

FIRST CONFIRMED NESTING OF NORTHERN PYGMY-OWL IN SASKATCHEWAN

John Patterson

554 Bornstein Terrace
Saskatoon, SK S7N 3Y1

Marten Stoffel

RR 4, Box 183
Saskatoon, SK S7K 3J7

Stan Shadick

903 Temperance Street
Saskatoon, SK S7N 0N3

The range of the Northern Pygmy-Owl (*Glaucidium gnoma*) in Canada has generally been understood to extend from the Rocky Mountain Foothills to the coast of British Columbia, but in the past 15 years the species was observed in diurnal breeding owl surveys in the boreal forest as far east as Cold Lake.¹ Nesting was confirmed at Calling Lake (1995)² and Lac La Biche (2018)³ and copulation was observed 25 km southeast of Calling Lake (2004).⁴

Since 2010, the regular presence of this pygmy-owl in Saskatchewan was suspected based on responses by agitated avian prey species to playback of its call at locations from Cold Lake east to Green Lake.⁵ Prior to 2016, there had been only a single observation in the province, at La Ronge on 12 October 2014, where it was first spotted by Richard Gruchy and photographed multiple times.⁶

The next observation in Saskatchewan was on a Christmas Bird Count, 27 December 2016, when Stan and Jan Shadick heard and saw a Northern Pygmy-Owl 20 km north of Pierceland.⁷ A group of nine birders returned to the general area a month later and heard and saw a Northern Pygmy-Owl 2 km northwest of the previous observation. Since then, the species has been observed several times in the Cold Lake area, including 10 April 2017, during the presumed breeding season.⁸ An attempt to locate a nest failed and the owl could not be relocated on 3 May 2017. A single individual was seen and photographed by Shelly Fisher and Dale Jefferson

farther east, in Prince Albert National Park, on 26 September 2022.⁹

On 8 March 2023, Dan Zazalenchuk and Marten Stoffel heard a Northern Pygmy-Owl from Saskatchewan Road 919, north of the Cold River Campground in Meadow Lake Provincial Park, near the eastern shore of Cold Lake. Warren and Vicki St. Germaine heard it again on 24 and 25 March 2023. John Patterson and Marten Stoffel traveled there on 25 May 2023 to relocate the owl and search for a nest.

We arrived shortly after noon, played the Northern Pygmy-Owl call, received an immediate response and headed into the bush west of the road in the direction of the owl, which continued to call. As we approached the owl it became increasingly difficult to get a fix on direction and being so small and still, we did not spot it. When we thought we were close, about 70 m from the road and 300 m from the lake shore, in a semi-open area of mixed coniferous/deciduous forest (Figure 1), we watched and waited. The Northern Pygmy-Owl is known as a “sit-and-wait” ambush predator, remaining stationary for extended periods as it watches for prey.¹⁰ Eventually we spotted it about 10 m up, when it moved from branch to branch.

It was in view for the next 30 minutes and changed perch only once. It actively scanned for prey the entire time, finally flying off out of sight to the north. In less than a minute it returned, having captured a small bird. It plucked a few feathers, flew to the trunk of a live trembling aspen (27 cm diameter at breast height), directly above one of us, disappeared briefly into the trunk and flew off without the prey. Stepping away from the tree and looking up, we could see a small entrance hole about 10 m high (Figure 2). It had perched, for the entire time we watched it, within 5 m of the hole. We monitored the hole for another 90 minutes, but there was no further activity. There was no nest-related debris at the base of the tree, such as pellets or feathers, which is consistent

with previous observations at Northern Pygmy-Owl nests.¹¹

This species may cache prey items on branches but unlike the Eurasian Pygmy-Owl (*Glaucidium passerinum*) and Ferruginous Pygmy-Owl (*Glaucidium brasilianum*) it is not known to cache food in cavities, so we were confident this was an occupied nest.¹⁰ We came that day with a nest inspection camera (3.2 cm diameter) on an extendible pole, but the cavity entrance was narrower than the camera, so we couldn't see the nest occupants.

On 4 June, Marten Stoffel, John Patterson, Harold Fisher, Stan Shadick, Valerie Horner and Ron Jensen returned to the site. We brought a smaller nest inspection camera this time (2.9 cm diameter). The owl was located at 13:45 h, about 2-3 m from the cavity, where it remained for about 45 minutes. After the owl flew off, the nest camera was raised to the entrance hole and partially inserted, but it was still too wide to penetrate the cavity, so again we could not see the nest occupants.

On 22 June, Stan Shadick returned to the site with Scott Currie and Jim MacDonald and nestlings made their first appearance. At about 13:30 h, with an adult owl perched near the hole eating a mouse (Figure 3), one gray-headed nestling peered out from the hole (Figure 4), and later what was believed to be a second nestling appeared at the entrance. It appeared that no additional nestlings had left the cavity, as no



FIGURE 1. The location of the Northern Pygmy-Owl nest, near the eastern shore of Cold Lake, 10 km from the provincial border.

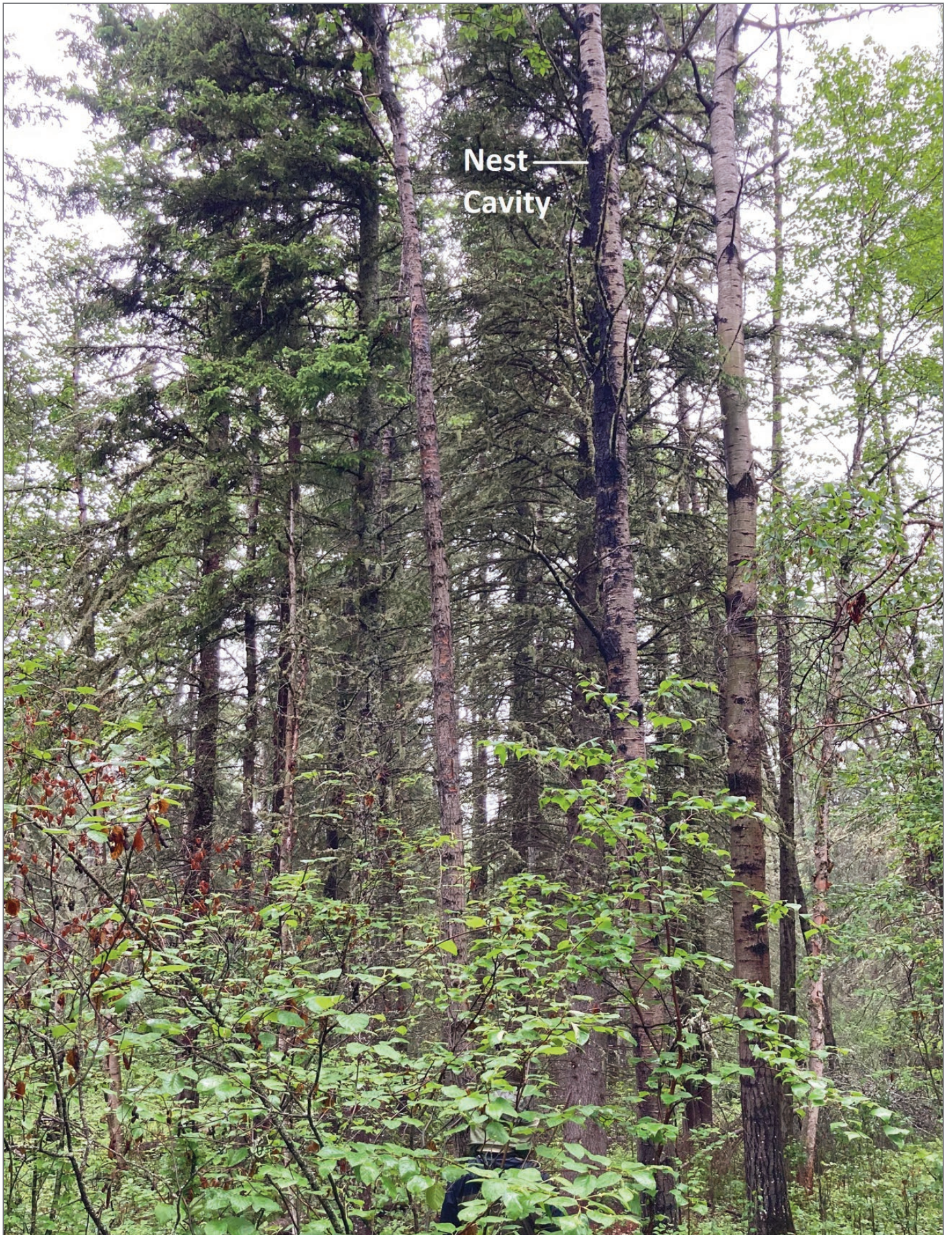


FIGURE 2. The location of the nest cavity, 10 m high in a trembling aspen. Photo credit: John Patterson.



FIGURE 3. Adult Northern Pygmy-Owl with a mouse, which it consumed. Photo credit: Scott Currie.



FIGURE 4. A nestling peering from the cavity entrance in a live trembling aspen on 22 June 2023. A 2.9-cm diameter camera could not be fully inserted into the entrance. Photo credit: Scott Currie.

fledged young were noted in nearby trees, nor did adult behaviour suggest that any of the nestlings had fledged.

The following day, Marten Stoffel and John Patterson returned for a third time, at 12:40 h. This time we had a very small industrial endoscope mounted on a paint roller handle and extendible pole that fit into the cavity. It was empty. After a search of nearby trees, we spotted a fledgling at 13:15 h, when an adult that had been feeding it flew from a spruce tree, at almost the same height as the nest and 10-15 m from it. The fledgling was perched adjacent to the trunk (Figure 5). We later briefly observed a second fledgling, but it was a better flyer and spent little time in our vicinity. Two adults were feeding the fledglings.

The first fledgling remained on the same branch for almost an hour, moving at one point from the trunk about 2 m farther out on the branch. It had been fed an unidentified prey item when first spotted and was fed again 45 minutes

later, when an adult brought a large, seemingly intact dragonfly (*Aeshna* sp.), with wings still attached. The feeding was captured on video.¹² Ten minutes later, the fledgling flew from the branch, which was also captured on video.

Audio recording at the site was difficult due to hordes of buzzing horse flies, but before we left the site at 15:00 h, sets of barely audible, repeated notes from both an adult and a fledgling were captured using a parabolic microphone (Figure 6). The fledgling vocalization was centred on 6400 Hz, with notes 0.092 seconds apart. The slightly faster repeated notes from the adult were at 1600 Hz, 0.075 seconds apart.

On 26 June, Stan Shadick returned to the nest site with photographers Boyd Coburn, Wendy Erickson and Deborah MacEwen. At least one adult and two juveniles were photographed. The juveniles had moved much higher than the nest to near the top of the forest canopy about 100 m north of the nest

tree where they were fed by an adult.

The nest was 10 km east of the Alberta border, but how far the breeding range extends into Saskatchewan remains to be determined. An agitated response by avian prey species to the pygmy-owl call has recently been noted by us in Prince Albert National Park, where the owl has been observed once already, which suggests that the eastern extent of the range may be at least 250 km from the Alberta border. We will attempt to confirm this in the future.

1. Personal communication, Lisa Takats Priestley.
2. Hannah K (1995) eBird checklist: <https://ebird.org/checklist/S16207656>. eBird: an online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. Available: <http://www.ebird.org> (Accessed November 1, 2023).
3. Personal communication, Lisa Takats Priestley.
4. Personal communication, Mike Russell.
5. Unpublished data, Marten Stoffel.



FIGURE 5. A recently fledged juvenile, as first observed 23 June 2023, near the trunk of a spruce tree. Image captured from a video posted at <https://ebird.org/checklist/S142772314>. Photo credit: John Patterson.

6. Taylor P (2019) Northern Pygmy-Owl. Page 346 in *Birds of Saskatchewan* (Smith AR, Houston CS, Roy JF, editors). Nature Saskatchewan, Regina.
7. Shadick J, Shadick S (2017) Successful quest for a second Saskatchewan Northern Pygmy-Owl. *Blue Jay* 75(1):22-23.
8. Shadick S (2017) eBird checklist: <https://ebird.org/checklist/S35889488>. eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. <http://www.ebird.org> (Accessed August 23, 2023).
9. Taylor PS (2023) New and notable records of Saskatchewan birds: 2022. *Blue Jay* 81(1):6-17.
10. Deshler J (2023) Northern Pygmy-Owl (*Glaucidium gnoma*), version 2.0. in *Birds of the World* (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bow.nopowl.02>
11. Holt DW, Norton WD (1986) Observations of nesting Northern Pygmy-Owls. *Journal of Raptor Research* 20:39-41.
12. Patterson J, Stoffel M (2023) eBird checklist: <https://ebird.org/checklist/S142772314>. eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. <http://www.ebird.org> (Accessed August 23, 2023). 🐦



Dancing Grouse Tour
Signs of Spring Tour
Cypress Hills Tour
Chaplin Shorebirds
Grasslands Park Tour
Duck Mt Park Tour
Whooping Crane Tour
Pre Spring Meet Tours
www.birdtours.ca
birdtours@sasktel.net
 306-652-5975

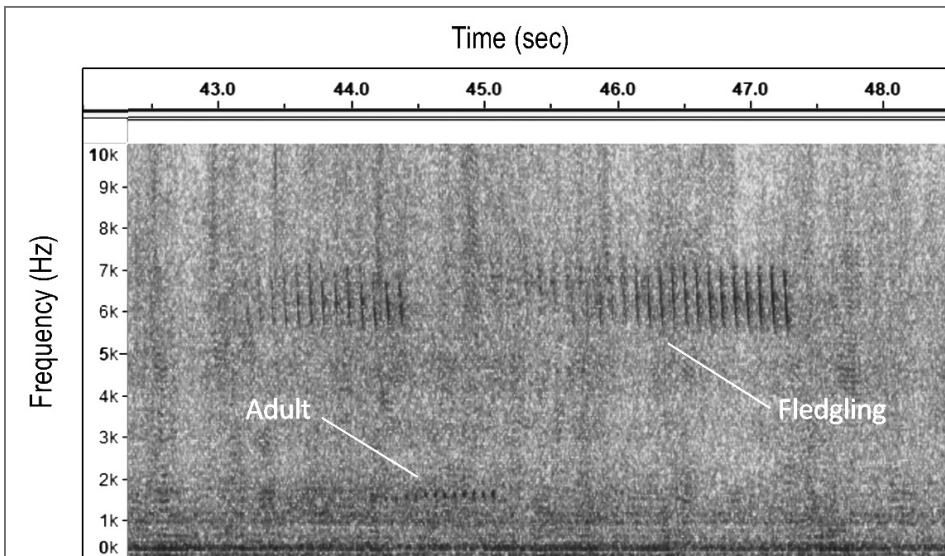


FIGURE 6. Spectrogram showing fledgling and adult Northern Pygmy-Owl vocalizations. Full audio posted at <https://ebird.org/checklist/S142772314>.