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SOUTHERNMOST BREEDING OF THE NORTHERN HAWK OWL IN THE UNITED STATES

JAY CARLISLE, Intermountain Bird Observatory, Boise State University, 1910 University Drive, Boise, Idaho 83725; jaycarlisle@boisestate.edu

In North America, the Northern Hawk Owl (*Surnia ulula*) breeds across the boreal forest of Canada and Alaska and is generally rare and irruptive in the coterminous United States (Duncan and Duncan 2014). Over the last two decades, multiple instances of breeding have been documented in northern Montana and Washington (Jessica Larson, Owl Research Institute, in litt., 2015; Washington Bird Records Committee [WBRC] 2015), suggesting that it is a rare but regular part of the breeding avifauna of the interior Northwest. In the last two decades 32 attempts at nesting have been documented in Glacier National Park and the nearby Flathead National Forest in northwestern Montana (J. Larson, in litt., 2015), as have two in Okanogan County in north-central Washington (WBRC 2015). Prior to 2014, there was a single breeding record in northern Idaho in 2001, at Snow Lake in Boundary County, and two additional summer (July and August) reports from northern Idaho (Idaho Bird Records Committee [IBRC] 2015). Most of the prior reports from Idaho (22 in all, nine confirmed; IBRC 2015) were in late fall or winter, supporting its status in the state as an irruptive visitor, predominantly in the nonbreeding season.

At approximately 20:00 on 2 July 2014, I was conducting field work in an area of mostly burned forest in the Salmon River Mountains about 21 km east-northeast of Warm Lake, Valley County (44° 43' N, 115° 25' W; "site 1"), when I noticed an adult Northern Hawk Owl perched in a burned snag. Over the next hour, I observed the arrival of a second adult, heard food-demand calls, and then observed a single begging fledgling. The fledgling had a tail that was less than half as long as that of an adult, thus was likely only recently fledged and unable to travel long distances. I briefly looked for potential nest sites and found a possible spot in a forked area of a snag but could not confirm a nest.

The next evening (3 July 2014) from approximately 19:30 to 20:00, Larry and Missy Arnold observed two adults and two fledglings at site 1 (in litt.). At about 20:30, they observed two adult and three fledged Northern Hawk Owls ~5 km southwest of site 1 (44° 41' N, 115° 28' W; elevation 2170 m; "site 2"). Given the distance and time interval between the Arnolds' observations, and the short tails of the fledglings, it seems very likely that there were two family groups.

Over the next month, several biologists and birdwatchers visited the area to observe the owls. In particular, Joe Faust (Boise National Forest biologist) returned at roughly weekly intervals. The family group at site 1 was observed only on 2 and 3 July, although Faust did not visit the site after 10 July, whereas he continued to see the family group at site 2 through 26 July, at which point the fledglings had become much more mobile and were undertaking longer flights. Paul Bannick was the last to see the adults and young at site 2 on 28 July (photo on this issue's back cover). No owls were observed when Faust searched site 2 on 3 August.

These sites are over 440 km south of the nearest prior nesting records for the species (Figure 1) and within a large forested area that burned in 2006. This habitat is similar to that used by breeding hawk owls elsewhere in their range. The habitat choice matches prior findings; in fact, hawk owl's abundance in burned forest can exceed that in green forests (Duncan and Duncan 2014), and most prior nesting recorded in Washington and Montana has taken place in burned forests (J. Larson, in litt., 2015; WBRC 2015). Additionally, both Idaho sites described here are at

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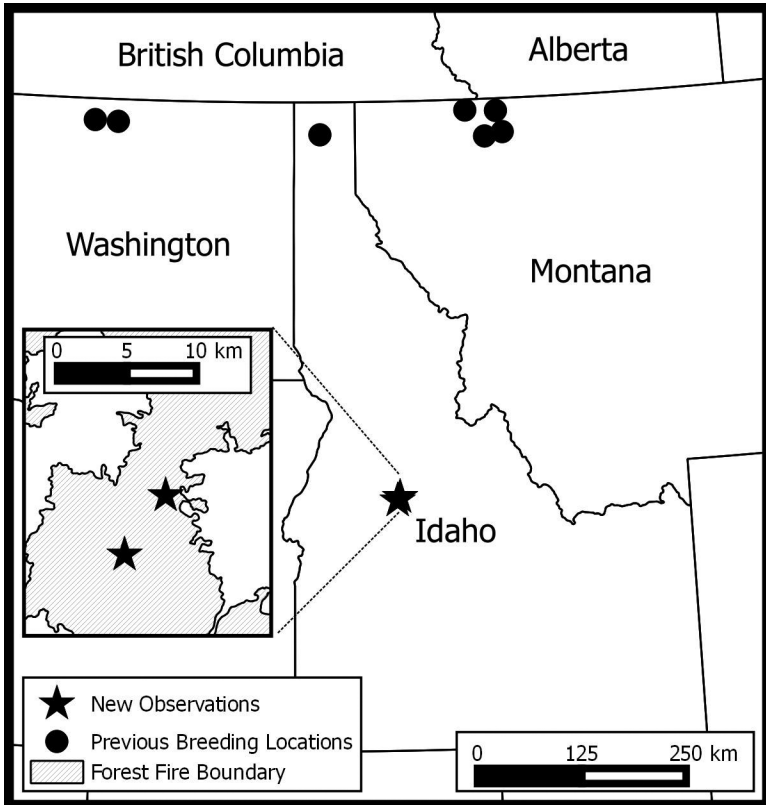


Figure 1. Locations of new 2014 Idaho breeding locations for the Northern Hawk Owl (*Surnia ulula*) relative to prior breeding records in the interior northwestern United States.

elevations of 2100–2500 m above sea level and contained habitat resembling boreal forests used by this species at more northern latitudes.

Although irruptive movements of the Northern Hawk Owl in the nonbreeding season have been documented as far south as the northern edge of Idaho’s Snake River Plain (IBRC 2015), the likelihood of dispersal combined with finding mates so far from the known range seems low and raises several questions. Namely, do the hawk owl families in central Idaho in 2014 represent a recent southward expansion of the nesting range or had the species bred in that region but gone undiscovered in prior years? Our lack of data prior to 2014 leaves us with no answer, but multiple checks of the sites in 2015 revealed no sightings of hawk owls. Furthermore, Intermountain Bird Observatory crews conducted playback surveys and searches for the Northern Hawk Owl along seven woodpecker-survey transects in burned forest including and within 30 km of these sites in 2015, also with no hawk owl detections. During the fall and winter of 2013–2014, there were two sightings of the Northern Hawk Owl in Idaho, one in Moscow (north-central Idaho), the other in Idaho Falls (eastern Idaho). Might

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there have been a larger irruption that went mostly undetected because of the remoteness of most of central Idaho but led to the breeding I report here? At this juncture, our knowledge is limited to two successful nestings in west-central Idaho, roughly 5 km from each other and over 440 km south of the nearest prior nesting records.

I thank the Boise National Forest for funding and logistical support for the study of the Black-backed Woodpecker (*Picoides arcticus*) that led to this discovery and Intermountain Bird Observatory research biologists Jessica Pollock and Rob Miller for their oversight of the study and assigning me the best transect! Thanks also to Forest Service biologist Joe Faust for following up and sharing his observations. Jessica Larson of the Owl Research Institute generously shared data providing the regional context. For decades Shirley Sturts has voluntarily maintained a database on Idaho bird distribution and this, along with the data of the Idaho and Washington bird records committees, was critical. Larry and Missy Arnold doubled the excitement by finding a second breeding site. The manuscript benefited from helpful reviews by James Duncan, Patricia Duncan, and Daniel Gibson. Finally, thanks to Paul Bannick for generously sharing his photograph.

LITERATURE CITED

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“Featured Photo” by © Paul Bannick of Seattle, Washington: Fledgling Northern Hawk Owl (*Surnia ulula*) in the Salmon River Mountains, Valley County, central Idaho, 28 July 2013. This was one of two families in 2013 representing a southward extension of the Northern Hawk Owl’s known breeding range by over 440 km.