



Barred Owl Snow-plunging in an Open Field in Daylight

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Photo by George K. Peck

Introduction

In typical habitat, Barred Owls (*Strix varia*) are considered to be “restricted to forested areas”, “preferably large unfragmented blocks, and old forest with a closed canopy” (Mazur and James 2000). Large contiguous forests of mature and old-growth timber are considered essential for the maintenance of healthy Barred Owl populations (Bosakowski *et al.* 1987). They are typically found as far from human habitation and potential disturbance as possible (Bosakowski *et al.* 1987).

Barred Owls are usually resident year-round in their territories, but during times of prey scarcity during the colder months of the year they may move in search of prey (Powell 1984, Weir 1984, Carpenter 1987, Mazur and James 2000). At such times they may often end up in atypical habitats, even residential areas (Elody and Slown 1985, Campbell *et al.* 1990). But, even in less typical habitat, they usually seek out tree cover for concealment during the day. Barred Owls are considered to be hunters only in semi-darkness or darkness (Johnsgard 1986) and are rarely seen out in daylight (Mazur and James 2000). Nero (1993) reports seeing them only 6 times in 20 years of winter Great Gray Owl (*Strix nebulosa*) banding activity. Daytime hunting in exposed situations could prove fatal as they may be targeted by the larger, more aggressive Great Horned Owl (*Bubo virginianus*) (Bosakowski *et al.* 1987).

This note presents observations of a Barred Owl hunting in an open field during the late afternoon, and recounts several instances of snow-plunging hunting behaviour, something apparently rarely seen in this species.

Observations

The following observations were made about 2.5km northeast of the town of Sunderland, Durham R.M., Ontario. I first became aware of a large raptor flying into an open field about 1700 h on 5 March 2006, about an hour before-sunset. It flew low into view and perched on top of a nest box about 2m above the ground. A check with binoculars quickly identified it as a Barred Owl. Over the next 25 minutes it was watched moving about the field, perching in 14 different places. The perches were the tops of nest boxes or the posts holding them, and a couple other somewhat taller posts, all in the open field from 150 to 30m away from any tree cover. The owl would perch for 30 seconds to 3–4 minutes at each site, scanning the ground below, and quickly turning its head as if it had heard something. Twice it was seen dropping into the snow near a perch, neither attempt apparently producing anything.

After about half an hour it disappeared behind some pines, but moving toward an area of scattered trees on a fairly open hillside. Ten minutes later it flew back into the field where it had originally been seen. For the next 10

minutes it again moved to seven different perches before being lost to sight once more. This time also it was seen twice dropping to the snow, apparently unsuccessfully.

A Barred Owl, presumably the same one, returned next day, and perched in the open on top of a structure in the front lawn about 20m from the house. This time it was first seen about 10 minutes after sunset, and remained there for half an hour.

Two days later it was again seen briefly in the late afternoon in the same field, as I departed the property.

Snow-Plunging Behaviour

Only once was it possible to see the snow surface as the owl dropped. At that place it had obviously plunged its head into the snow. Following the plunge it struggled briefly to get itself upright again. On this and the other three drops to the snow it went down head first, but apparently extended its feet at the last moment, to hit the snow with its feet as well as its head. This is apparently what typically happens with Great Gray Owls, as described by Nero (1980, 1993). The depressions in the snow examined later indicated that this is what happened.

Snow Conditions and Plunge Marks

All the snow at this time had a substantial crust after an earlier night of rain on the accumulated winter snow. Much

of the time that crust would support my weight in the open fields. In the nearby woodland there was somewhat less crust, but food there may have been less available in the deeper snow. In the open field, snow depth was 15 – 25cm. The crust may have been somewhat softened by the all day sunshine, and temperatures just below freezing at mid day. However, the owl still appeared to have trouble penetrating the crust. A later check of the sites where the owl went down showed the deepest plunge penetrated only about 12 cm of a 22cm depth at that point. Two other plunge marks only went 8 and 10cm into a depth of 20 cm of snow. Such plunges would have been inadequate to catch prey under the snow. Prey would have had to be tunneling within the snow to be reached, something that is often possible.

Discussion

It is probable that hunger had induced this bird to hunt in atypical habitat, even coming close to an occupied house, and during a time of day when it would normally be roosting. The hard snow conditions, that would have been widespread in this part of the province, no doubt inhibited any owl from hunting subnival prey at this time.

Snow-plunging as a means of prey capture by Barred Owls has been considered uncommon, and very rarely seen (Nero 1993). In more than 20 years of owl studies he and Herb Copland had

only three indications of this activity, and had never witnessed it. A couple of other owl researchers with whom he corresponded had also never seen the behaviour, although they had seen indications of it on rare occasion. A local person had conveyed the only eye-witness account. That had also occurred in daylight, but along a wooded edge of a field.

Nero was able in one instance to see an imprint of the owl's face showing the bill, just as seen numerous times for Great Gray Owl plunge holes. But, the imprint was the size of a Barred Owl face (Nero 1993). Unfortunately, the crusty snow conditions present during my observations did not leave a very definite imprint. The lower part of the hole was disturbed, as if by the owl's talons, but the hole was larger than would have been made by feet alone. The hole was more the size of the owl's head, and the head was certainly down as the plunging owl neared the snow surface. On the first plunge seen, the head was definitely down into the snow.

The owl observed was dropping from only 2–3m in height, perhaps not high enough to penetrate more deeply given the snow conditions. While a plunge from higher might have helped, it might also have been a much harder landing than desired. The Barred Owl once was observed to fly up somewhat higher, as if to plunge from a greater height, but then checked its decent and landed softly feet first.

Snow-plunging is a method of obtaining food under deep snow conditions, and its use may be more frequent in Barred Owls than assumed. While they are typically hunting in dense forests, they presumably also must deal with considerable snow depth most winters throughout their northern forest range. The fact that they are seldom seen at all in winter would limit the possibility of seeing snow-plunging. It is obviously an effective way of hunting in deep snow, commonly used by the Great Gray Owl. In deep or hard to penetrate snow, it would seem an effective method for the Barred Owl also, even though it is about one-third lighter. They are obviously capable of performing the activity. Even the much smaller Boreal Owl has been seen using this method of hunting (Nero 1993).

Acknowledgements

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