

The Snowy Owl Migration of 1971-72 in the Sudbury Region of Ontario

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Photo C. G. Hampson, from N.A.S.

INTRODUCTION

The winter of 1971-72 was an exceptional one for sightings of Snowy Owls (*Nyctea scandiaca*) in many parts of Ontario (Goodwin & Rosche, 1972). In the Sudbury region, in the northeastern part of the province, Snowy Owls was recorded in unprecedented numbers between the first week of November and the end of March. In order to document this invasion, the general public was asked, by way of newspaper advertisements and radio and television announcements, to notify the Department of Biology at Laurentian University of all sightings of owls in the Sudbury district. Contributors were asked to give the time and location of the sightings, a description of the appearance of the birds; whether they were pure white or spotted and to tell what they were doing at the time. The following report summarizes the results of this public survey.

SURVEY AREA

Sudbury is located forty miles northeast of Georgian Bay near the northern extremity of the Deciduous-Coniferous Forest ecotone. It is a large mining and industrial center surrounded by a small amount of cleared agricultural land. Within the city itself there are extensive tracts

of cleared vacant land which are known to support fairly large populations of Meadow Voles (*Microtus pennsylvanicus*).

RESULTS

During the interval between November 7, 1971 and March 27, 1972, one hundred and sixteen sightings of Snowy Owls were recorded in the Sudbury area. In some cases the same bird obviously had been reported by several observers and in other cases, the same bird had been seen by the same observer on several successive days. In order to overcome this problem of duplication of sightings, a system of cross-checking of records was employed in which all of the sightings were plotted on large scale maps along with the precise times of the sightings. By a process of elimination, the original list of one hundred and sixteen was reduced to thirty-three individuals. Of these, twelve were reported to have been conspicuously speckled and ten were described as being pure white. The plumage coloration of the remaining eleven birds was not recorded.

The owls were found to occur in a variety of different habitat types. Most of the sightings (41%) were of birds in open field situations.

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Thirty-four per cent were recorded in residential or built-up areas and the remaining twenty-five percent were associated with marsh, scrub or second growth forest habitats. As for the activities of the birds at the time of sighting, fifty-three out of eighty-eight or sixty per cent were roosting on elevated perches such as utility poles, fence posts or the tops of buildings, twenty-five per cent were seen on the ground and remainder were flying. The birds were observed at all times of the day from just before sunrise until well after sunset. Most of the sightings were during the periods between 10:00 a.m. and noon and between 4:00 and 6:00 in the afternoon.

DISCUSSION

The thirty-three Snowy Owls seen in the vicinity of Sudbury, Ontario during the winter of 1971-72 indicated a major invasion from the nesting areas in the Arctic. No owls had been seen during the winter of 1969 (at least none had been reported to the Ministry of Natural Resources) and only one owl sighting was recorded in 1970. One of the unusual features of the 1971-72 invasion was the unexpectedly large number of adult birds. It is usually assumed that the Snowy Owl population will be particularly large during the nesting season preceding a major invasion and that the population will contain a large proportion of immature birds (Nagell & Frycklund, 1965). Since the birds with spotted plumages may be either adult females or immatures of either sex (Keith, 1960), one would expect a much larger proportion of the winter migrants to be spotted than pure white. This was not the case at Sudbury. The unaccountably large number of unmarked birds however may have been the result of inexperience on the part of the observers. It was found that many of the observers remarked only on the general white appearance of the birds and paid little attention to the presence or absence of spots. Most of the owls were sighted either in the late morning or in the late afternoon. These were also the times of greatest human activity; people coming and going from work or school or going shopping, so it is possible that the increase in owl activity was more apparent than real. It is significant however, that more birds were seen on the ground, presumably hunting for rodents during the forenoon as compared with the late afternoon when most of the sightings were of birds on elevated perches. These birds

probably were preparing to roost for the night. It was noted that most of these roosts were adjacent to prospective hunting areas, either near fields or along the banks of creeks. Even in the built-up or residential areas, the roosts were almost always within easy flying distance of vacant lots. It was also apparent from the records that quite a number of the birds had established permanent hunting territories within the city, each with its own preferred roost or look-out post. Keith, (1964), described this type of territorial behaviour among Snowy Owls wintering at Horicon Marsh in Wisconsin.

CONCLUSION

The results of this questionnaire survey suggest that Snowy Owls choose winter habitats that are visually reminiscent of their arctic breeding areas and that they maintain individual hunting territories within these wintering areas which they may occupy for days if not weeks at a time. Owls seen in and around cities would appear to be there by choice, possibly attracted by large rodent populations. They are not lost wayfarers as has sometimes been suggested.

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