

BOREAL OWL MONITORING IN THE NISBET FOREST: 2010 YIELDS FIRST BREEDING RECORD



Figure 1. Adult boreal owl in the entrance to a nest box.

Shelly Fisher

Boreal owls (*Aegolius funereus*) have a continuous breeding population in the boreal forests of Canada and Alaska.¹ They usually use natural cavities in snags and stumps or excavations made by northern flicker (*Colaptes auratus*) or pileated woodpecker (*Dryocopus pileatus*), but will readily use nestboxes (Fig. 1).²

Boreal owl breeding records for the province of Saskatchewan are few. One nest containing four young was found on 12 June 1938 in an old pileated woodpecker excavation on the banks of the Leather River east of Armley.³ There are four nesting records from the Besnard Lake area, all in American kestrel (*Falco sparverius*) nest boxes. On 22 May 1988, a depredated nest box contained one egg and egg shells. The second and third Besnard nestings were within 500 m of each other in 1993. One held four eggs on 24 April and fledged young by 17 June,

and the other held three eggs on 28 May and fledged young by 24 July. The fourth Besnard account, also for 1993, was of a breeding attempt as evidenced by a broken egg and eggshells at the base of the nest tree on 24 May.⁴

The Nisbet Provincial Forest (hereafter called Nisbet), north of Prince Albert, SK, is located in the southern half of the province in the Boreal Transition Ecoregion. It is considered an island forest because it is completely surrounded by agricultural and urban development. The Nisbet forest is characterized mainly by northern boreal forest, but approximately 25% of the area is used for agricultural production, most of which consists of grazing leases. It is separated from the Northern Provincial Forest by 30 to 40 km of mixed agricultural land. The Nisbet Forest is approximately 83,000 ha in size and consists of five separate parcels of forest.⁵

During the years 2007, 2008, 2009, and 2010, personnel and volunteers conducted banding operations for northern saw-whet owls (*Aegolius acadicus*) at Nisbet Banding Station on the northern edge of the Nisbet Forest, 11.5 km NE of Prince Albert. Our setup included a series of two to four 12-m mist nets monitored nightly during September and October. Nets were typically set from dusk until midnight when weather conditions were suitable. An audio lure (male northern saw-whet owl song) was used to attract owls to the nets where they were captured for banding. We were surprised to find the occasional boreal owl captured in the nets. We continued our netting operation each season after the saw-whet flight had passed (late October at this latitude), but instead used the boreal owl song as the audio lure and reduced our net array to two or three mist nets for easier maintenance during cold conditions. During the four seasons, we captured and banded 31 boreal owls, although we caught none during the autumn of 2007.

Some of the boreal owls responded to the saw-whet audio lure, but capture rate increased significantly when the boreal owl song was played. During the months of September and October of the four years, we captured only six boreal owls over 160 nights (2515 net-hours) of saw-whet banding operations (1 net hour = one 12-m mist net operated for 1 hour). The remaining 25 birds were captured while playing the boreal owl call over a total of 48 nights (234 net-hours) during late October, November, December, and January of 2008, 2009, and 2010.

We also operate a nest box study for northern saw-whet owls in and around the Nisbet Forest, with a total of 56 boxes in place at present. In view of the strong presence of boreal owls during the autumn and winter months, we speculated that they might also nest in the

Nisbet Forest in small numbers and made the decision to include this species in our nest box study. We enlarged the openings of our saw-whet nest boxes from 7.5 cm to 9 cm to accommodate this larger species. When we checked nest boxes on 2 May 2010, we were delighted to find a boreal owl using one of them. We returned to the nest box on 27 May 2010 to band the young and found two healthy boreal owl chicks almost ready to fledge (see front cover). This nest box was located 7 km NW of Prince Albert in a strip of aspens within a stand of primarily jack pine woodland. The nest box was attached to an aspen at a height of 4 m and faced in a southerly direction.

We believe this to be the first record of boreal owls breeding in the Nisbet Forest, and this is certainly one of the most southerly breeding records of this species documented for Saskatchewan.

1. Hayward GD, Hayward PH (1993) Boreal Owl (*Aegolius funereus*). In: Poole A (ed) *The Birds of North America Online*. Cornell Lab of Ornithology, Ithaca, NY. Available at: <http://bna.birds.cornell.edu/bna/species/063>

2. Priestley L (2008) The Nesting Phenology of Northern Saw-whet Owl and Boreal Owl in Central Alberta. *Nature Alberta*

3. Houston CS, Street MG (1959) *The Birds of the Saskatchewan River*. SNHS Special Publication #2, Regina

4. Gerrard JM, Bortolotti GR, Wiebe KL (1996) *Birds of the Besnard Lake Area*. SNHS Special Publication #20, Regina

5. Saskatchewan Environment and Resource Management (SERM) (2000) *Nisbet Provincial Forest Integrated Land Use Plan, Background Document*. (Available online at <http://www.environment.gov.sk.ca/adx/asp/adxGetMedia.aspx?DocID=647,645,621,247,94,88,Documents&MediaID=268&Filename=Nisbet+LUP+background+doc.pdf&l=English>)

- Harold Fisher, R.R. 4, Site 1, Comp 231, Prince Albert, SK, S6V 5R2; email: <hfisher@skyvelocity.ca>