

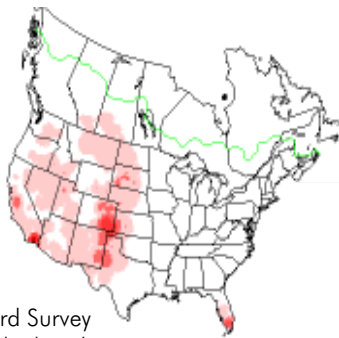
# Natural History of Burrowing Owls

At one time, burrowing owls were fairly common and widespread over western North America. However, populations of owls have declined, or in some cases disappeared altogether, due to the large scale changes that humans have made to the owl's habitat. They are endangered in Canada and are listed as endangered or threatened in a number of states. Burrowing owls are now a federally listed Species of Management Concern and are a Species of Special Concern in California. In response to decline of this species, a collaborative research effort in California was initiated in 1995.

## *Where are they found?*

Burrowing owls are found from Canada to South America. They inhabit most western states in the United States and have a disjunct population in Florida. In California, burrowing owls are found mostly in grasslands. Burrowing owls are either year-round residents or migratory, depending on where they live. Little is known about where the birds actually migrate to, but California appears to be the most important state for burrowing owls during the wintertime. The owls nesting in California are primarily year-round residents.

Burrowing owls are generally found in low-lying grassland areas and semi-desert. They require open habitats that contain suitable nesting burrows, usually with short grasses and sparse shrubs. Owls avoid thick, tall vegetation, brush, and trees, perhaps because these areas provide places for predators to hide. Native grassland habitat is disappearing from development and invasion by non-native plant species. Burrowing owls are being forced to rely on less natural habitat for survival.



Data from Breeding Bird Survey  
Darker colors indicate higher densities.



## *Where do they nest?*

Like the name suggests, these owls nest in burrows. They use vacated burrows made by mammals such as ground squirrels or similar holes in the ground. The owls' activity is tightly centered around the nest burrow during the breeding season. They may use more than one burrow within their territory during the breeding season. This may be an anti-predation strategy; if one burrow is found by a predator, some of the young might survive in another burrow.

Nest burrows are very distinctive because the owls line the entrance with material such as cow manure, insect parts, cotton, dead toads, plastic and tin foil.

If you find a nest burrow, it is important not to disturb it. Try moving away and waiting for the owls to emerge or return. They are fun to watch!

## *What do they eat?*

Burrowing owls are opportunistic feeders; that is, they eat a wide variety of things as they become available. Although you may often see burrowing owls during the day, most of their time searching for prey is during the night. Prey items include mammals, birds, reptiles, amphibians, insects, spiders, centipedes, scorpions, crayfish, and molluscs. The majority of the diet is made up of small mammals (pocket gophers and voles) and insects (grasshoppers, crickets, and beetles). One way to learn about what owls eat is to examine "pellets." Pellets are comprised of prey remains that the owl cannot digest. These remains, bones for example, are regurgitated in the form of pellets.



## *When do they reproduce?*

Reproduction begins the year after hatching. The nesting season (courtship and egg-laying) occurs between February 1 and August 30, depending on location. Females lay up to 12 eggs and incubate them for almost four weeks. Males bring food to the females during the incubation period. He also brings food for the chicks and mother during the early nestling stages. The young are capable of short flights by week 4, and fly well at week 6. They are still fed by their parents for another 6-8 weeks, and remain near their nest burrow until fall.

If you visit in July, you are likely to see the chicks and adults nearby their nest. By this time, most chicks are as large as their parents.

## *How long do they live?*

The lifespan of wild burrowing owls is essentially unknown. The record currently is held by one banded owl that survived 8 years, 8 months. Much of our research involves understanding factors affecting the owl's survival and reproduction.

## *What is being done to save the owls?*

Several agencies have begun to develop conservation plans. Enough information exists to further the efforts but more knowledge is needed to develop a scientifically based state-wide management strategy. To help gather this information, we began a research program on the burrowing owl. We are investigating factors affecting reproduction and survival, and the effects of habitat on their home range shape and size.

We established four sites that serve as the primary study areas in California. They are located in the south San Francisco Bay area, the Central Valley (Lemoore Naval Air Station), Carrizo Plain Natural Area, and the Imperial Valley (Salton Sea National Wildlife Refuge). The Burrowing Owl Research Program is coordinated through the Institute for Bird Populations, Point Reyes Station, California with collaboration of researchers from Oregon State University and San Jose State University.



**For more information about the Burrowing Owl Research Program, contact:**

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