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# LIVING

# Owls by the numbers

*Last winter's irruption of the majestic great grey was unique*

Last winter provided birders and non-birders alike with an unparalleled opportunity to witness an amazing spectacle of nature — the southward flight of thousands of great grey owls in search of food.



**OUR CHANGING SEASONS**  
Drew Monkman

The massive influx of owls covered an area that included Quebec, Ontario, Minnesota, Wisconsin and the prairie provinces. In Peterborough County, great greys could be observed from January through March along roadsides throughout the area south of the Shield. Now, thanks to detailed record-keeping by numerous birders, bird banders, taxidermists, wild bird rehabilitators and staff of the Royal Ontario Museum and Ontario Ministry of

Natural Resources, valuable information on the flight has been compiled. The data that I will be citing in this week's column have been taken from the December issue of the *Journal of the Ontario Field Ornithologists* in an article by local naturalist and biologist Colin Jones. I have also included information from another article in the same issue by Mark Peck and Glenn Murphy of the Royal Ontario Museum.

Birders first became aware in September of 2004 that a potential "irruption" of owls was in the making. Larger-than-usual numbers of great greys were being observed all across northern Ontario. In Hearst, for example, owls were noted moving out of their boreal forest habitat into abandoned farmland and roadsides. By November, great greys were being seen in locations to the south, such as Algonquin Park. For the most part, the birds were present one day and gone the next as they continued southward in search of food. The great grey's preferred prey item is the meadow vole, a species whose population crashes periodically in the boreal forest where this bird is usually a year-round resident. This results in a mass exodus as the owls search for voles elsewhere.

By late December, observers were seeing the first great greys in southern Ontario in the counties north of Lake Ontario. The first owl recorded in Peterborough County was seen on Dec. 19. The numbers of owls continued to climb through January and stabilized in February. By then, the birds were staying put more or less in the same area. By March, most counties were reporting fewer birds and, by mid April, the vast majority of the great greys had left southern Ontario and returned northward.

Most of the owls were concentrated in marginal farmland interspersed with forest along the southern edge of the Canadian Shield. The "owl belt" extended from the Orillia area, east through Peterborough and across to Ottawa. Significant numbers of great greys also spent the winter along the lakeshore east of Toronto. However, Peterborough County may well have had the largest owl numbers of all. In a one-day survey co-ordinated by Colin Jones and carried out on Jan. 9, 2005, 22 observers drove along approximately 75 per cent of the roads of southern Peterborough County searching for owls. In total, 96 individual great greys were reported. However, when you take into account the 25 per cent of the road network that was not covered, plus the owls that would not have been visible from the roads, the total number was obviously much higher.

Tim Dyson, a local owl bander with many years of experience banding and studying great greys, made some particularly interesting findings. He spent a great deal of time trying to get an accurate idea of how many owls were actually present in the area bordered by Lakefield, Keene, Campbellford



The large facial disk of the great grey owl serves to amplify any incoming sound, such as that of a vole moving under the snow.

and Havelock. By walking through property between roads, Dyson discovered that there were many more owls to be found. For example, where only four or five might have been visible along roadsides, almost three times as many were back in the fields between the roads, and therefore out of sight from a car. He estimates that at least 105 great grey owls were present in his study area alone

and, based on this total, that at least 500 were present in Peterborough County as a whole. Simcoe County, too, had particularly large concentrations of owls, with more than 400 individuals recorded by the end of the winter. At least 111 owls were also present in the Ottawa region. Assuming that there were similar concentrations in other areas along the southern edge of the shield

between Ottawa and Orillia, and adding on the fairly significant number of birds present along the lakeshore from Toronto to Kingston, the total number of great grey owls involved in the irruption of 2004-2005 into southern Ontario must have numbered in the thousands.

Although a few individual owls did linger in the south until June, almost all had left for their boreal forest nesting grounds by early April. Birds heading north were recorded in areas such as Algonquin Provincial Park throughout April. This is noteworthy because no owls are believed to have actually spent the winter in the park. It is possible that the relative handful of owls that lingered in southern Ontario until late spring could actually have bred here. In 1992, a pair of great greys nested in Algonquin Park, a location far to the south of their normal breeding range.

Previously, the largest recorded great grey incursion into southern Ontario took place in 1995-1996. There was also a significant "echo" flight the following year. Naturalist Doug Sadler reported more than 330 different owls present the first year and 265 in the flight of the following year. This was in an area that extended roughly from Peterborough to Lake Simcoe. In these flights, however, the owls didn't appear to arrive until February, and retreated northward in early March. The 2004-2005 irruption was therefore unique in that the owls arrived much earlier and stayed later.

The irruption of last year also provided information on the mortality, diet, health, sex and age of the owls moving south. There is MNR documentation for at least 501 great greys having been found dead. The vast majority died as a result of collisions with cars. However, there were probably two or three times as many birds that died but were never found or reported. On a more encouraging note, there were no reports anywhere in Ontario of owls being shot.

Based on the stomach contents of the carcasses, meadow voles (*Microtus pennsylvanicus*) were by far the most common prey item. There was no evidence of larger prey items in any of the stomachs. Most of the owls were also found to be healthy, with considerable fat deposits at the time of death. About two-thirds were female and practically all were second or third winter in age. Only one first winter bird was banded, which indicates very poor nesting success in the spring of 2004. Presumably, this was a result of low food availability. As for the winter of 2006, it now appears unlikely that these majestic birds will make a return flight, but we should be keeping our eyes open just the same. Given the number that died last year, it's just as well that they stay home.

## What to watch for this week

Ruffed grouse often appear in silhouette as they feed at dusk and dawn on the buds of birches and aspens. Watch for them along roadsides. Courtship preoccupies great horned owls this month. This is therefore a good time to listen for their deep, muffled "who's awake...me too" call.

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## Elliott's Place

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