



Photo: Brian Morin

GREATER SNOW GEESE IN EASTERN ONTARIO

Brian Morin and Jack Hughes

Greater Snow Geese (*Chen caerulescens atlanticus*) have become a regular feature of spring migration in eastern Ontario.

Photo by

The first published account was by Bruce Di Labio (1987). Ron Pittaway detailed the status of the birds in 1992 (Pittaway 1992), and an update was presented by Morin in 2004 (Morin 2004).

From the first reported sighting of 580 birds at Riceville, by Bruce Di Labio in 1986, the annual flocks have grown to between 70,000 and 100,000, spread over the southeastern portion of the province. During that same period, from the mid 1980s to 2009, the Greater Snow Goose population has grown from about 300,000 to over 1.4 million (Canadian Wildlife Service (CWS) Waterfowl Committee 2009). Although the number of migrant Greater Snow Geese has increased dramatically in eastern Ontario and continues to rise, there

has not been a corresponding expansion of the area in which the birds are appearing. Most sightings still occur within 70 km of the Ontario-Quebec border, with the highest concentrations usually being reported from sites northwest and northeast of Cornwall as far as the Ottawa River. Snow Geese are less commonly seen in other areas from Kingston to Ottawa, with generally only a few individuals or small flocks appearing there for a brief time each year. Most of the birds reported west of Kingston are probably Lesser Snow Geese (*C. c. caerulescens*), and their numbers are small.

In the springs of 2007-2009, sighting information was obtained from over three dozen observers. Reports on the Ontbirds listserv were also noted and

personal observations were detailed. During this period, it was possible to develop a greater understanding of where the birds were concentrating, their numbers, and daily movements between roosting and foraging sites. A few additional notes have been added from the beginning of the 2010 migration season.

Migration

The timing of arrival in Ontario is fairly constant from year to year, with the first birds appearing by mid-to late March. The spring flight typically begins with small flocks appearing in open water along the St. Lawrence River west of Cornwall near Long Sault. The river runs faster here and as the ice retreats, the area along the Long Sault Parkway can host

Figure 1. Abundant fields of corn stubble in eastern Ontario often attract geese. *Photo: Brian Morin*





Figure 2. Flooded creeks and fields are a significant attraction for migrant geese. *Photo: Brian Morin*

several thousand geese in the early part of the season. The river to the east of Cornwall starts to open shortly after and the broad portion of the river close to the Quebec border, known as Lake St. Francis, has hosted over 15,000 birds between late March and mid-April. This portion of the river remains an attraction until the ice moves out, which can be as early as the beginning of March or as late as early April. At that point, most of these birds either head into Quebec or relocate to other areas in eastern Ontario. Once the ice is largely gone, only a shallow area east of Lancaster near Bainsville continues to attract 5-10,000 roosting geese for a few more weeks.

When the main flocks of Greater Snow Geese arrive, usually in late March or early April, most of the fields are free of snow. Geese disperse across the abun-

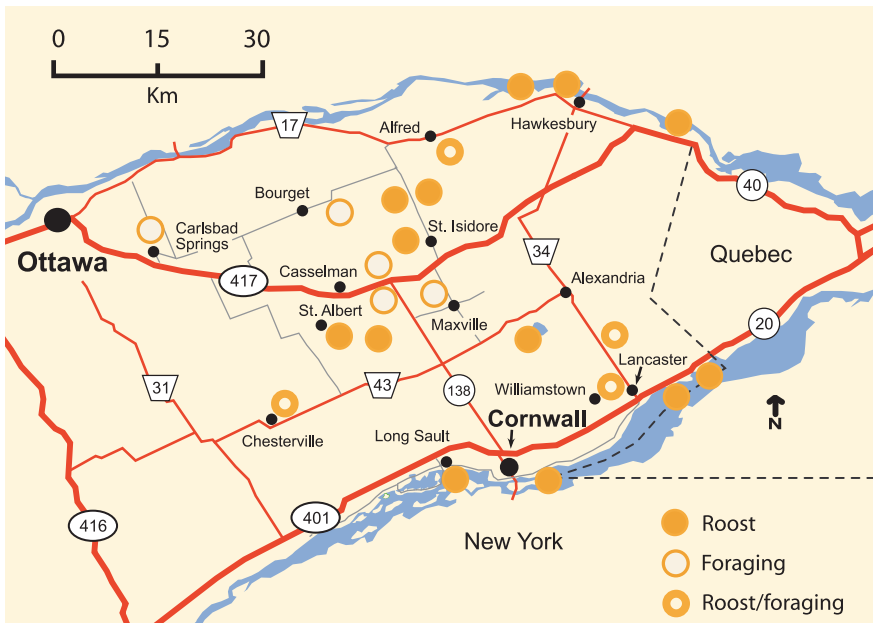
dant fields of corn stubble in the region (Figure 1), where they feed intensively to build up fat reserves needed to continue their migration north to the breeding grounds. While the potential foraging sites are many, preferred locations tend to be those along a few flooded creeks or rivers or near sewage lagoons and agricultural ponds (Figure 2). During the peak of the season, many of the geese use these water features for roosting rather than returning to the St. Lawrence or Ottawa Rivers at dusk. The Ottawa River opens later than the St. Lawrence River so concentrations in bays east and west of Hawkesbury appear after the locations to the south. Although flocks are seen in areas other than those shown in Figure 3, these are the roosting and foraging sites used most regularly in recent years.

The use of southern sites diminishes as the season progresses, with activity at areas closer to the Ottawa River usually peaking a couple of weeks after those along the St. Lawrence River. By early May, the reports dwindle to a trickle as birders shift their focus to songbirds, but that doesn't mean the Snow Geese have left the region. The Canadian Wildlife Service conducts an annual one-day aerial survey of the population over eastern Ontario and southern Quebec in late April or early May. Results during three years show that most of the birds are still present during the time of the surveys (approximate totals: 2007 - 20,000 , 2008 -51,800, 2009 -61,500). By mid-May, however, very few geese are being reported and by the end of May, only the odd straggler is seen.

Daily Activity

The daily pattern of activity for migrating Snow Geese consists of morning and evening foraging flights, mostly to agricultural fields, and periods resting on water at mid day and overnight. On hot, sunny days, especially later in the season as fields begin to dry out, Snow Geese tend to spend less time in fields and more time at roosts between their morning and evening foraging flights. Anyone who has watched flocks of Greater Snow Geese in eastern Ontario knows that they tend to be very active, moving frequently among the locations shown in Figure 3. The exception seems to occur during inclement weather when they spend much of their time on the ground. This is quite different from Canada Geese (*Branta canadensis*), which may

Figure 3: Greater Snow Goose Spring Staging Area *Brian Morin*



remain in an area for longer periods of time. Usually it is necessary to check several sites to locate flocks of 5,000 or more Snow Geese. Occasionally, Greater Snow Geese will concentrate in very large flocks of 20,000 -50,000. This was principally noticed during the spring melt when creeks, smaller rivers and adjacent fields were flooded. Such concentrations will also occur in the first few days of the migration.

Spring 2007

This was a typical spring for Greater Snow Goose migration. Several flocks of a few hundred were reported on 24 March, mainly in areas north of Hwy. 417, but also a flock of 250 observed near Kemptville, west of the normal range. The next day, 2,000 were seen at North Lancaster. Then on 6 April, CWS staff reported 4,000 along Hwy. 417 east of St. Isidore and 10,000 there on 8 April. Tens of thousands were jammed into the municipal ponds at St. Isidore on 11 April, where the birds were quite a spectacle at liftoff. Several Ross's Geese (*C. rossii*) joined the flock at Alfred between 7 and 12 May. The final report of the spring was a lingering bird at Alfred on 28 May.

Spring 2008

Eastern Ontario experienced an exceptionally heavy snowfall in the winter of 2007-08, which produced significant flooding during the melt. The appearance of the first large flocks of geese was delayed until early April because of the heavy snow cover, but once the birds arrived, concentrations were spectacular.

The first major reported sighting was on 15 April, when 22,000 were seen at Green Valley (Figure 4) and 30,000+ at Fournier, on the South Nation River. The South Nation River between Fournier and Riceville continued to be a magnet for large numbers of geese for a couple of weeks, with a high of 50,000 counted on 17 April.

Seasonal flooding also occurs each spring south of Alexandria along Rivière Beaudette and east of Bourget along Cobbs Lake Creek, but was greater than usual in 2008, and large flocks were observed at both locations (Figure 5). The last report of large numbers was 5,000 on the St. Lawrence River at Bainsville on 5 May. A single bird closed out the season at Embrun on 16 May.

A unique sight occurred on 7 April on the St. Lawrence River near Gray's Creek at the eastern end of Cornwall. Close to midnight, bathed in the glow of street lights, hundreds of Greater Snow Geese could be seen floating downriver on ice flows while hundreds more rested along the ice edge. Many of the birds were vocal and a few occasionally took flight. It is not the scene one might expect from birds gone to roost.

Spring 2009

The season was characterized by a very early start to migration. The first flock of about 250 appeared on 7 March along the St. Lawrence River west of Ingleside, and the first report of 1,000 was on 12 March at Williamstown. Large numbers began to appear by mid-March, and on 17 March 22,000 were observed on the St. Lawrence River at South Lancaster.

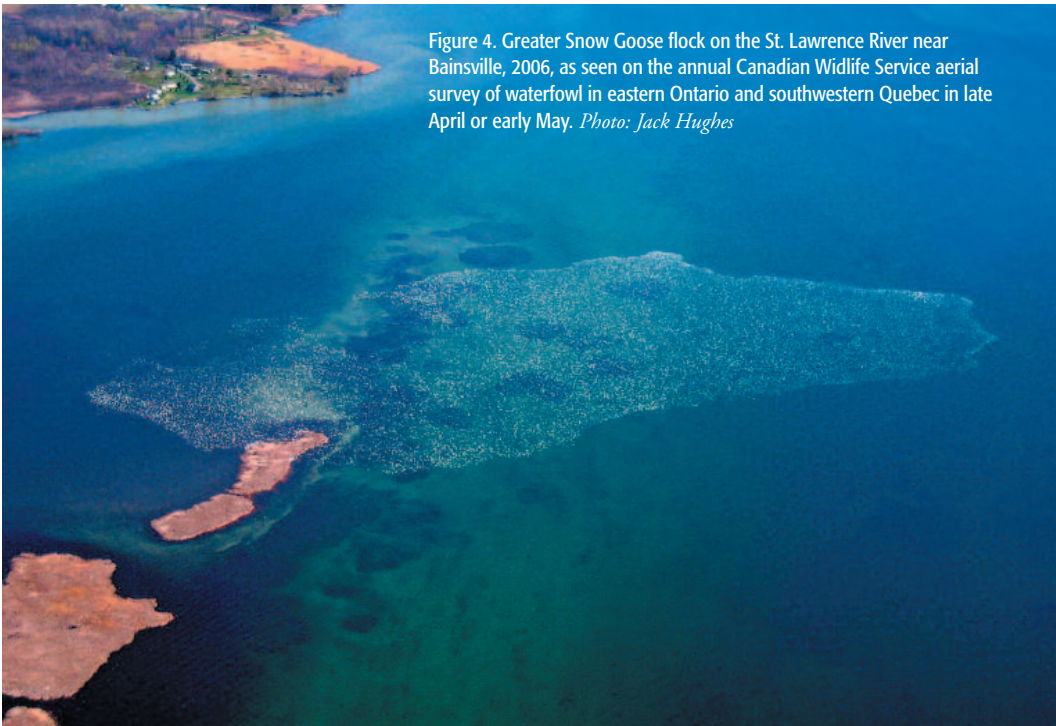


Figure 4. Greater Snow Goose flock on the St. Lawrence River near Bainsville, 2006, as seen on the annual Canadian Wildlife Service aerial survey of waterfowl in eastern Ontario and southwestern Quebec in late April or early May. *Photo: Jack Hughes*

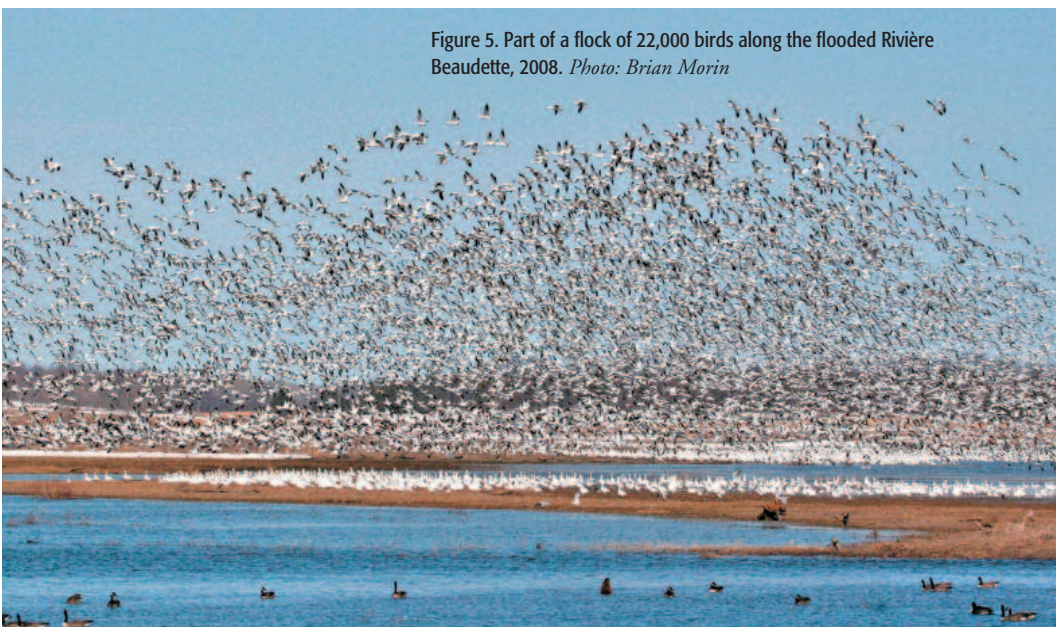


Figure 5. Part of a flock of 22,000 birds along the flooded Rivière Beaudette, 2008. *Photo: Brian Morin*

This is an early date for a flock of that size. The largest flock of the season was between 40,000-50,000 reported along Hwy. 417 near St. Bernardin on 3 April, but possibly the largest number of birds ever recorded on a single day was on 4 April. Tyler Hoar's party made a concerted effort to count as many birds as possible and hit many sites from Casselman east. They estimated 88,000 Greater Snow Geese in 39 flocks. Because they did not cover all key areas due to time constraints, and knowing later that a significant flock was present at Chesterville, outside the area of coverage, a fair assessment would be that over 100,000 birds were present in eastern Ontario that day.

The last significant report (again likely due to shifting birder interest in May) was from the CWS survey on 4 May. There were still roughly 61,500 birds present at 10 sites in eastern Ontario, with the largest concentration being 18,000 geese in two locations along the South Nation River near Chesterville. The final report of the spring was of two lone birds seen at lagoons in Alfred and Maxville on 15 June.

Spring 2010

While the study period did not cover the 2010 migration, it is interesting to note that the first flocks appeared only a few days later than in the very early 2009 season. A Pacific El Nino event led to a mild and dry second half to Ontario's winter. This contributed to a very early ice breakup in late February and an early snow melt. The birds were not influenced by ice conditions in the St. Lawrence, snow in the fields or by flooding,

all factors that normally affect early movements. Greater Snow Geese arrived in Ontario in the tens of thousands on 15-16 March. Few significant sightings were reported after that, indicating that most of the flock may have moved through the region very quickly this spring.

Blue Morphs and Lesser Snow Geese

A very small percentage of the Greater Snow Goose population is blue morphs (less than 2%) compared to over 50% of Lesser Snow Geese from eastern Arctic colonies. In a flock of 10,000 Snow Geese in eastern Ontario, one might usually expect to see up to 50 or 100 blue-morph birds. While this number is showing signs of increase, it is not yet higher than expected. West of Kingston, where small numbers of Snow Geese occur during migration, a much higher percentage are blue morphs, indicating that they are Lesser Snow Geese.

Knowing this feature of each subspecies, it raises questions about what birds were observed in late April and early May 2008. On 25 April, while conducting the annual CWS aerial survey, Hughes noted a flock of about 200 geese, of which 80% were blue morphs (Figure 6), near Cobbs Lake Creek, in association with a flock of 11,000 white geese. Three days later, while leading tours east of Ottawa, Tony Beck observed hundreds of blue morphs among flocks of about 14,000 typical white morph birds at Bourget. Tony described the scene as typical of the "salt and pepper" pattern that he has observed with flocks of Lesser



Figure 6. A few of the hundreds of blue morph Lesser Snow Geese at Cobbs Lake Creek, 2008.
Photo: Susan Goods

Snow Geese on the Prairies. This is quite uncharacteristic of Snow Goose observations in eastern Ontario and was a first for him in the region. A similar experience occurred on 4 May when he counted 250 blue morphs in 5,000 birds between Navan and Sarsfield.

In 2009, on 20 April, Hughes observed a flock of about 10,000 Snow Geese on the South Nation River at County Road 9. Within that large flock was a cluster of about 2,000 geese of which roughly half were blue morphs. Then, on 26 April, Hans van der Zweep counted 600+ blue morphs among 8,000-10,000 birds near Chesterville. Observations of these birds in both years is certainly noteworthy and indicates a change in the typical pattern, but as yet it is not clear how many may be Lesser Snow Geese, which are normally

uncommon in the east. Reasons for apparently increasing numbers of Lesser Snow Geese in eastern Ontario are not known but could indicate a shift in migration pattern, or perhaps more likely, growth of a formerly smaller colony of this subspecies that has been migrating through eastern Ontario for many years but has gone unnoticed because of the small numbers. This is something that observers should take note of in the coming years.

A careful examination of possibly 2/3 of the 2010 migrants revealed only a small number of blue morphs. Since observations of large numbers of blue morphs in the two previous years were only made later in the migration period, it could suggest that if these are Lesser Snow Geese, they may arrive several weeks after the Greater Snow Geese.

Banded birds

Every so often, observers are lucky enough to identify a leg band or neck collar which can then be matched to records of marked birds through the CWS. Roger Clark received acknowledgements for six birds that he reported, four from 2007 and two from 2008. Of the 2007 birds, two were banded in the north on Bylot Island and two were banded east of Quebec City at Montmagny. Both of the 2008 birds were from Bylot Island, site of the largest Greater Snow Goose colony in the Canadian Arctic where Laval University and CWS have been conducting research since the late 1980s.

Fall birds

The story of the Greater Snow Goose is dynamic. The population continues to expand thanks largely to adaptation to include agricultural food sources during migration. It is also showing signs of evolving into a dual season species of interest in eastern Ontario. Whereas in decades past it was not a significant species for birders to chase in the fall, in recent years the number appearing has rivaled some spring flocks, with exceptional sightings of 20,000-30,000 birds, from mid-November to mid-December 2008, around St. Isidore-Casselman. In the fall of 2009, up to 15,000 were present east of Casselman, from November until early December, with scattered flocks in the south. The big difference in the fall is that the birds tend to be much more restricted in their pattern of dispersion seeming to favour the central portion of the region. They typically

remain until significant snow covers the ground and tend to depart en masse.

The story of the Greater Snow Goose will continue to excite birders as migration brings one of nature's most magnificent avian spectacles to our province. Unless significant declines occur in the size of the population, this phenomenon is likely to be a feature of migration in eastern Ontario for years to come.

Acknowledgements

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Brian Morin, 661 Champlain Drive, Cornwall, ON. K6H 6H9

Jack Hughes, CWS, Environmental Stewartship Branch, Environment Canada, 335 River Road, Ottawa. K1A 0H3