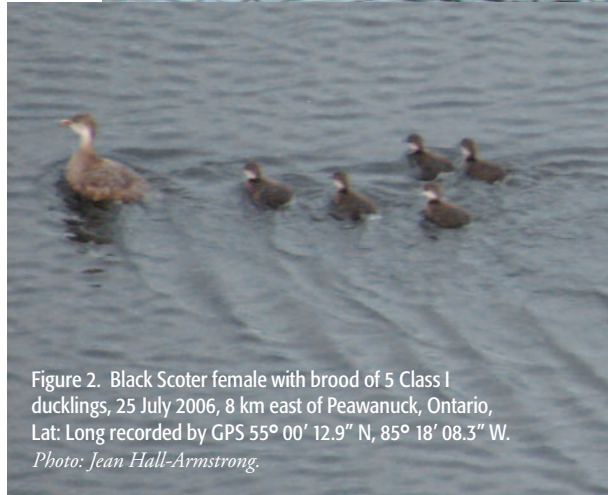


Figure 2. Black Scoter female with brood of 5 Class I ducklings, 25 July 2006, 8 km east of Peawanuck, Ontario, Lat: Long recorded by GPS 55° 00' 12.9" N, 85° 18' 08.3" W. Photo: Jean Hall-Armstrong.

trations do not show so much yellow on the bill of the female). She clearly was accompanying a brood of five very young ducklings (estimated as Class I, Gollop and Marshall 1954). They had dark caps and white-sided faces, consistent with the sea duck tribe (Mergini). We hovered to



Figure 3. Female Black Scoter with her ducklings, note upright tail of alert posture, 26 July 2006, 8 km east of Peawanuck, Ontario, Lat: Long recorded by GPS 55° 00' 12.9" N, 85° 18' 08.3" W.
 Photo: Jean Hall-Armstrong.

get general location and higher altitude pictures of the lake (Figure 1), then got low enough for all aboard the aircraft to see the birds and for Jean Hall-Armstrong to take the definitive first pictures of the female and brood (Figure 2).

The next day, we returned to the lake and dropped Jean and Brenda Hill on the ground to take more photographs from better vantages (Figure 3). We maneuvered the brood by hovering at a sufficient altitude to keep it reasonably close to the shore where Jean and Brenda were concealed. While they were photographing the birds, our activity disturbed or attracted a Common Loon

(*Gavia immer*), which landed near the brood and was apparently taken as a threat by the female scoter. She assumed alert postures and agitated behaviours (cocked tail, vocalizations, short hopping flights toward the loon and around her young, and calling the young close to her, etc.). She later escorted them to an adjacent smaller lake through a small connecting channel (visible in Figure 1). The habitat was typical of a large number of lakes with indeterminate depth (our guess is about 2 m), with dark substrates and tannin coloured water. The banks are lined with thick spruce and tamarack.

Observation 2: 80 km east of Peawanuck, Ontario, 20 km south of Hudson Bay. Location recorded by GPS: 55° 07' 26.9" N, 84° 13' 37.2" W; 16 676813 6112117 NAD83.

On 24 July 2007, again during a helicopter flight after a day of goose banding, we were on another direct flight to Peawanuck at 18:30 EDT when a scoter-like duck brood caught our attention, but in different habitat than the 2006 confirmed observation. This habitat was a shallower lake in more open sedge fen, but with a surrounding elevated rim ringed with tamarack, willow and birch. We circled, hovered, and this time KFA easily determined with binoculars that it was a Black Scoter female with a brood. We quickly dropped Andrew Silver on the northwest shore with the sun behind him so he could take pictures of the female with 3 Class I ducklings from a good vantage point (Figure 4). We landed on a peat plateau at the opposite side of the lake and shut down to make our own observations, and to assure that the

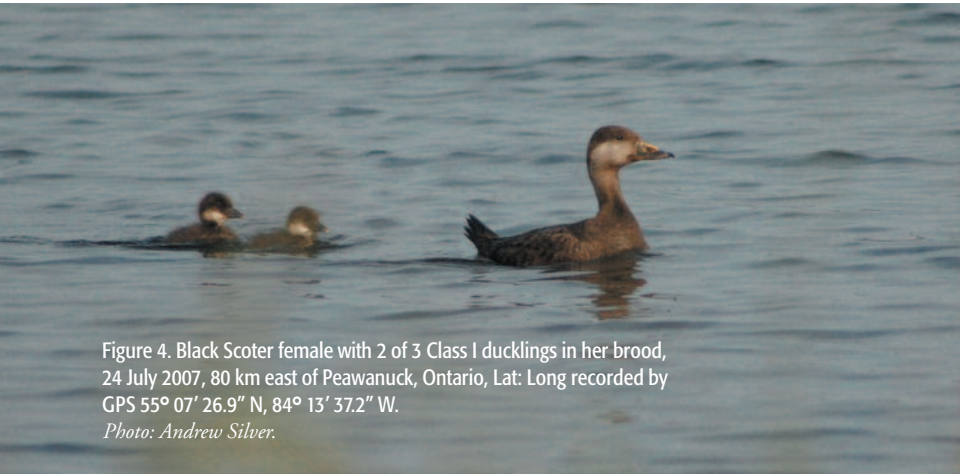


Figure 4. Black Scoter female with 2 of 3 Class I ducklings in her brood, 24 July 2007, 80 km east of Peawanuck, Ontario, Lat: Long recorded by GPS 55° 07' 26.9" N, 84° 13' 37.2" W.

Photo: Andrew Silver.

Figure 5. Lake on which a Black Scoter female with brood of 3 Class I ducklings was found, 24 July 2007, showing emergent vegetation on the shoreline, 80 km east of Peawanuck, Ontario, Lat: Long recorded by GPS 55° 07' 26.9" N, 84° 13' 37.2" W. Photo: Ken Abraham.



Figure 6. Lake on which Black Scoter female with brood of 3 Class I ducklings was found, 24 July 2007, showing a tamarack hedge along the shoreline, 80 km east of Peawanuck, Ontario, Lat: Long recorded by GPS 55° 07' 26.9" N, 84° 13' 37.2" W. Photo: Ken Abraham.



birds went in the direction where Andrew was concealed. We took photos of the lake and surrounding habitat from this second vantage point (Figures 5, 6). One duckling became separated for a while but

rejoined the female and its siblings before we left. A female scaup (*Aythya* sp.) was also attracted to the group during our observation.

Observation 3: 109 km east of Peawanuck, Ontario, 28 km south of Hudson Bay. Location recorded by GPS: 55° 01' 50.8" N, 83° 43' 08.7" W; 17 326220 6101596 NAD83.

On 25 July 2001, during a helicopter flight on the way to band geese, we flew over a small lake, ringed with black spruce and tamarack (much like the one in Observation 1, but with more emergent vegetation like the one in Observation 2). KFA saw a dark adult duck of scoter size with what appeared to be a duckling at its side, and the brief glimpse was of a bird about 1/4 the size of the adult. When we circled, the adult was agitated but did not flush or dive; the apparent young bird did dive into some nearby emergent vegetation. We circled repeatedly, hovering low enough so that KFA could positively identify the duck as a female Black Scoter by its bicoloured head and lack of white wing markings (Figure 7), but the other bird could not be seen. We hovered at a higher altitude for a few minutes hoping they would be reunited, but the presumed duckling could not be relocated. We returned on

the following two days for quick passes and the female was present on both days. On 27 July, we landed near the lake and KFA took videos of the female on the lake and as she flushed (photos on file with the Ontario Bird Records Committee). No duckling was seen on either of the latter two occasions, thus we cannot be certain of its identification. The persistent presence of the female, on her own and in such habitat on those dates, is suggestive of successful breeding, but not conclusive.

Observation 4: 92 km east of Peawanuck, 43 km south of Hudson Bay. Location recorded by GPS: 54° 51' 57.0" N, 84° 00' 32.4" W; 16 691938 6083960 NAD83.

On 9 August 2007, while in transit by helicopter between Mid-Canada Line (MCL) Radar Sites 415/416 and Peawanuck, a female Black Scoter with a brood of six half-grown ducklings was observed by Don Sutherland (hereafter DAS) on one of a series of small inter-connecting lakes in open to sparsely treed taiga with extensive palsa development, near the Aquatuk River. The lake was bordered by a discontinuous band of low birch and willow and sedge marsh.



Figure 7. Black Scoter female leaving lake, 27 July 2001, 109 km east of Peawanuck, Ontario, Lat: Long: recorded by GPS 55° 01' 50.8" N, 83° 43' 08.7" W.

Photo (still image captured from digital video): Ken Abraham.

Observation 5: 45 km east of Peawanuck, 18 km south of Hudson Bay. Location recorded by GPS: 55° 03' 55.8" N, 84° 43' 46.2" W; 16 644991 6104436 NAD83.

On 10 August 2007, while in transit by helicopter between the mouth of the Sutton River and Peawanuck at 17:39 EDT, DAS and Bill Crins observed a large aggregation of duck broods in open water near the south end of a relatively large lake in sparsely treed taiga. Circling back in the helicopter, it was evident that broods comprised several species of duck, and as we circled overhead our attention was first drawn to a female White-winged Scoter (*Melanitta fusca*) with a brood of six small ducklings near the periphery of the flock, then a female Black Scoter with a brood of 10-14 small ducklings. As we circled the lake, the duck broods moved to the shoreline against the darker backdrop of shrub willow-birch and spruce growth bordering the lake, where they became more difficult to discern. A second pass along the shoreline revealed a second female Black Scoter with a brood of eight small ducklings, and at least two broods (9 and ~14 young, respectively) of Surf Scoter (*Melanitta perspicillata*) and several broods of Greater Scaup (*Aythya marila*). On 11 August, while in transit between Peawanuck and MCL Radar Sites 415/416 at 09:30 EDT, we returned to the lake with the intention of obtaining photographic documentation of the Black Scoter broods; however, we were

unsuccessful in relocating broods of either Black Scoter or White-winged Scoter, but were able to locate and photograph two broods of Surf Scoter (9 and ~14 ducklings) and several broods of Greater Scaup.

Observation 6: 17 km east of Peawanuck, 30 km south of Hudson Bay. Location recorded by GPS: 55° 01' 5.4" N, 85° 09' 55.6" W; 16 617294 6098352 NAD83.

On 10 August 2007, at 17:49 EDT, while in transit by helicopter between the Sutton River and Peawanuck, a female Black Scoter with a brood of ~12 small ducklings was observed through binoculars by DAS while overflying a series of sinuous, interconnected small marshy lakes, bordered by low willow-birch thickets and open, sparsely-treed taiga.

Discussion

Why has it taken so long to confirm the breeding of Black Scoter in Ontario? Ross (2007) discusses this question with respect to waterfowl surveys and volunteer atlas field work. We agree with his view that it is a reflection of remoteness, timing and population size and distribution. The extreme remoteness and restricted access to the breeding range in general, and the preferred habitats in particular (taiga ponds), especially in Ontario, is a primary factor. This affects both routine surveys and atlas-type field work. In addition, routine waterfowl

surveys are conducted at times that are not optimal for observing either pairs of this late-nesting species. Pair surveys are done in late May or early June (while Black Scoters arrive in mid June) and brood surveys are done in early to mid July (while Black Scoters hatch in mid to late July or early August). Finally, the number of breeding Black Scoters may be as low as 6500 (Ross 1994) in a vast area of over 200,000 km².

Our ability to use helicopters, and our practice of using all point to point flights between our primary study sites (e.g., banding locations) and base camp in Peawanuck as survey flights, and by varying the flight paths on the homeward leg, has given us access to areas most visitors to the Hudson Bay Lowlands do not get. If distribution of suitable habitat is patchy, as Ross (2007) suggests, this practice may have worked to our advantage. An alternate view is that distribution is less patchy, and that our good for-

tune in locating broods was a result of more intense search effort at appropriate times of the season. All of our brood observations occurred after 20 July, and as late as 10 August, due to the nature of the primary objectives. As a result, our visits were well timed with respect to hatch and the presence of broods. Finally, we suggest that the population of Black Scoters breeding in Ontario may be substantially higher than the very preliminary projection of Ross (1994).

Given that little is known of the breeding habitat of Black Scoter in Ontario, a summary of the general characteristics of brood habitat for the species in Ontario from the above observations is warranted. All sites were between 18 and 43 km inland (south) of the Hudson Bay coast in open to sparsely-treed muskeg/taiga (Figure 8). Three sites (2, 4 and 6) were in more open, sparsely treed taiga and were surrounded by sedge fen and/or marsh with some to extensive low-palsa

Figure 8. Map showing the locations (1-6) where Black Scoter broods have been observed on the Hudson Bay Lowlands. *Map: Andrew Jano.*



development, while the other sites (1, 3 and 5) were rimmed by a curtain forest of larger spruce (*Picea* spp.) and tamarack (*Larix laricina*). Brood lakes were generally small (<1 to 22 ha; average 5.4 ha) with shallow (est. 1-4m), generally tannin-stained to clear water. Four of six lakes were free of emergent aquatic vegetation, while two (Observations 2 and 6) had moderate to extensive emergent sedge growth and were surrounded by more open sedge fen. All lakes had shorelines rimmed with a continuous to discontinuous thicket of low (generally <2 m) willow (*Salix* spp.) and birch (*Betula* spp.). Characteristics of brood habitat for Black Scoter in Ontario correspond well with those observed in Québec (Bordage and Savard 1995; Morrier 1996), where small (10-30 ha), relatively shallow (<5m) productive taiga lakes with little emergent vegetation were preferred, and larger (>30 ha), deeper lakes and rivers were avoided.

In Ontario, as elsewhere in its range, the Black Scoter typically breeds at low densities, usually with a single pair to a lake and less commonly or rarely in company with other waterfowl species. In Québec, the Black Scoter tends to breed in company with the other scoter species only on larger (20-100 ha) lakes (Morrier 1996). Our observations (see Observation 5) suggest that in Ontario this may be true as well, and that Black Scoter may be less likely to be found in company with the other scoter species, as suggested by Ross (2007).

As there is still much to learn about the Black Scoter in Ontario, and because there is concern at a continental level about its status, we recommend the development and implementation of a systematic brood survey in early August. Such a survey would also improve information about the other scoter and waterbird species in this vast wetland area.

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