

SOME OBSERVATIONS ON THE FALL MIGRATION OF WATERBIRDS AT THE EAST END OF LAKE ONTARIO

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Most birders consider Derby Hill a spring hawk lookout. Few are aware, however, of the waterbird migration that can be seen here in the fall. Under certain weather conditions, Derby Hill is an excellent spot to observe flights that are impressive in numbers of species, individuals and rare and unusual species. There was very little observation of these movements from the late 1950's through the 1960's, but a few visits at the right times made observers aware of the potential.

Even in this decade, coverage is very limited due to travel distance from Syracuse and uncertain weather conditions around the lake. However, despite sporadic coverage, a certain pattern to these flights has been worked out. More knowledge of weather factors that produce these flights and relative abundance of species of birds which comprise the movements has been obtained. Regular fall coverage is needed to provide further information. It is hoped that the Onondaga Audubon Society's Derby Hill Bird Observatory can locate the necessary funding to continue its monitoring of spring migration and extend itself to do necessary research in the fall.

As with all movements at Derby Hill, the fall waterbird flights require a certain set of weather conditions to concentrate flights at this corner of the lake. The conditions are characterized by very strong WNW winds following the passage of a cold front. Wind strengths of 15-25 mph and more are an essential ingredient to concentrate migrants. Any time such conditions develop between mid-August and early December, some degree of movement may be expected.

The timing of a frontal passage seems to be critical to the timing of flights. When a front passes in late afternoon or at night, the flight occurs the next day if the winds remain strong. If a front moves through in early afternoon, there is frequently a large flight that same day. Late afternoon flights can easily go unrecorded due to the difficulty of predicting these fronts as they move across the lake. Rarely do large flights occur on successive days, even though conditions remain favorable.

It is difficult to know if jaegers spend time on Lake Ontario in the fall and are driven toward shore on gale winds where they can be more readily observed, or if large flights occurring after passage of a

cold front bring numbers of these long-distance migrants. Very little observation has been done by boat and we can only correlate the data that we have from shore, with simultaneous movements of ducks and geese.

Occasionally an intense low pressure area will generate more than one cold front and create unfavorable SW or WSW winds on the lake. This does not bring the birds close to the south shore and identification is difficult at great distances. An offshore flight may go undetected.

North and northeast winds do not appear to produce waterbird flights, except for ducks and geese. In particular, large Canada Goose flights can be seen on northeast winds.

The origin of a number of the species which occur off Derby Hill in the fall is open to considerable conjecture. Large numbers of migrant birds funneling down from Hudson Bay into James Bay would cross overland to the Atlantic Coast. One of the most direct routes would be through the east end of Lake Ontario on a south-southeast course and on to the Long Island area. Lake Ontario may serve as a resting or feeding area for these migrants at times, while on other occasions their flight to the coast is direct and difficult to detect. Small numbers of birds have been seen leaving the lake at Derby Hill and proceeding southeast. These birds invariably spiral and rise to a great altitude before going inland. They circle and return to the lake several times before departing, appearing reluctant to leave the lake. Such behavior has been observed with jaegers, Brant, Oldsquaw and other species. The groups disperse and fly high so that an accurate count on an overland route would be impossible.

Many of the most spectacular flights have occurred between 5 and 25 October, although large movements have been observed as early as 10 September and as late as 22 November.

The following table shows the peak dates for fall migration at Derby Hill for selected species:

Red-throated Loon	15 Oct. - 15 Nov.
Red-necked Grebe	20 Oct. - 20 Nov.
Canada Goose	1 Oct. - 15 Oct.
Brant	15 Oct. - 20 Nov.
Dabbling ducks	25 Sep. - 15 Nov.
Scaup	25 Sep. - 15 Nov.
Oldsquaw	15 Oct. - 15 Nov.
Scoters	30 Sep. - 10 Nov.
Northern Phalarope	20 Sep. - 31 Oct.

Red Phalarope	15 Oct. - 20 Nov.
Dunlin	1 Oct. - 31 Oct.
Pomarine Jaeger	1 Oct. - 15 Nov.
Parasitic Jaeger	1 Oct. - 25 Nov.
Glaucous Gull	15 Nov. -
Iceland Gull	15 Nov. -
Little Gull	1 Oct. - 15 Nov.
Black-legged Kittiwake	1 Nov. - 5 Dec.
Forster's Tern	1 Sep. - 20 Oct.

There are few records for some birds, but what little information we have shows Long-tailed Jaeger, Black-headed, Franklin's and Sabine's Gull occurring in September-October. The rare ducks, such as Barrow's Goldeneye, Common and King Eider, pass Derby Hill in November.

The fall of 1979 saw an astounding flight of Common Terns, spawned evidently by a hurricane, as well as four other exciting waterbird flight days.

On 15 September 1979, at the east end of Lake Ontario, there were strong northwest winds (20 to 25 mph) following the remains of Hurricane Frederic, which had broken into several small lows and passed to the west of Buffalo. F. G. Scheider had arrived early in the morning at the Sandy Pond inlet. This inlet is approximately nine miles north of Derby Hill, on the east end of Lake Ontario. Derby Hill is on the southeast corner of the lake. An Onondaga Audubon Society field trip was at El Dorado Shores that day, ten miles further north of Sandy Pond.

As early as 0700, Scheider was counting flocks of Common Terns beating due north along the lake shore. By the time he left Sandy Pond at 1100, he had counted 7800 Common Terns. Observers at El Dorado Shores said hundreds of terns were sitting around and any that flew also headed due north. The birds were obviously off course and were looking for an exit from the lake in a northerly direction.

Prior to 0800, the winds at Derby Hill still had not turned around to the north, but hundreds of terns were seen far out over the lake. From 1000, Jean Propst was at the lookout and the winds had shifted to northwest. All day she watched Common Terns by the hundreds milling around off the bluff and as far out over the lake as she could see. From 1430, there were five observers at Derby Hill. There was no possible way of knowing if the birds flew off to be replaced by others or if they were simply flying in circles and trying to get their bearings. By counting the large flocks in front of us at

one time, we were able to estimate 3000 Common Terns. This, added to the 7800 headed north at Sandy Pond, makes a total of well over 10,000 for the day. John Bull, in *Birds of New York State*, lists coastal maxima of 5000 after a hurricane at Moriches Inlet, 3 September 1949, and the inland maxima of 750 at Sodus Bay, Wayne Co., 3 September, 1966.

In addition to the sheer numbers and constant feeding activity of this mass of terns, there was one other action that was of interest. Several times in the afternoon, groups of 100 to 150 of the birds would seem to mass together and start spiraling up off the water. They would circle and climb continuously until they were small white specks high in the air. At that distance, they resembled a tight flock of shorebirds. When the group reached some unknown height, it would head to the west, where it was lost in the sun.

In the mass of Common Terns, there were a few Black Terns and small numbers of Great Black-backed, Herring, Ring-billed and Bonaparte's Gulls. At 1700, a Sabine's Gull in immature plumage passed the lookout, followed at 1730 by a Willet. With so many hurricane-disturbed birds, it is surprising that there weren't more rarities. The large numbers of terns were still over the water as daylight disappeared. The following morning, only three or four hundred Common Terns could be found at the east end of Lake Ontario.

Except for location, the Common Tern flight of 15 September, 1979, does not really fit into this report because of the most unusual weather conditions. Probably the Sabine's Gull and Willet were the only birds mentioned that were migrating in a regular pattern, aided by the northwest winds.

On 7 October, the winds began to shift from the WSW to the WNW at approximately 1100. Between 1100 and 1330, while this windshift was occurring, 11 Parasitic Jaegers were seen some distance to the north. By 1330, the winds were WNW 15-35 mph and by sunset observers had counted 202 Parasitic Jaegers, 1 Pomarine Jaeger, 4 Forster's Terns, 1 Peregrine Falcon, an immature Sabine's Gull, 1 Black-legged Kittiwake, 2 unidentified jaegers and more than 1000 Brant.

This Parasitic Jaeger count far exceeds the maxima in Bull, also from Derby Hill. The previous massive flights were in 1973 with 184 on 5 October and 103 on 9 October.

The activity of the jaeger packs was a scene of constant motion of birds chasing gulls and each other, as well as of birds flying steadily

westward and others moving inland. A majority of the Parasitic Jaegers were immatures, but all ages and phases were well represented. The Pomarine Jaeger was an immature. Adults of this species rarely occur in this area.

On 8 October, although the wind continued from the northwest, there was not a jaeger to be seen.

The next unusual flight came on 25 October. Numbers were insignificant, but there was a great variety of birds. The wind again was northwest, but not very strong, possibly 10 mph. Nothing unusual was seen in the morning, with the exception of one adult Black-headed Gull. This is the first one to be seen in Region Five since 1972. At approximately 1400, just off the bluff, there was considerable activity caused by a feeding group of Red-breasted Mergansers and an assortment of gulls. Most of these were Ring-billed, Herring and Great Black-backed Gulls. From time to time, a different bird would join the flock temporarily, then move on. Among these were a dark phase Parasitic, a dark phase Pomarine Jaeger, and a Forster's Tern which still retained the black crown from the bill to just back of the eye—a strange plumage at this late date. There was an adult Little Gull, one Iceland and one Glaucous Gull, four kittiwakes (one in adult plumage) and one Bonaparte's Gull. This makes a total of nine species of gulls seen from Derby Hill in one day. The duck flight was not large, but was also varied. It included 1000 Oldsquaws migrating in groups of from 50 to 250 at a time.

On 29 October there were over a thousand scoters sitting in the water off the Derby Hill bluff. These were mostly Black Scoters, but there were 250 White-winged and 12 Surf Scoters. On 3 November there were 5000 Red-breasted Mergansers and the season closed on 28 November with an immature dark phase Pomarine Jaeger.

A visit to Derby Hill, owned by the Onondaga Audubon Society, on a blustery northwest wind day in the late fall can be frigid, but ornithologically exciting. It is hoped that increased coverage in the future will allow for further understanding of the factors that influence these fall movements of jaegers, gulls and various species of waterfowl.

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