

# THE GREAT GRAY OWL IN MANITOBA, WINTER 1995-96 AND 1996-97

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In 1928, P. A. Taverner described the Great Gray Owl as "only a winter visitor in the settled parts of Canada."<sup>13</sup> In the intervening years much has been learned about this owl's distribution and habits. It is now known that this species is resident throughout much of the boreal forest of Canada, and in places even nests close to busy roads and residences.<sup>8</sup> Still, Great Gray Owls are usually more frequently observed during winter months, and in some winters this irruptive species may even be fairly abundant.<sup>1, 5, 9</sup> Occasional irruptions, that is, movements outside the usual range, may result from a combination of years of good reproductive success followed by abrupt prey declines.<sup>8</sup>

## Winter 1995-96

The winter of 1995-96 will be remembered in both Canada and the U. S. for the numbers of Great Grays that were seen. Winnipeg birder Gordon Grief reported: "This winter [there] appears to have been a continent-wide movement of Great Gray Owls. They have been seen in good numbers in Minnesota near Duluth, in Wisconsin and Michigan, southern Ontario and Quebec and even into northern New York and the Maritimes."<sup>4</sup>

For Wisconsin, Korducki noted: "While the numbers of Great Grays did not approach the winter of 1987-88, this year was unique in the magnitude of their wandering." Reports from southernmost areas of that state were "astounding".<sup>6</sup> On December 3, 1996, Beth Praeschaldt, Liscomb, Iowa, wrote

to me as follows: "I am wondering if you have heard of the 'invasion' of Great Gray Owls in Iowa in February 1996. There was one seen at Big Marsh in Butler County, central Iowa, from February 11-26. We saw it twice and it was wonderful!! That bird really put Big Marsh on the map. Another was a road kill just south of Big Marsh in Grundy Co. Another was reported January 10 in Black Hawk Co. - 15 miles away. Exciting times!"

Ontario birders were almost overwhelmed; for the Peterborough area, Sadler wrote: "In the winter of 1995-96, we watched in astonishment as numbers climbed steadily to more than 330 different Great Gray Owls in my study area."<sup>12</sup> Ridout estimated that more than 600 Great Grays were present in southern Ontario during March 1996.<sup>11</sup> Zoologist and owl specialist Jim Duncan referred to this winter irruption as "one of the largest documented in central and eastern Canada and the adjacent United States."<sup>2</sup>

For Herb Copland and myself, long-time owl-banders, this was the winter in which we banded 115 Great Gray Owls, surpassing our earlier record of 88 in winter 1978-79. Compared to the previous winter (1994-95), when Herb and I banded only one Great Gray, winter 1995-96, despite severe low temperatures and extended duration, didn't last long enough. We went out on 36 days, during which we drove 20,600 km. Our success in finding owls

depends on reports from observers, plus our familiarity with areas likely to be frequented by owls, and our knowledge of their habits. Unlike many previous winters, owls were scarce in extreme southeastern Manitoba. A few birds occurred west of Winnipeg and at least one spent several weeks in Winnipeg. We found owls as close as Selkirk, Libau and Tyndall, but the largest numbers occurred northeast of Winnipeg. Most of our birds were captured near Traverse Bay, Lac du Bonnet, Pine Falls and north to Manigotagan.

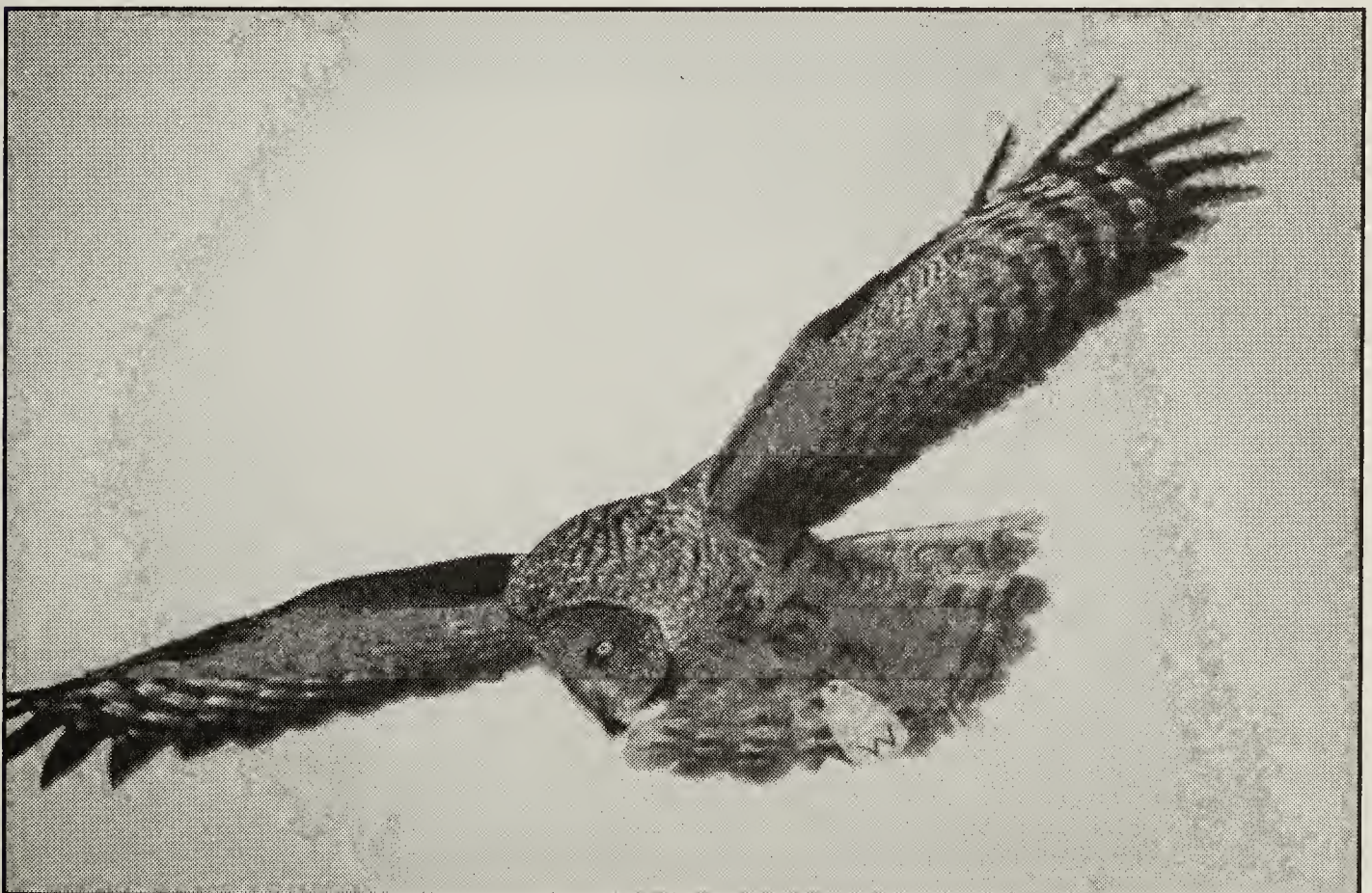
Owls began making an appearance in this area as early as October 27, when a road-kill was found near Great Falls. In November, I received seven reports of owls, including one of an owl apparently electrocuted at Victoria Beach on November 20. Things really began to happen in December, with nearly 50 reports reaching me. Daily counts that month included a high of 23 seen on December 29 by the McCall family driving from Powerview to

Manigotagan, a stretch of 71 km. Constable Rob McCall said that it was the highest number he had ever seen along a road he'd driven regularly for several years. Herb and I, on our last outing, April 13, saw at least 18 on that same road.

We found that 56 out of 126 owls, or 44%, that we examined that winter were 2-year-old birds, an age group not previously noted by us. These birds, from the 1994 hatch-year, were identified by their plumage. We concluded that a large 1994 hatch and a subsequent food shortage were factors partly accounting for the 1995-96 irruption of owls.<sup>10</sup> Similarly, Sadler, reporting on captured or injured owls that same winter in Ontario, found that "most were fledged in 1994".<sup>12</sup>

#### Winter 1996-67

The following winter, even larger numbers of owls were observed. Wisconsin columnist Roy Lukes wrote: "Surely the winter of 1996-97 will be entered in the Wisconsin Birding



*Great Gray Owl*

*Gerry Jones*

Records Book as the greatest winter invasion of the state by the great gray 'phantoms' ever witnessed by many fortunate people."<sup>7</sup> For Minnesota, Eckert noted that Great Gray Owl numbers that winter "were higher than in any previous winter on record".<sup>3</sup> In Ontario, Sadler found numbers of owls "almost as large" as in the previous winter.<sup>12</sup> Alberta banders Ray Cromie and Trevor Roper recorded high numbers of Great Gray Owls in both winters; they banded 39 in 1995-96 and a remarkable 144 in 1996-97 (Robert Gehlert, 1999, *pers. comm.*). Jim Duncan (*pers. comm.*) received reports of one or more Great Grays from 40 observers, not including Herb and myself.

This bonanza of owls provided a spectacular treat for delegates to the Second International Owl Symposium in Winnipeg in February 1997.

In addition to unusual numbers of Great Grays close to Winnipeg, there were good numbers of Northern Hawk Owls and Snowy Owls. When asked how we planned that feature, we said, of course, that the owls were coming to the widely publicized symposium. On February 9, I took out three symposium delegates who had been unable to attend the scheduled field trip. In less than 2 hours (from downtown Winnipeg and return) we found an incredible 25 Great Gray Owls, 9 Hawk Owls and 3 Snowy Owls. Two keen birders, Peter Taylor and Rudolf Koes, in an intensive search east of Winnipeg on March 2, found 32 Great Gray Owls! That same day, Diane Kunec and I saw 20 others in a small area north of Winnipeg.

Herb and I were in the field on 25 different days, from December 1, 1996 to April 10, 1997, during which we drove 13,287 km and banded 121 Great Gray Owls, giving us a total of 236 owls banded

over two winters. The total number of Great Gray Owls banded in this area by ourselves and our colleagues, especially Jim and Patsy Duncan, now stands at 1191 (which includes young and adults at nests and three rehabilitated birds). In the next two winters, by way of contrast, owls were notably scarce here. In 1997-98 we had only 13 reports of Great Grays. Accompanied by California raptor specialist Nikolle L. Brown, who flew here to gain some experience finding and banding owls, I drove 2,026 km in 5 days (January 29-February 2), going to all the good spots, and failed to find a single Great Gray Owl.

### Origin of Birds

The occurrence of an irruption of Great Gray Owls in two consecutive winters across the country from Alberta to Quebec requires some explanation. Could prey populations peak at the same time across this broad region? If so, then this might initiate a high production of young owls, thus augmenting the overall population. In winter 1995-96 an unusual number of 2-year-old birds, presumably hatched in 1994, were observed in Alberta (Gordon Court, 1997, *pers. comm.*), Manitoba and Ontario. That could set the stage for a second factor affecting population movement, namely a drastic reduction in prey levels.

The appearance of unusually large numbers of 2-year-old owls with an inhibited molt condition indicating food shortage in winter 1994-95 and/or spring and summer 1995, suggests this possibility.<sup>10</sup> Microtine prey species, that is, voles, are especially prone to fluctuating numbers, although it is not clear whether such a phenomenon could occur synchronously across the country. Weather, especially heavy snowfall and severe cold, also could force a wide scale owl population movement out of certain areas even

though Great Gray Owls seem well adapted to northern winter conditions. One uncertain aspect of this scenario is the origin of displaced birds. Despite the relatively large-scale banding efforts, little information is available on the post-winter location of irruptive owls. In Manitoba, there is some indication that the birds retreat northwards, presumably returning to their place of origin, but this is not well substantiated. Radio-telemetry of winter-captured owls would be enormously helpful in this respect.

Winter irruptions of Great Gray Owls are usually accompanied by other irruptive owl species, namely Boreal Owls and, especially, Northern Hawk Owls. In winter 1996-97, for example, Jim Duncan (*pers. comm.*) recorded sightings of one or more Hawk Owls by 51 observers. Given that the Hawk Owl, at least, is not a regular resident of the southern parts of Manitoba, when large numbers occur here they are almost certainly birds from more northerly parts of their range. The joint occurrence of

numbers of Great Grays and Hawk Owls probably indicates that the Great Grays are also birds from the north. Just how far north is not known.

Large numbers of Great Gray Owls in southern Manitoba in winter does not necessarily mean that there will be large numbers of breeding birds here the following spring. In fact, the opposite may be true. Those winters in which owls are seldom seen may mean that factors are favourable for nesting in the breeding areas, keeping the owls there. In winter 1998-99, for example, few Great Gray Owls were observed in southern Manitoba and adjacent Minnesota, yet nesting in 1999 was relatively high (Jim Duncan, *pers. comm.*) Moreover, irruptions of owls usually occur over a broad region, right across much of Canada and into the northern U. S. Here too, there is a suggestion that many of these birds, presumably affected by similar conditions of weather, food availability, etc., have been displaced a considerable distance.



*Herb Copland (left) and Bob Nero (with owl)*

*Norman R. Lightfoot*

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“Gaia Hypothesis : Originally articulated by James Lovelock in the early 1970’s, the Gaia Hypothesis puts forward the startling proposition that earth is a coherent entity, approximating in some ways a single organism. Earth is certainly, in this view, a self-sustaining system. The living planet, the hypothesis asserts, may be unconscious, but self managing.”

Robert Paehlke, *Conservation and Environmentalism : An Encyclopedia*