

ABOUT THE COVER: SHORT-EARED OWL

The Short-eared Owl (*Asio flammeus*) is one of the most widely distributed of the world's owls, occurring on every continent except Australia and Antarctica. Although normally crepuscular in nature, it is often seen during the day bouncing through the air on slow, deliberate wing beats, resembling a giant moth. This medium-sized owl in flight shows a black patch near the bend of the underwing and a conspicuous buffy patch on the upper wing surface. It is a buffy brown-streaked owl with a well-defined facial disk and two small feather-tuft "ears" that are difficult to see. The wings are long and wide. The sexes are similar in plumage, but females average slightly larger, and the sexes can be separated in the breeding season by slight differences in plumage color, size, and behavior.

The Short-eared Owl is polytypic with eight or nine subspecies recognized worldwide, many of which are endemic insular races. In North America they breed from Alaska to Newfoundland and across the northern United States wherever suitable habitat occurs. In the northeast this owl has a patchy distribution extending south to New Jersey. In Massachusetts Short-eared Owls are an uncommon breeder on the islands off Cape Cod, with twenty to twenty-five pairs reported breeding on Monomoy, Nantucket, Martha's Vineyard, and other smaller islands. Northern birds migrate south in winter to the southern United States and Mexico. In Massachusetts the Short-eared Owl is considered a fairly common migrant and winter resident, with owls arriving in late September and remaining until early April. Highest concentrations occur in the Plum Island area, on the Boston marshes, in Middleboro, and on Cape Cod and offshore islands. The Short-eared Owl is considered by some as an irruptive species and is nomadic in parts of its range, seeking concentrations of its favored mouse and vole prey. Significant flights occurred in Massachusetts in the winters of 1961-1962, 1978-1979, and 1981-1982, with a high count of forty-three in 1961.

Short-eared Owls are seasonally monogamous breeders with reproduction and population dynamics tied to the density of small mammal prey. They prefer open habitats such as marshes, sand dunes, prairies, and tundra. They have a variety of calls, with males uttering a series of *hoo-hoo-hoo-hoo* tooting notes while "sky dancing" over the nest, soaring and swooping, sometimes "clapping" their wings together under their bodies with audible results. Other calls include *keeee-yow* and a variety of hisses, squeals, and bill-snaps. The male in courtship feeds the female. The threat display involves crouching with feathers ruffled and wings partially extended and lifted to face the opponent, which greatly exaggerates the bird's apparent size.

In Massachusetts nesting is underway by late May or early June. The usual nest is little more than a depression lined with grass or feathers, often hidden by tufts of grass. The clutch is four to seven creamy-white eggs. Incubation begins

before the last egg is laid, and hence the young hatch asynchronously, producing chicks of unequal size. This is probably an adaptation for maximizing the number of young produced during years of abundant food. Only the female owl has a brood patch, and she does all the incubating while the male provides the food. Both adults will give elaborate distraction displays when disturbed near the nest, including flopping about on the ground with wings spread while uttering a variety of barks, screams, and whines. The incubation period is three to four weeks and the birds fledge four to five weeks after hatching. The male provides the food for the young.

Short-eared Owls are efficient predators with asymmetrical ear openings enabling them to locate sound vertically and horizontally simultaneously. They also use sight to aid in prey capture. Normally hunting at dawn and dusk, they will forage during daylight if energy demands are high (e.g., while nesting) or prey is scarce. Their major prey is small mammals, although they also take small birds and insects. They hunt in a fashion similar to harriers, silently quartering low over fields or marsh, sometimes gliding on slightly dihedral wings, sometimes hovering, dropping down with legs extended upon prey. Occasionally they hunt from a low perch. They may cache food, presumably as a hedge against bad weather or ephemeral prey. They swallow small mammals whole or snip off their heads, and clip the wings off small birds before swallowing the bodies whole. They have been known to ravage tern colonies. They generally regurgitate a single pellet of feathers, fur, and bones after each meal.

Due primarily to habitat loss Short-eared Owls are declining in many parts of the United States, particularly in the Pacific northwest and in the northeast. Ironically, in the northeast reforestation may play a role in population declines. They were on the National Audubon Society Blue List, which included birds experiencing population declines or range reductions nationally. Seven northeastern states currently list the Short-eared Owl as endangered, threatened, or a species of special concern. As ground-nesting birds, they are subject to mammal predation and are sometimes preyed upon by large raptors, including eagles and other owl species. They lose eggs and young to corvids, gulls, and jaegers. Habitat loss appears to be the major threat to their survival, although fluctuations in prey abundance may affect local populations.

In many parts of the United States and Canada, however, Short-eared Owl populations seem more secure, and because of their wide distribution they should continue to brighten our winters into the foreseeable future.

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