

# BURROWING OWL

*Athene cunicularia*

## Identification

These are small, long-legged owls, 8–10 inches tall, brown with white spots on the back and wings, and dark brown barring on the light brown breast and belly. They are often seen in the daytime perched on fence posts or on the ground in or near prairie dog colonies. They have the peculiar habit of bobbing up and down while looking at prey or other animals.

## Habitat

Burrowing Owls nest in treeless areas with short (less than 4 inches tall), low density vegetation usually where there are prairie dogs. The owls nest underground in burrows dug by prairie dogs, badgers or foxes. They successfully raise more young where there is a high density of prairie dogs, either because the owls are less conspicuous to predators in areas with many prairie dogs, or because prairie dogs are good at spotting predators and barking to alert all residents of the colony including the owls. Burrowing Owls benefit from some areas of tall, dense vegetation (at least 12 inches tall), which provides habitat for insect and small mammal prey.

## Natural history

Burrowing owls leave their wintering grounds in March and April, arriving on the breeding grounds as late as May. They begin laying eggs in late March in the southern part of the range, and mid-May in the north. Burrowing Owls nest in loose colonies, with nest burrows about 100 yards apart. The adults and young birds move around and use “satellite” burrows in addition to the nest burrow. Owls further north leave for their wintering grounds by mid-October, while more southern birds remain all year.

Unlike many other owls, Burrowing Owls will hunt during the day. This is when they capture insects near the nest burrow and in other areas of short vegetation. They also hunt at night, capturing small mammals in areas of taller vegetation. Contrary to popular belief, they do not share their burrows with prairie dogs or rattlesnakes.

Burrowing Owls rely on prairie dogs to maintain the burrows that they use for nesting and resting. Without



Burrowing Owls. Photo by Alan Schmierer (Flickr Creative Commons)

prairie dogs, burrows remain usable to owls for only 1–3 years, depending on the soil type. Although they will do minor excavating, the owls are unable to dig new burrows or clear out collapsed burrows.

## Nest

The nest is located underground at the end of a burrow 3–10 feet long. The nest is usually lined with plants or dried manure, probably either to disguise its scent or to help absorb water.

## Eggs

Usually 5–7 (sometimes as few as 3 or as many as 10), 1¼ inches long, white, almost round.

## Did you know?

Before egg laying, Burrowing Owls will lay animal dung around their burrow entrance to attract dung beetles and other insects which the owls catch and eat.

## Conservation Need

Significant range contractions and population declines have occurred in some areas, especially Canada and California, where 60 percent of the breeding birds disappeared in the 1980s and 1990s. Over the past

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100 years, Burrowing Owl populations in British Columbia, Alberta, California, Nevada, Colorado and New Mexico have dropped by more than 50 percent. In Saskatchewan, the population declined 88 percent between 1988 and 1997. Causes include loss of habitat (to urbanization and conversion to croplands or to taller, non-native haylands), and eradication of prairie dogs. They are a Species of Greatest Conservation Need in Nebraska, North Dakota, South Dakota and Wyoming.

## Management recommendations

- Retain populations of the principal insect prey species (grasshoppers, crickets, beetles) at levels compatible with economic activities on the land. Insecticides have direct (poisoning) and indirect (loss of prey) effects on the birds. If insecticides are necessary, postpone their use until after the young owls have left the care of their parents (i.e., after the end of July).
- Retain populations of prairie dogs at levels compatible with economic activities on the land because Burrowing Owls are heavily dependent on prairie dogs for nest burrows. Consider the use of barrier fences to control the distribution of prairie dogs.
- If prairie dog control is necessary, defer until November to mid-March to prevent unintentional harm to nesting burrowing owls and their young. If using chemical controls, poison only active prairie dog burrows.
- Leave inactive burrows open to provide roosting sites and future nesting sites for owls.
- Educate varmint hunters about the owls, and instruct them to be sure of their targets. Given the owls' habit of perching on the ground outside a burrow entrance, some owls could be mistaken for prairie dogs or ground squirrels.
- Protect known nest burrows because the owls will often reuse the same burrow in subsequent years.
- Maintain a buffer zone of 100–300 yards (up to ½ mile, if possible) around owl nest burrows; limit insecticide applications, rodent control, and other human disturbances in this area.

- Graze areas of shortgrass prairie used by owls to maintain a low vegetation profile and provide manure for owl nests.
- Maintain areas of taller vegetation, such as weedy fallow fields or fencerows, within 1 ½ miles of known owl nest burrows, to provide habitat for the owls' prey species.
- Drive slowly by colonies to avoid collisions with owls—vehicles often hit owls when they fly low over roads in search of prey.

## Associated species

Other wildlife that may benefit from habitat management for Burrowing Owls include Swainson's Hawks, Red-tailed Hawks, Ferruginous Hawks, Rough-legged Hawks, Golden Eagles, Mountain Plovers and Horned Larks.

## Diet

Invertebrates (mostly crickets, grasshoppers and beetles) 88%, Small mammals and birds 12%.

