

Snake River Birds of Prey National Conservation Area



Western Burrowing Owl (*Athene cunicularia*)

Description/Size

Wing span: 20-24 inches

Length: 7.5-11 inches

Weight: 4.5-9 ounces

A small owl that lacks ear tufts; has relatively long, narrow wings, short tail and long legs. Adults – upperparts evenly barred, spotted pale brown and buffy. Spots are smaller and more numerous on the crown and larger on the back, upper wings and hind neck. Sandy colored on the head, back and upperparts of the wings. Tail short with buffy white bands. Distinct oval facial ruff, framed by bold white eyebrows extending above and along side of the beak. Has a prominent white chin stripe. Under parts are buffy white with broad brown barring/spots except the under tail coverts are white. Lower chest white; band of dark brown (mottled with white) between white throat and chest. Eyes usually bright lemon yellow. Beak is cream colored. Cere and eyelids grayish. Gape pinkish. Bristle-like feathers on legs and feet white to beige. Skin dark gray, except undersides of feet sometimes yellowish in juveniles. Unlike most owls, the male is slightly heavier and has a longer wingspan than the female. Males tend to be lighter colored, more grayish brown and not as heavily barred below. Females are usually darker than males. Juveniles – Brown on head, back and wings. Under parts lack barring and are dull white except for upper chest that is dark brown. Crown marked with fine buffy-white streaks. Up to 18 subspecies currently recognized. Two subspecies in North America: *A.c. hypugaea* found from e Texas north to s. Manitoba and west across s. Canada and all of the western US south to El Salvador, and *A.c. floridana* restricted to Florida and the Bahamas.

Similar Species

None.

Habitat/Range



Open, well-drained grasslands, steppes, deserts, and prairies, often associated with burrowing mammals. Also agricultural lands, and golf courses, cemeteries, airports, vacant lots and other open areas within cities. Extends from southwestern Canada, western US and Florida, throughout Central America, and most of South America except the Amazon River basin. Also on Cuba, Hispaniola, n. Lesser Antilles, Bahamas, and several islands off the west coast of Mexico. Nests in dry level open terrain with low height vegetation for foraging and available perches such as fences, utility poles and raised rodent mounds. The abundance of available burrows seems to be a critical habitat requirement. Favored locations are those in relatively sandy sites, areas with low vegetation around burrows, holes at the bottom of vertical cuts with a slight downward slope from the entrance and slightly elevated locations to avoid flooding. Winter range is much the same as breeding range, except that most apparently vacate northern areas of the Great Plains and Great Basin.



Food/Diet

Opportunistic hunters; insects, small mammals and birds but will also eat reptiles and amphibians. Insects include grasshoppers, scorpions, large beetles, moths, and crickets. Mammals include mice, rats, voles, gophers, and bats. During breeding season, food is cached within nest burrows and tunnels. Also found scattered within 100 feet of the nest burrow.

Voice

Thirteen vocalizations of adults and three of young have been identified. Adult vocalizations include a Primary Song, a two-note call *coo coooo*, given exclusively by male. Other sounds associated with copulation, nest defense and food begging: rasp, chuck, chatter, and scream. Most vocalizations given near the nest burrow. Juveniles give an intense prolonged rasp when severely distressed; mimics a rattlesnake rattle and deters potential predators from entering nest burrows. Non vocal sounds: Bill snaps most often heard in defense of nest site, but given whenever severely threatened; accompanied by threat display and vocalizations.

Behavior

Only small owl likely to be seen perched in the open in daylight; often on the ground or on fence posts. Bobbing “deep knee bend” motion of agitated birds is distinctive. Hunts while walking, hopping, or running across the ground; also hovers in mid air and swoops down; glides silently from a perch; or catches insects in the air. Hunting style varies with type and activity of prey pursued, time of day, and vegetation. Prey is caught with feet and carried by the beak. Is crepuscular - hunts mainly at dawn and at dusk but will hunt any time during a 24 hour period. Tends to hunt insects in day and small mammals at night. It has been suggested that these owls may be capable of fasting for several days. Flies with irregular, jerky wingbeats and frequently makes long glides, interspersed with rapid wingbeats. May flap wings asynchronously (not up and down together). Birds in the northern part of the range are migratory. Banding recoveries show that Canadian owls migrate further south than those banded in the US, suggesting a “leap-frog” migration. Compared with other birds, these owls show a significantly higher tolerance for carbon dioxide, apparently a response to nesting in burrows. Mammalian predators elicit aerial attacks during the nesting season. Avian predators elicit escape behavior, often into burrows.

Reproduction/Nesting

Clutch size: 6-9 eggs
Eggs: round-ovate, white, 1.3 x 1.0 inches
Incubation: 28-30 days
Fledge: 44 days
Disperse: little information available.

Courtship displays includes rising quickly to 100 feet, hovering for 5-10 seconds then dropping to 50 feet. Repeated many times. Circular flights of approximately 130 feet also occur; performed mainly by males. Usually monogamous but occasionally polygynous (one male and two females). Pair bond may or may not be retained from year to year. Nests and roosts in abandoned animal burrows or other crevices. If soil conditions allow they will dig their own burrows. Also use manmade burrows (containers placed underground with entrance tunnel). May nest alone or in a group with other nesting burrowing owls. Prefer nesting areas with high density of burrows available; this may provide extra escape burrows for young owls before independence. Adults return to same burrow or nearby area each year. Both adults renovate and maintain burrows. Often line the nest with a variety of dry materials including dung. Continue to maintain their burrow throughout most of the breeding season. In non-migratory populations, use and maintain burrows year-round; in winter, burrows provide protection from avian predators. Burrow dimensions vary; nest cavity is roughly circular, approximately 10 inches wide and 4-5 inches high. Tunnel slants approximately 15° downward from the entrance. Young owls begin to use satellite burrows at 7-8 weeks. No known record of second broods; renesting may occur if the first nest is destroyed early in the breeding season. Sexually mature at one year of age.

Life Span

Longest recorded – 9 years 0 months.

Conservation Status

Not on the US Fish and Wildlife's Endangered or Threatened Species List. However it is protected by the Migratory Bird Treaty Act. Idaho Fish & Game lists the western burrowing owl as a protected non game species for which it is illegal to collect, harm or otherwise remove from its natural habitat. The BLM considers this a Watch List species

in Idaho – current population or habitat information suggests that this species may warrant sensitive species status in the future. Listed as endangered, threatened, or a species of special concern in most states where they occur. In Canada it is Endangered. Intensive cultivation and urban development of grasslands and native prairies has long been recognized as a cause of declining owl populations: results in loss of burrows, loss of foraging habitat, creation of suboptimal nesting habitat, and increases in vulnerability to predation; may also reduce the chance that unpaired owls will be able to find mates. Human activities which cause the reduction of burrowing mammals also impact these owls through the loss of burrows for nests. Pesticides used in farming can result in direct mortality, or indirectly due to loss of prey base or due to contaminated prey. This owl is vulnerable to many different predators. Mammals, particularly badgers, are major predators. Domestic cats, dogs, opossums, weasels, and skunks feed on eggs and young. Hawks, falcons, larger owls and crows are also predators of adult and young burrowing owls. Collisions with vehicles often a serious cause of mortality; the owls habitually sit and hunt on roads at night. Severe spring and summer weather known to kill both adults and young in burrows. It is not known if illegal shooting is a local or widespread problem.

Viewing in the NCA

Interesting Facts

Spanish name:
Lechuza llanera, Chicuate

The western burrowing owl is seen in the NCA from March through August.

- the scientific name comes from the Greek word *athene* referring to Athena the Greek goddess of wisdom whose favorite bird was an owl and the Latin word *cunicularia* meaning mine or miner, referring to its nesting under ground.
- Common name refers to its nesting in burrows.
- Other names: ground owl, long-legged owl, prairie dog owl.
- Burrowing owls are crepuscular – hunting mainly at dawn and at dusk.
- The Zuni Indians called this owl the “priest of the prairie dogs” because it frequently nests and roosts in empty prairie dog burrows.
- Early European settlers were convinced that rattlesnakes often shared its nests.



Sources

- Bird Banding Lab - www.pwrc.usgs.gov/bbl/homepage/long2890.htm
- Idaho Fish&Game - <http://fishandgame.idaho.gov/wildlife/nongame/birdspecies.cfm>
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- The Peregrine Fund – www.peregrinefund.org/Explore_Raptors/owls/burrowowl.html
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- The Owl Pages – www.owlpages.com/species/athene/cunicularia/Default.htm
- Birds of North America Online - http://bna.birds.cornell.edu/BNA/account/Burrowing_Owl/
- US BLM – www.id.blm.gov/information/sss/Animal_List_FINAL.pdf
- US Fish and Wildlife Service – http://ecos.fws.gov/tess_public/servlet/gov.doi.tess_public.servlets.VipListed?code=V&listings=0#B

Illustration: courtesy Alberta Sustainable Resource Development / Map: The Peregrine Fund
Photography: BLM