

Western Burrowing Owl

Athene cunicularia hypugaea

Class: Aves **Order:** Strigiformes (owls) **Suborder:** n/a **Family:** Strigidae (typical owls)

Other names: Billy Owl, Ground Owl, Long-legged Owl, Prairie Owl, and Prairie Dog Owl.

Other subspecies: There are 22 subspecies of burrowing owl. Only *A. c. hypugaea* (Western burrowing owl) and *A. c. floridana* (Florida burrowing owl) are found in North America. [1]

Other Relatives: 3 species of owl are found in the genus *Athene*

Zoo Burrowing Owl 1.1

Dori 0.1– female, DOH: April 7, 2010 in the Sacramento Zoo, AQ: April 3, 2013

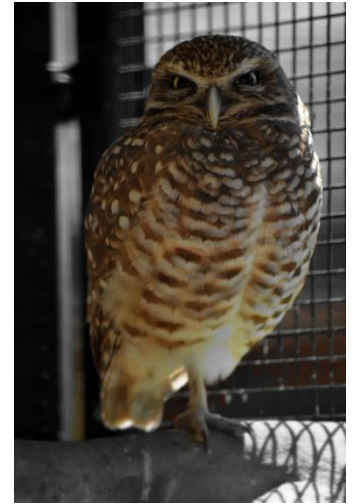
About Dori

Dori came from the Sedgwick Zoo. She weighs 160g (~.35 lb)

Oz 1.0 – male, DOH: March 30, 2011 at the Living Coast Discovery Center, AQ: March 12, 2015.

About Oz

Oz was acquired from the New Zoo, Wisconsin, where he'd lived since 2012. He weighs 181g (~.39 lb)



Status

Least Concern [2]

Burrowing Owls are listed as Endangered in Canada and Threatened in Mexico. They are considered by the U.S. Fish and Wildlife Service (USFWS) to be a Bird of Conservation Concern at the national level. At the state level, Burrowing Owls are listed as Endangered in Minnesota, Threatened in Colorado, and as a Species of Concern in Arizona, California, Florida, Montana, Oklahoma, Oregon, Utah, Washington, and Wyoming [1]

Geographic Region

The burrowing owl is found in North and South America. [2]

Habitat

Desert, dune, savanna, grassland [3]

Characteristics

Size: *Height:* 7.5 – 11" [4] *Wingspan:* 20 – 24" [4] *Weight:* 4.9 – 8.5 oz. [4]

Longevity: **Wild:** about 9 years [3] **Captivity:** over 10 years in captivity [3]

Physical Description

- The burrowing owl is one of the smallest owl species [3].
- The owl has long lanky legs, a short tail, and it does not have any ear tufts [3].
- The burrowing owl's body is generally brown with speckles of white. The owl's breast is a lighter color brown while its face is encircled in white, with tinges of sandy brown feathers [3].
- Its wings are about the same size as its body, and has featherless legs, and round yellow eyes. [3]

Dimorphism

Males:

Females: Unlike other owl species, the female burrowing owl is smaller than the male [3].

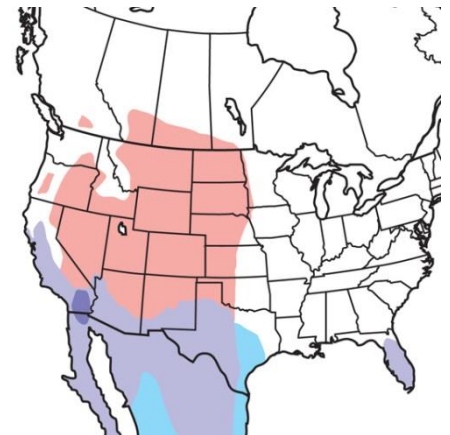
Diet: Carnivore

Diet in the Wild: The diet of the burrowing owl consists of insects, small frogs, lizards, and rodents. The owl will often eat beetles, crickets, moths, kangaroo rats, and snails. It eats different prey depending on availability in the habitat and the time of year. The owl is a keen hunter always on the lookout for prey, during the day or night. Burrowing owls always keep a supply of food in its burrow [3].

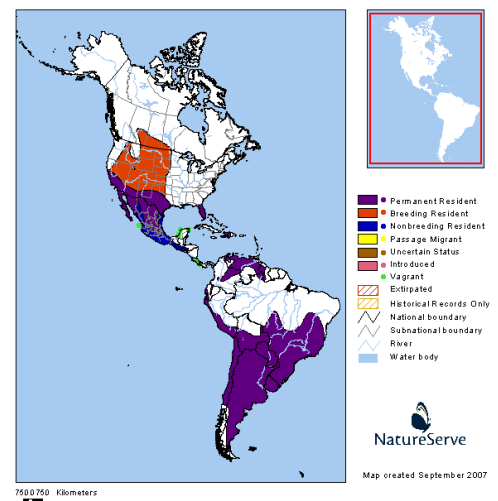
Diet in the Zoo: Bird of prey diet, small rodents, crickets

Behavior

- *Diurnal, day-active:* the burrowing owl is not nocturnal like most other species of owls.
- This species spends most of its time on the ground



Birds in Florida and parts of southwest may be permanent residents, but northern birds migrate south, some reaching southern Mexico and Central America. Strays sometimes have wandered north from Florida or east from the Great Plains.



Feeding Behavior

- Burrowing owls hunt while walking or running across the ground and by swooping down from a perch or hover, and they will catch insects from the air. However, they hunt mostly between dusk and dawn, like most other owls. [1].

Social Structure & Communication

- Burrowing owls will live together in colonies with other burrowing owls [1].
- They may hover above the ground or perch in a tree when searching for prey.
- While most owls tend to be solitary creatures, the Burrowing Owl is quite social. This small raptor lives among others of its own species in loose groups of up to several hundred individuals. Burrowing Owls also may live among other animal species, as well. In some parts of their range, they live side by side with prairie dogs in what are known as prairie dog towns. [5]
- All owls have many types of vocalizations and use alarm calls to warn other members of their species of potential danger or to scare off predators, but when young Burrowing Owls get scared, they emit an alarm call that sounds something like a rattlesnake! This is an interesting adaptation for survival, as certainly any predator hearing what they think is a rattlesnake will be cautious before getting too close [5].

Home Life

- The Burrowing Owl is also quite unique in its nesting habits. While some owl species nest on the ground, the Burrowing Owl is the only one that actually nests underground in holes dug mainly by burrowing mammals [5].

Defense Mechanisms

- The burrowing owl has especially long legs which allow it to sprint in addition to flying. This sprinting adaptation is helpful for escaping from its main predators: badgers, coyotes, and snakes. [4]

Reproduction

- A male will court several females with his primary song and displays. While singing, the male will bend forward, almost parallel to the ground with his **primaries** and **secondaries** held together over his back and white patches of the throat and brow fully displayed. Other courtship behaviors include circular flights, billing and preening of the head and face, and the male presenting food to the female. [5]
- Burrowing owls will nest underground, either by digging its own burrow or more frequently by taking over a burrow dug by other mammals such as prairie dogs and pocket gophers. The owl lines its den with grass and roots [3].
- The burrowing owl has the largest **clutch** size of any North American raptor, laying up to 12 round white eggs in April [5] [6]. Typically only one **brood** is hatched per year.
- In some areas, incubation starts after the first egg is laid while in others, it does not begin until the clutch is complete [5].
- After 28-30 days of incubation by the female only [5], the eggs will hatch and the mother and father will share the responsibility of caring for the young [3]. In the beginning, mothers mainly stay with the **altricial** chicks while the father hunts, but after 1-2 weeks, the female will begin hunting for the chicks as well [5].
- The young owlets will remain in their nest for about 40 days before leaving and venturing out on their own. [3]
- Sexual maturity is reached at 1 year of age [6].

Conservation

Although the burrowing owl is considered least concern, some subspecies are in more danger than others.

- **Use & Trade:**
- **Threats:** They are endangered in Canada and threatened in Mexico. Deforestation near the Amazon rainforest has caused a decline in numbers of burrowing owls in South America. In North America, the major threat is land development including the construction of airports, golf courses, and roads. Pest control programs targeting prairie dogs also have reduced the burrowing owl numbers in North America. The predation by domestic cats and dogs also pose a danger to the owls. [4]
 - When urban development is not preventable, passive relocation has been implemented with success. Capturing and moving the birds to a new location is very stressful and has a low success rate. Instead, a nearby site with suitable soil is chosen as new location for the birds. Perches and burrows are added in order to entice the birds to relocate. As the birds begin to move, the previously inhabited burrows are destroyed in order to prevent their return. [4]
- **Predators:** badgers, coyotes, and snakes

Did You Know?/Fun Facts

- Nesting female owls will add cow dung to their nest in order to attract insects for an easy meal. The dung also helps to keep the burrow at a steady and comfortable temperature. [4]
- The genus *Athene* comes from Athena, the Greek goddess of wisdom, who is often associated with owls. The species name *cinicularia* means miner or burrower in Latin. [1]

- Cowboys sometimes called these owls "howdy birds," because they seemed to nod in greeting from the entrances to their burrows in prairie-dog towns [5].

Glossary

Altricial - hatched or born in an undeveloped state and requiring care and feeding by the parents.

Brood - a family of young animals, especially of a bird, produced at one hatching or birth

Clutch - A clutch of eggs refers to all the eggs produced by birds, amphibians, or reptiles, often at a single time, particularly those laid in a nest. In birds, destruction of a clutch by predators results in double-clutching.

Primaries - Primaries are connected to the *manus* (the bird's "hand", composed of carpometacarpus and phalanges); these are the longest and narrowest of the *remiges* (flight feathers, particularly those attached to the phalanges), and they can be individually rotated.

Secondaries - Secondaries are connected to the ulna. In some species, the ligaments that bind these *remiges* to the bone connect to small, rounded projections, known as quill knobs, on the ulna; in other species, no such knobs exist. Secondary feathers remain close together in flight (they cannot be individually separated like the primaries can) and help to provide lift by creating the airfoil shape of the bird's wing. Secondaries tend to be shorter and broader than primaries, with blunter ends

References

- [1] "Burrowing Owl Facts," Burrowing Owl Conservation Network, 2013. [Online]. Available: http://burrowingowlconservation.org/burrowing_owl_facts/. [Accessed 21 September 2014].
- [2] Birdlife International, "Athene Cunicularia," The IUCN Red List of Threatened Species, 2012. [Online]. Available: <http://www.iucnredlist.org/details/22689353/0>. [Accessed 28 September 2014].
- [3] C. Cheng, "Athene cunicularia," Animal Diversity Web, 2001. [Online]. Available: http://animaldiversity.ummz.umich.edu/site/accounts/information/Athene_cunicularia.html. [Accessed 28 September 2014].
- [4] "Burrowing Owl," Wikipedia, 21 August 2014. [Online]. Available: http://en.wikipedia.org/wiki/Burrowing_Owl. [Accessed 28 September 2014].
- [5] Program Animal Rating and Information System, "Burrowing Owl," Zoo Paris, 2015. [Online]. Available: <https://zooparis.wikispaces.com/Burrowing+Owl>. [Accessed February 2015].
- [6] Audubon , "Burrowing Owl," Audubon, 2015. [Online]. Available: <https://www.audubon.org/field-guide/bird/burrowing-owl>. [Accessed February 2015].

