

Barred Owl Nest in Attic of Shed

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ABSTRACT.—Barred Owls (*Strix varia*) nested in the attic of a shed during 12 out of 13 years at Flotten Lake, Saskatchewan. Twelve nestlings were banded in five seasons. Although two species of *Strix* are known to nest in buildings in Europe, this appears to be the first such instance in North America. Received 7 Oct. 1998, accepted 7 Jan. 1999.

For twelve out of thirteen years (1980–1992), Barred Owls (*Strix varia*) nested in the same attic of a shed along Flotten Lake, Saskatchewan. Prior to this, Barred Owls had never been reported to use a building for nesting purposes. Furthermore, this example represents the longest continuous use of one nest site by this species, reported to date in Saskatchewan.

Barred Owls apparently moved into central Saskatchewan from adjacent Manitoba in the 1950s. They occupied a relatively narrow band of mixed forest, most often near lakes and rivers. The first Saskatchewan nest was located in 1961 (Houston 1959, 1961). In the only Barred Owl nesting study conducted in Saskatchewan, Mazur and coworkers (1997) found nests only in mature forest: 6 in broken tree snags, 4 in broken limbs, 2 on squirrel platforms, 2 on stick nests, and 1 on a witch's broom platform. Of these nests, 10 were in deciduous trees and 5 were in conifers.

On 15 May 1988, I first visited an abandoned shed (Fig. 1), built in 1946 in a 1.6-ha man-made clearing located in mixed old-growth forest near the shores of Flotten Lake, Saskatchewan (54° 30' N, 108° 30' W). During the visit I banded three half-grown Barred Owl nestlings. The property owners, Mr. and Mrs. D. Mazuren, had observed Barred Owls nesting on the attic floor in this building every year except one since 1980. Consequently, 1988 was the eighth year of use in nine years. During other times of year, the owls were seen

in nearby trees but never perched on or in the buildings. On 3 June 1989, we again banded three young and took photographs. On 11 June 1990, we banded the single nestling raised that year; on 28 May 1991, three nestlings; and on 30 May 1992, two nestlings (only 2 eggs had been present on 19 April). The shed attic has not been used since.

The 12 years of use is similar to the 10 consecutive years that Barred Owls used a deep cavity in a dead oak in southeastern Massachusetts (Bent 1938). I have found no other records of Barred Owls using buildings for nest sites, although they use artificial nest boxes in Wisconsin and Minnesota (Johnson and Follen 1984). In Europe, other species of



FIG. 1. Author banding young Barred Owls in the attic of a shed. Photograph by D. G. Miller.

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Strix use buildings, especially barns, as nest sites. The Tawny Owl (*Strix aluco*) uses buildings as nest sites 15% of the time, similarly, the Ural Owl (*Strix uralensis*) nests in buildings 2–4% of the time (Mikkola 1983).

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Double Brooding in the Long-eared Owl

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ABSTRACT.—Owls in the family Strigidae typically raise no more than one brood per year. We documented what apparently is the first unequivocal case of double brooding in Long-eared Owls (*Asio otus*). A banded female raised 12 young in two nesting attempts compared with a mean of 5.3 young for three single-brooded females that nested in the same grove. Two factors may have influenced the occurrence of double brooding: the first nest was initiated unusually early in the year (mid-February) and food availability (in the form of voles) was high. The rare description of double brooding in Long-eared Owls may be due to the difficulty of detecting it. Alternatively, double brooding may be uncommon because it is seldom an economically viable strategy. Factors that would select against double brooding include low probability of recruitment of the first-brood young, and reduced survival and fecundity of the adults. Received 17 Sept. 1998, accepted 29 Dec. 1998.

fecundity of the adults and their young from the first brood. The occurrence of double brooding may be influenced by factors such as length of the breeding season, food availability, growth rates of the young, and the duration and quality of parental care (e.g., Drent and Daan 1980, Askenmo and Unger 1986, Tinbergen and van Balen 1988).

Double brooding is relatively rare in raptors, presumably because the length of the breeding cycle and extended postfledging care preclude its occurrence (Newton 1979, Morrison 1998). Among nocturnal raptors, double brooding occurs regularly in Barn Owls (*Tyto alba*; Marti 1992, 1997) and occasionally in Florida Burrowing Owls (*Athene cunicularia floridana*; Millsap and Bear 1990) and Boreal Owls (*Aegolius funereus*; Kellomäki et al. 1977, Solheim 1983). During a study of breeding Long-eared Owls (*Asio otus*), we documented a female that raised two broods during the same nesting season. Here, we describe the event and discuss factors that may have influenced its occurrence.

STUDY AREA AND METHODS

The study area is a small grove (ca 2 ha) of quaking aspens (*Populus tremuloides*) and black hawthorns (*Crataegus douglasii*) located about 16 km west of Polson, Lake County, Montana (47° 40' N, 114° 20' W). The elevation at the site is 888 m, and the nesting

The number of young raised per year is an important component of an individual's lifetime reproductive success. Double brooding, in which a second brood is attempted after a successful first attempt, is a viable strategy if the increase in fitness that results outweighs the cost of any reduction in future survival or

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