

Status of the Barn Owl in Illinois

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Abstract.

The Barn Owl (*Tyto alba*) is one of the most widely distributed species of birds, nesting on six continents and many islands. In spite of versatility in nesting habitats and prey selection, this species has become rare in the Midwestern United States. Population declines are strongly correlated with changing agricultural practices. Hay and pasture – rich foraging areas for voles (*Microtus spp.*), the preferred prey in the region – have been extensively converted to row crops which support fewer prey items. Although Barn Owls are rare and listed as endangered in Illinois, they remain broadly distributed with nesting records from 31 counties during 1990-2009, mostly in the southern half of the state. Barn Owl populations are secure in states south of Illinois, and populations in some Midwestern states, including Illinois, may be expanding. As part of developing a recovery plan for Barn Owls in Illinois, we surveyed historic nest sites and installed new nest boxes in 2010. In total, at least 19 Barn Owl nests in 16 counties were documented. With the encouraging results from the 2010 field season, the Barn Owl population appears to be moving toward recovery objectives, but reaching those objectives will require continued support and field work.

The Barn Owl, *Tyto alba*, is one of the most widely distributed species of birds, nesting on all continents (except Antarctica) and many islands. Because Barn Owls are tolerant of human activity and readily nest in barns and other structures, they are likely the most familiar owl in the world. Their whitish plumage and distinctive heart-shaped facial ruffs give this species a striking, ghost-like appearance. Barn Owls are well-adapted to catching prey (typically small mammals) at night. Barn Owls have excellent low-light vision, their flight is nearly completely silent, and they have the ability to locate and capture prey in total darkness with their acute hearing. Barn Owls are tremendous dispersers (sometimes >1,000 miles) and have high reproductive rates (often >2 broods per year, and capable of nesting in all seasons), enabling them to colonize and quickly populate regions with suitable habitat.

In spite of wide versatility in nesting habitats and prey selection, Barns Owls have become rare in portions of Europe and North America. Though Barn Owl populations, like most nocturnal birds, are difficult to monitor, the decline of this species in the Midwestern United States since the early 1900s has been well-documented. The decline is most strongly correlated with changing agricultural practices. Hay and pasture – rich foraging areas for voles (*Microtus spp.*), the preferred prey in the region – have been extensively converted to row

1. The Nature Conservancy
2. Illinois Endangered Species Protection Board
3. Illinois Department of Natural Resources
4. Illinois Natural History Survey

crop agriculture which supports little prey. Concurrently, the replacement of open-wooden barns with closed metal structures has reduced potential nesting sites. Today, Barn Owls are endangered in Illinois.

As part of the development of a Barn Owl recovery plan for Illinois, we sought to better understand the recent distribution, abundance, and population trends of this species in Illinois and the Midwest, and during the 2010 nesting season, to specifically seek out and document Barn Owl nests at historic sites and in previously installed nest boxes.

The Barn Owl is one of the least-reported resident birds in the state. For the 26-year period from 1984 through 2009, the Illinois Department of Natural Resources' database for tracking Element of Occurrence Records of threatened and endangered species contains 47 records of Barn Owl from 28 counties. The Illinois Breeding Bird Atlas (Kleen et al. 2004), based on field work conducted from 1986-1991, located Barn Owls in four blocks out of 1,286 sampled. Barn Owls were reported on Christmas Bird Counts in Illinois in 13 of 29 years (20 out of 1,386 counts) from 1981-82 to 2008-09, at the rate of about 1 bird per 3,000 hours of