

First Documented Nest Records of Ross's Goose in Ontario

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Introduction

The diminutive Ross's Goose (*Chen rossii*) is the smallest of the three forms of white geese that breed in North America (along with the Lesser Snow Goose *Chen caerulescens caerulescens* and Greater Snow Goose *Chen caerulescens atlantica*). It was first reported and well described by Hudson's Bay Company explorer Samuel Hearne as the "Horned Wavy", in the journal he kept during his epic overland travels between Churchill, Manitoba and the mouth of the Coppermine River, between 1769 and 1771. Hearne noted that his superior at Prince of Wales Fort (Churchill), Governor Moses Norton, had failed to include an available specimen of Ross's Goose, taken nearby, among a collection of 17 bird specimens sent to the Hudson's Bay Company in London in 1771 (Hearne 1795, Houston *et al.* 2003). Ross's Goose was, therefore, not formally described to science until nearly a full century later, by John Cassin, who named it for

Figure 1: The 2005 Burntpoint Creek, Ontario Breeding Bird Atlas team at the tip of Cape Henrietta Maria, 17 June 2005. *Left to right:* Colin Jones, Glenn Coady, Mark Peck, Don Sutherland and Gerry Binsfeld.
Photo by Dan Steckly.



Figure 2: Aerial view of the habitat. The periphery of the Cape Henrietta Maria Snow Goose colony, 15 June 2005.

Photo by Mark Peck

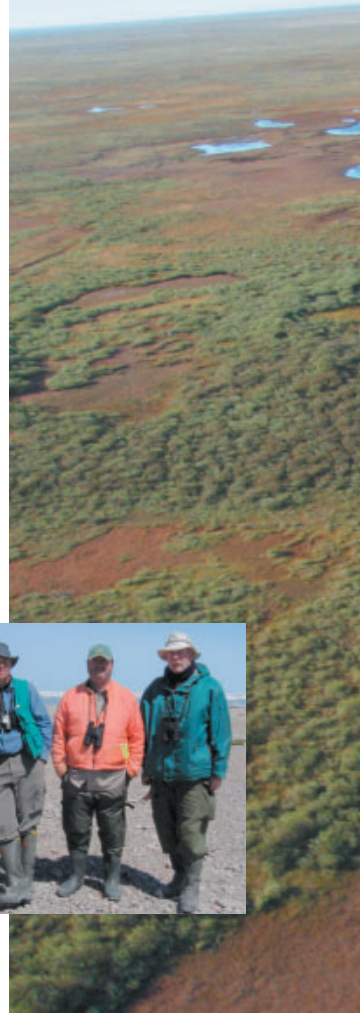




Figure 3: Nest and eggs of
Ross's Goose, 15 June 2005.
Photo by Don Sutherland

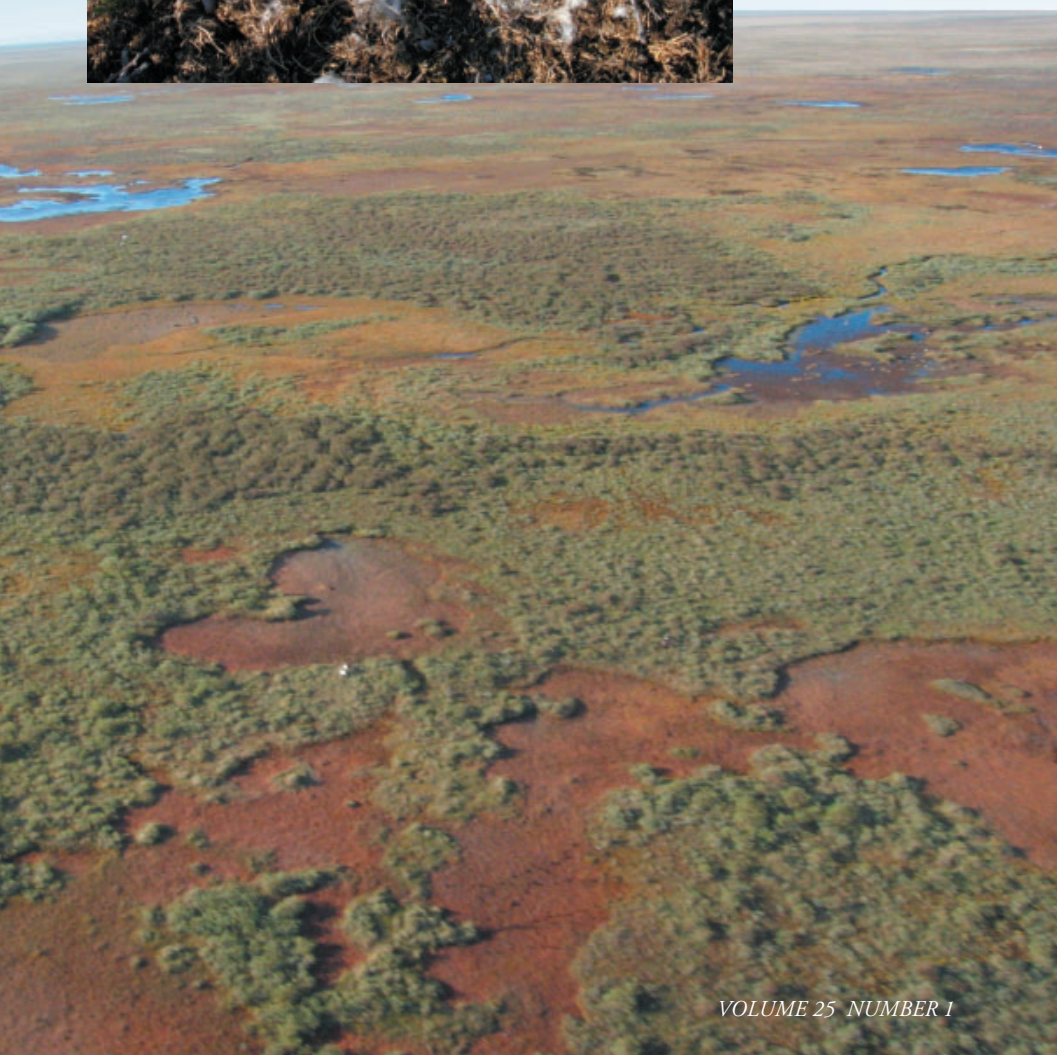
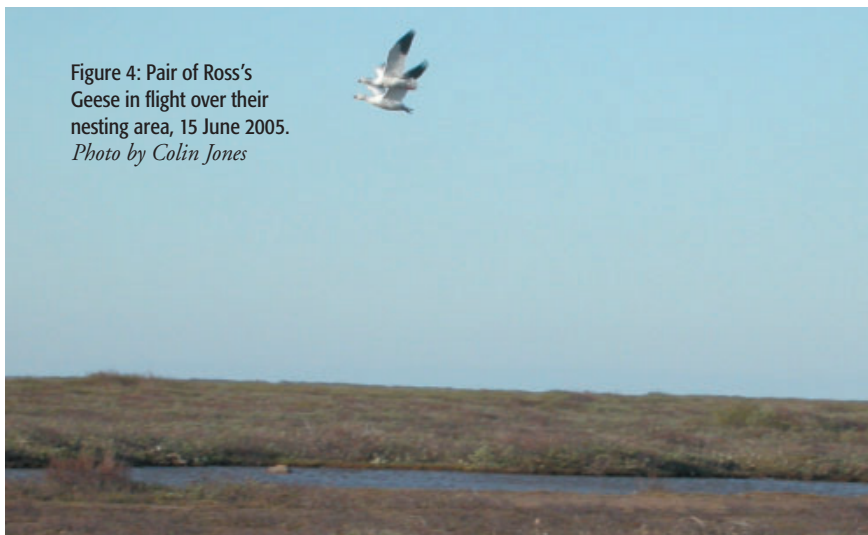


Figure 4: Pair of Ross's Geese in flight over their nesting area, 15 June 2005.

Photo by Colin Jones



Bernard Rogan Ross, a Chief Factor of the Hudson's Bay Company, who had sent him specimens from Fort Resolution on Great Slave Lake (Cassin 1861).

Ross's Goose was at one time thought to be the rarest breeding North American goose species, and possibly in danger of extinction (Grinnel *et al.* 1918, Lloyd 1952), reaching an estimated low of approximately 2,000 birds in 1949 (Hanson *et al.* 1956). Remarkably, its breeding grounds eluded discovery until 1 July 1940, when Hudson's Bay Company officials Angus Gavin and Ernest Donovan reported the first nesting colonies on a lake near a tributary of the Perry River, about 80 km north of the Arctic Circle (Cartwright 1940, Gavin 1940, Taverner 1940, 1941). Gavin (1947) later revised this account to reveal he had previously discovered a Ross's

Goose nest on a lake near the Perry River in June of 1938. Its breeding range was formerly restricted to the central Canadian Arctic in a limited area around the Perry River delta in the Queen Maud Gulf lowlands, and it once wintered exclusively in the interior valleys of California (Kortright 1943, Delacour 1954).

By the 1950s and 1960s the breeding range of Ross's Goose had expanded, and it was discovered breeding among widespread Snow Goose colonies away from the traditional Perry River area, from Banks Island in the west (Barry 1960), to Southampton Island and the McConnell River in the east (Cooch 1954, Barry and Eisenhart 1958, MacInnes and Cooch 1963). Further range expansion was documented from the late 1960s to the 1990s (Ryder 1969, Kerbes *et al.* 1983, Alisauskas and Boyd 1994, Kerbes

1994), extending westward to Alaska (Johnson and Troy 1987), and eastward to Arviat, Nunavut (Ryder and Alisauskas 1995), La Pérouse Bay in Manitoba (Ryder and Cooke 1973), the Cape Henrietta Maria area of Ontario (Prett and Johnson 1977), Akimiski Island in James Bay (Prett 1987) and southwestern Baffin Island (Ryder and Alisauskas 1995).

The range expansion has continued concomitantly with a dramatic increase in its total population (like that of the Lesser Snow Goose) to this day. From a low of about 2,000 birds in the late 1940s, the population has continuously increased to an estimated minimum of 542,000 breeding adult Ross's Geese in the central and eastern Arctic, and ca. 800,000 birds overall, as of the spring of 1998 (Hanson *et al.* 1956, Ryder 1969, Prett and MacInnes 1972, Kerbes 1994, Kelley *et al.* 2001, Kerbes *et al.* 2006).

Ross's Goose now breeds throughout the central and eastern Arctic and sub-Arctic south to northern James Bay, in the majority of sites where Lesser Snow Goose colonies occur, yet approximately 90% of the population still breeds in the Queen Maud Gulf lowlands. It still winters predominantly in the Central Valley of California, and increasingly in New Mexico, the north-central highlands of Mexico, Texas, Arkansas and Louisiana, with

the mid-continent wintering population now estimated to exceed 100,000 birds (Ryder and Alisauskas 1995, Kelley *et al.* 2001).

The first record of Ross's Goose in the Hudson Bay Lowlands of Ontario involved an adult female, shot at the mouth of the Harricanaw River in southern James Bay (51°10' N, 79°47' W), by a Cree hunter, in October 1953. It was with an adult male blue morph Lesser Snow Goose and a family group of juveniles appearing to be blue morph Lesser Snow Geese (Cooch 1954). A second specimen was taken slightly further to the northwest in Hannah Bay (51°15' N, 79°50' W) in early May 1954 (Cooch 1955). The establishment of Ross's Goose as a breeding bird on Ontario's tundra coast has been a long process. On 29 July 1975, among a total of 1850 flightless Lesser Snow Geese, captured for banding at the mouth of the Brant River (55°10' N, 82°52' W), J.P. Prett and F.C. Johnson discovered a family group consisting of an adult



Figure 5: Habitat around the nesting area of Ross's Goose, 15 June 2005. Photo by Colin Jones

male Ross's Goose with 3 juveniles (1m,2f), 5-6 weeks old, and a larger female appearing to be a hybrid between Ross's Goose and Lesser Snow Goose (Prevett and Johnson 1977). This provided the basis for the inclusion of Ross's Goose on the list of breeding birds for Ontario (Peck and James 1983, Wormington and James 1984).

During the first Ontario Breeding Bird Atlas (1981-1985), breeding was confirmed on nearby Akimiski Island, Northwest Territories (present-day Nunavut), in James Bay, when an adult male Ross's Goose and two goslings were captured by an Ontario Ministry of Natural Resources (OMNR) team in a banding roundup of 50 geese on the north shore of the island, on 13 July 1984 (Prevett 1987). In the second Ontario Breeding Bird Atlas (2001-2005), numbers of both adult and juvenile Ross's Geese have been captured annually in OMNR goose banding operations in the Cape Henrietta Maria area, but they have accounted for fewer than 1% of over 20,000 *Chen* geese handled (Abraham 2002 and unpublished).

Although breeding by Ross's Goose has long been clearly established in Ontario, no nests of Ross's Goose had been documented for the province before 2005 (Peck 2005). The purpose of this paper is to document the first nests of this species in Ontario, found by the authors during field work in the Cape Henrietta Maria area in June

2005 on behalf of the Ontario Breeding Bird Atlas (Peck and Peck 2006, Sutherland 2006).

Observations

Between 7 and 21 June 2005, the authors (Figure 1) atlassed areas of Ontario's Hudson Bay Lowlands between Peawanuck and Cape Henrietta Maria (Figure 2). The main purpose of the field work was to complete basic atlas coverage, perform a requisite number of standardized point counts, and upgrade levels of breeding evidence for as many species as possible in atlas blocks LA, LB and MB within Polar Bear Provincial Park.

It was arranged for us to be stationed at the OMNR Burntpoint Creek goose research camp, located near the Hudson Bay coast, about 85km ENE of Peawanuck, with access to an OMNR helicopter and pilot, to cover the area with maximum efficiency. An account from this expedition has been published previously (Sutherland 2006).

On the morning of 15 June 2005 we set out by helicopter from our Burntpoint Creek headquarters with the intention of having two groups doing point counts in widely separated areas: Coady, Jones and Sutherland within the large Snow Goose colony between the Brant and Black Duck rivers, in atlas square 17MB00 (Figure 2); and Binsfeld and Peck at the base of



Figure 6: Ross's Goose nest and immediate surrounding area, 15 June 2005. *Photo by Colin Jones*

Cape Henrietta Maria, in square 17MB10. We arrived over a particularly dense portion of the goose colony at 0647h and randomly selected a suitable site to put the helicopter down to let our first team out to start point counts. What occurred next served to reinforce the often heard axiom that it is sometimes better to be lucky than good. Our first team (Coady, Jones, Sutherland) had just exited the helicopter, and while collecting equipment and watching our pilot, Dan Steckly, prepare the helicopter at 0652h for taking off with our other team, bound for the base of Cape Henrietta Maria in the next square, Coady noticed that the nearest white goose was a Ross's Goose! A second later we saw another Ross's Goose stand up from a nearby

nest at the adjacent pond's edge (Figure 3). In the very extensive and dense colony of Lesser Snow Geese, we had improbably landed our helicopter immediately beside Ontario's first discovered Ross's Goose nest (Nest location: 17U 404751 6106447 North American Datum 1983; 55°05'44.15" N, 82° 29'33.38" W).

We had a very good look at both adult Ross's Geese before they flew a short distance away when we approached to examine the nest (Figures 4 and 5). The nearest available Snow Geese for comparison were a mere 20m away, with many additional birds nearby, due to the helicopter disturbance.

Both birds were very small, about Mallard size, and their plumage was

entirely white except for their black primaries. In their alert posture, they appeared very short-necked, with a very dainty and quite rounded all-white head profile. They had very short, pink bills that were clearly lacking the thick black tomia with exaggerated arches (the so-called “grinning patches”) evident on both Snow Goose and Snow Goose x Ross’s Goose hybrids. These short, pink bills of both birds were decidedly bluish at the base of the maxilla between the nostril and the feather border, and showed the characteristic warty protuberances found in Ross’s Goose. On both birds, the area of contact between the base of the maxilla and the facial feathering around the lores was straight and vertical. Neither bird showed any indication of the published characters of hybridization with Snow Geese (Trauger *et al.* 1971). Both birds had noticeably smaller and slimmer bodies than nearby Snow Geese. Their legs were shorter and thinner, and tended more toward bubblegum pink rather than the deep reddish-pink legs of the Snow Geese. In the air, they showed a definitely narrower wing profile than the Snow Geese and their nasal grunting calls were obviously higher pitched than those of adjacent Snow Geese, making them stand out simply by call alone.

As we were examining and photographing the nest, a flock of 24 calling Ross’s Geese flew directly overhead. It is unfortunate that we did not have calipers with us for egg measurements,

especially because a method for egg discrimination between Ross’s Goose and Lesser Snow Goose has been refined (Ryder 1971, Alisauskas *et al.* 1998). The nest and eggs of this Ross’s Goose pair were noticeably much smaller than any of the several hundred Snow Geese nests and eggs collectively examined that morning.

The nest and eggs were placed in a shallow hollow on a 30 cm mossy hummock lightly covered with dwarf birch (*Betula nana*) and low-lying willow (*Salix sp.*) scrub, 3m from the edge of a small tundra pond (Figures 6 and 7). It was situated about 20m from the nearest Snow Goose nest, with several additional Snow Geese nests visible around some of the larger willow thickets at nearby ponds. The nest was neatly lined with down and contained 4 subelliptical white eggs with minimal gloss or brown staining.

As our priority was to split up and perform point counts along three separate planned transects through the colony, en route to a pre-arranged rendezvous point with our helicopter, limited time prevented a further search of this specific area for additional Ross’s Goose nests. However, Sutherland located a second area with 6 adult Ross’s Geese (about 2km south of Hudson Bay and 12km west of the base of Cape Henrietta Maria), and flushed a second pair of Ross’s Geese from a very similar nest containing 3 eggs (Nest location: 17U 405654 6105081 NAD83; 55° 05' 00.59" N, 82° 28' 40.83" W). In the



Figure 7: Colin Jones inspecting a Ross's Goose nest, 15 June 2005. *Photo by Don Sutherland*

five hours in which we walked through this impressive Snow Goose colony, these were the only areas where we found evidence of breeding Ross's Geese.

Discussion

Ross's Goose may possibly be breeding in all the Ontario Snow Goose colonies. As it is quite difficult to separate Ross's Goose and Lesser Snow Goose from each other with aerial survey methods, an accurate assessment of the current and future population of Ross's Goose in Ontario may require well-timed intensive ground searches during the incubation period. Given that it appears they are not uniformly distributed within the Cape Henrietta Maria Snow Goose colony, a logical first place to build on our knowledge of their

population in Ontario will be more thorough ground surveys in the areas where these first two nests have been located.

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