

A SUMMARY OF RECENT EVENTS PERTAINING TO THE BLUE
AND LESSER SNOW GOOSE.

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FOR comparison with recent events, it seems of value here to attempt first a brief review of the usual spring and autumn movements of the Blue Goose (*Chen caerulescens*) and that segment of the population of the Lesser Snow Goose (*Chen hyperborea hyperborea*) with which it is usually associated.

The Blue Goose winters mainly on the Gulf coast of Louisiana.¹ In the spring, late March,² it starts its migration northward with a contingent mixture of lesser Snow Geese. The general course followed is through the continental interior approximately along a line which traces or parallels the Mississippi Valley. No great stopover area is known within this broad region, but beyond it, at Meadows³ (and vicinity), near Winnipeg, Manitoba and at Whitewater Lake, Manitoba,⁴ many of these birds congregate. The Whitewater flocks, and, prior to 1925, those at Meadows, have been predominantly Lesser Snow Geese. It is improbable that the entire Blue Goose population stops at these two places, though it would seem that a large percentage does so. About the subsequent course of these flocks or stop-overs made by others, we know very little. Occasional flocks of "waveys" which probably include Blue Geese are seen passing northward as far east as Port Arthur. Perhaps these flocks make a direct course for James Bay.

After a stay of from four to five weeks in southern Manitoba, the Geese continue northward. Bent⁵ states that "the main flight in spring seems to pass up the east side of James Bay." Discrepancies between the departure dates from Manitoba and arrival dates on their breeding grounds⁶ indicate loitering about the shores of James and Hudson Bays.

After the breeding season, Blue Geese gradually shift southward to the tidal flats on the coast of James Bay. This movement starts in late August. During September, together with Lesser Snow Geese, they congregate in large flocks on the east and west coasts of James Bay and more particularly at Hannah Bay at its southern extremity. Here they normally remain until the advent of a pronounced freeze-up, whereupon there is a sudden and usually complete exodus. According to O. J. Murie (Bent), the departure is made in late October or early November. The route followed to their

¹ A. O. U. Check List, Fourth Edition, 1931.

² McIlhenny, E. A. Auk, July, 1932, pp. 291-301.

³ Cartwright, B. W. Canadian Field-Naturalist, Nov. 1931, pp. 181-182.

⁴ Harrold, C. G. Auk, July, 1928, pp. 290-292.

⁵ Life Histories of North American Wild Fowl, Bull. 130, U. S. Nat. Mus. p. 179.

⁶ Sutton, G. M. Memoirs of the Carnegie Museum, Vol. XII, Part II, Section 2, p. 55: Soper, J. Dewey. The Blue Goose. Dept. of the Interior, Ottawa, 1930.

restricted wintering ground is largely unknown. Numbers of Blue Geese and Lesser Snow Geese stop in southern Manitoba on the fall migration but not in such large numbers as in spring.

It is generally supposed that most of these birds make a nonstop flight from James Bay to the Gulf of Mexico. There have been few reports of their occurrence in Ontario other than in the James Bay region. However, they must annually have passed over extensive portions of the province on their course south or west.

The above remarks have sketchily described the seasonal movements of these birds, which may be regarded as normal. Recent occurrences in connection with the movements of Blue Geese (and Lesser Snow Geese) indicate a variation from the normal as outlined above.

As early as the spring of 1929, Winnipeg ornithologists were led to believe that the number of Blue Geese at Meadows was larger than during former years. To convey some idea of the Meadows congregation of Geese in the spring of 1929 and the following year, a few extracts from the journal of the junior author are quoted:

"April 24, 1929: . . . a prolonged cold spell has kept the Geese from moving away from their excellent feeding grounds at 'Grant's Lake' while they continue to arrive in from the south. In some of these fine flights, coming up from the south and settling about the flooded meadows, as many as four to five thousand birds constitute a flock"

"April 18, 1930: . . . Geese have arrived in even greater numbers than last year. The residents of Rosser, Meadows and Grosse Isle state that they have never seen them so numerous. The Blue Geese are overwhelmingly in the majority this year, the proportion being about ten Blue Geese to each Lesser Snow Goose. Last year, I doubt if the ratio was more than five to one"

The spring flights of 1931 and 1932 were also very large. In the spring of 1933, a very marked increase of Geese which stopped at Meadows was reported to the writers by Mr. A. H. Shortt of Winnipeg. The number returning in the fall was also increased. This applied both to the Blue Goose and the Lesser Snow Goose, but the former greatly outnumbered the latter. There appears to have been no marked evidence of this increase in the east in 1933, since the few available records of occurrence (Kingsville, Ontario) in the spring and fall of that year were of the usual casual nature.

In the fall of 1934, it was evident that many Blue and Snow Geese were exhibiting an unusual tendency to stop for a time in southern Ontario. Beamer¹ has recorded the appearance of large numbers at Meaford, Ontario, and there were further reports (mss.) from Thornbury, Dundalk and Wasaga

¹ Canadian Field-Naturalist, Nov. 1935, p. 137.

Beach in the Georgian Bay region; from King, Belleville, Bloomfield, Toronto, Hamilton, Melrose, Long Point and Rondeau in the southern Ontario peninsula and the lower lakes region. The foregoing records appear to concern both species rather indiscriminately but the Lesser Snow Goose was most definitely identified. The extraordinary distribution of Blue and Snow Geese during the winter of 1934-35 has been well and adequately reported on by Cottam.¹

Reports from Winnipeg during the subsequent spring (1935) demonstrated that these Geese had maintained their great numbers, and were apparently moving north approximately along their usual course. An estimate totalling half a million birds was made for the Meadows congregation, Blue Geese outnumbering Lesser Snow Geese very pronouncedly.

That these birds, particularly Blue Geese, experienced a successful summer in 1935 was evidenced by the fall flight. In the following account, it is not possible to give accurate ratios of the Blue Geese and Lesser Snow Geese involved. The most reliable accounts which concern large numbers observed estimate from 10 to 20 Blue Geese to 1 Lesser Snow Goose.

Mr. L. H. Beamer, who estimated a total of twenty thousand birds on this flight at Meaford on Georgian Bay, states that advance flocks reached there on October 22. Many subsequently came to rest in that vicinity. The greatest number of birds was seen, however, two or three days later. The peak of this fall flight appears to have been on the 26th when great numbers were seen, in many parts of the southern Ontario peninsula and in the north. From our scattered records, it seems probable that, geographically for that day, observations commenced with those of Mr. Murray Speirs at Timmins, southern Cochrane District. He observed five flocks of Geese totalling approximately 750 birds passing southward on the 26th. Snow Geese were definitely identified in one flock; others were too high for determination. Circumstances suggest that these flocks were a part of the great flight of Blue Geese (and Lesser Snow Geese) which came down from the north that day.

To continue with events pertaining to the 26th, observers in localities adjacent to Meaford were also noting the passing birds and the occasional flocks which settled (Collingwood, Owen Sound, and Goderich on Lake Huron). Southward, we have the observations of Mr. Charles Molony, who saw fully a thousand Geese pass overhead from his position on the flats of the Holland river, Simcoe County, at 4 p. m. At Puslinch Lake, near Guelph, according to Mr. H. G. Mack, from two to three thousand birds came to rest. At Toronto, "many thousands" of these birds passed over in the late afternoon of the 26th. One observer stated that the sky overhead was full of the "cobweb strings" of flying Geese passing southwestward.

¹ Auk, October, 1935. pp. 432-441.

Crowds of people out-of-doors at athletic events rose and cheered the flying Geese, forgetting their sport for the moment.

The breadth of the flight on this day is indicated by the reports from Lake Huron (Dr. C. H. D. Clarke, Goderich) to Toronto. Stratford, Hamilton and Beamsville records suggest the convergence of the flight in the Niagara district, where apparently the greatest spectacle of Geese was to be observed. News accounts in the Toronto papers described "Myriads of Wild Geese Battling Against Death Above Falls at Niagara." There is no doubt that reports of the congregations of Blue and Snow Geese on the Niagara river (Mr. R. W. Sheppard) and adjacent sections of Lake Ontario (Dr. W. E. Hurlburt) indicate a remarkable event, one without recorded parallel. A few birds were destroyed by being swept over the falls.

The duration of this stop-over in southern Ontario was approximately one week, although flocks and individuals remained longer, particularly in the Georgian Bay region. The large flocks which settled on Puslinch lake (Waterloo County) on October 26 left early on the morning of November 2. Mr. George North, who estimated a total of 14,000 Geese, at or passing over Hamilton, reported that the flocks which settled on Lake Ontario and on Hamilton Bay departed, for the most part, on November 1. It appears that October 28 was the date of departure of the large body of Geese from the Niagara River, although many remained until later. Mr. P. A. Taverner informs us that he heard many Geese flying about on the night of October 28 or 29 at Lansing, Michigan, and heard of similar occurrences taking place at Battle Creek. These records suggest a trend toward the Mississippi valley.

The numbers involved in the 1935 fall flight and the stop-overs made in southern Ontario are unprecedented. The course taken by these birds seems to be unusual insofar as we can judge by the casual information covering previous periods.

As to the time of departure from James Bay, we may assume that the period between October 22 and 26 covers both the advance migrants (Meaford) and the bulk of the flight which was reported from throughout the western portion of southern Ontario. Birds leaving James Bay at daybreak and travelling forty to forty-five miles an hour would reach south Ontario by late afternoon.

Reference to meteorological records of conditions which prevailed at Moosonee from October 22 to 26 are given below:

Date	Minimum Temperature	Maximum Temperature	Precipitation
Oct. 22	28°	30°	nil
23	16°	34°	nil
24	24°	30°	nil
25	30°	40°	.16 in. (rain)
26	24°	30°	

A perusal of records pertaining to weather subsequent to October 26 shows that decidedly cold, "freeze-up" conditions did not set in at Moosonee, until November 6, in fact, mild weather prevailed during most of the first week in November. If it is true that Blue and Lesser Snow Geese normally remain until the advent of a pronounced freeze-up, as is generally supposed, then the 1935 exodus was not normal.

In searching for factors affecting Blue and Lesser Snow Geese of recent years, we have considered the advent of white hunters in the fall on southern James Bay. The number of hunters frequenting this area has increased annually since the completion of the railroad to Moosonee in September, 1931. Special railway inducements during the fall of 1935 probably further increased the sportsman traffic. Conversation with a well informed person who has had continuous first hand experience in the James Bay region before and since the building of the railroad makes it obvious that the fall congregations of Geese are finding it increasingly difficult to feed and rest at Hannah Bay during September and October. During periods of high tide the Geese are forced in to the hunters and are then greatly handicapped in coming to rest. It is conceivable that such a disturbance might induce their departure in advance of a normal meteorological stimulus. Supposing this to be the case, the abnormal stop-overs en route to wintering quarters might result as a secondary effect.

Whether or not there is any correlation between disturbances on James Bay, date of departure and stop-overs made by the 1935 flight, one relationship seems established. The events pertaining to the Blue (and Lesser Snow Goose) in the fall of 1934, in the winter of 1934-35 and the fall of 1935 coincide with a period of great numbers. Dense populations in the case of other animals often form the background for extralimital occurrences and abnormal behaviour. In the present case, it has not been possible to arrive at any estimate of total numbers of Geese passing through southern Ontario. It would seem, however, that the Ontario flight, large as it was, did not represent a population approaching the estimated numbers of Blue and Lesser Snow Geese in spring in southern Manitoba. It seems most probable that we were experiencing the marginal portion of the flight which may have passed south farther westward.

As a matter of record, one additional fact relative to the Blue Goose may be stated. From the casualties of the birds which were swept over Niagara Falls, nine unselected birds were secured as scientific specimens; eight were females.¹

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¹ cf. also pp. 204-208.