

California's largest burrowing owl population is in rapid decline

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New surveys show a 27-percent drop in the number of breeding burrowing owls in California's Imperial Valley and provide some of the most striking evidence yet that the species is badly in need of state protections. Recent surveys of the state's largest burrowing owl population have been conducted by the Imperial Irrigation District. The Imperial owl population has declined from an estimated 5,600 pairs in the early 1990s to 4,879 pairs in 2007, then dropped sharply to 3,557 pairs in 2008.

“It’s alarming to see such a rapid, single-year drop in owl numbers in an area that is supposed to be a stronghold. Breeding owls been eliminated from a quarter of their former range in California over the past two decades as their habitat has been destroyed and they’ve been shoved aside for urban development,” said Jeff Miller, conservation advocate at the Center for Biological Diversity, which led several groups in petitioning for state Endangered Species Act protection for the owl in 2003. “A state threatened listing is clearly needed for burrowing owls, which are likely to disappear from major portions of the state. It is now uncertain whether owls will persist in areas they were thought to be secure, including the Imperial Valley.”

Burrowing owls in the Imperial Valley nest almost entirely in ground-squirrel burrows along earthen irrigation canals and drains. They represent nearly half the state’s breeding pairs. Once common in California, burrowing owls have been driven out of much of the state, with large populations primarily in areas of intensive agriculture,

including parts of the Central Valley, along the lower Colorado River and the Imperial Valley.

The California Fish and Game Commission rejected the 2003 petition following a highly controversial assessment by the Department of Fish and Game. After the vote, it was revealed that agency biologists evaluating the petition concluded that the burrowing owl should be protected as a “candidate” species and considered for endangered or threatened status, but the Department suppressed their report and recommended against listing.

Burrowing owls face multiple significant threats, including habitat loss and fragmentation by urban development, elimination of burrowing rodents and destruction of burrows, pesticides, predation by nonnative species, vehicle strikes, collisions with wind turbines and shooting. The state has allowed landowners to evict and “passively relocate” owls from development sites, with inadequate mitigation and no assurances that relocated owls are able to survive.

It is unknown what is causing the Imperial owl decline, but loss of suitable foraging areas from fallowing of agricultural fields due to water transfers and ground-squirrel eradication programs may play a role. There is no evidence that the Imperial owls are moving elsewhere in California.

The information about Imperial Valley burrowing owl declines is buried in a 2009 annual report by the Imperial Irrigation District to the State Water Resources Control Board that can be found at www.iid.com/Media/2009-Report.pdf on page 176. The significant decline in the Imperial Valley has not been publicized by the Department of Fish and Game, which is currently preparing a state burrowing owl “Conservation Strategy” designed to prevent listing, and will rely primarily on voluntary measures and provide no effective legal

protection for owl habitat.

The western burrowing owl (*Athene cunicularia hypugaea*) is a small, ground-nesting bird of prairie and grassland habitats. Its breeding range is west of the Mississippi River to the Pacific, north into Canada and south to Mexico. The species has declined significantly throughout North America, is listed as endangered in Canada and threatened in Mexico, and is state-listed as endangered in Minnesota and threatened in Colorado. Many other states, including California, list it as a state “species of special concern.” California supports the largest remaining breeding and wintering populations of western burrowing owls. There are no state or federal laws that protect burrowing owl habitat, which is rarely purchased by agencies to conserve the owl or other grassland-dependent species. An estimated 91 percent of all burrowing owls in California occur on private land, much of which is threatened by future development.

Early accounts of the burrowing owl in California described it as one of the state’s most common birds in the late 1800s and early 1900s. Owl numbers have dropped steadily since the 1940s; by the mid-1990s surveys estimated 9,450 owl nesting pairs in the primary range of California burrowing owls, with 5,600 pairs thought to nest in the Imperial Valley. The number of breeding owl colonies in the survey area declined by nearly 60 percent from the 1980s to the early 1990s, and the statewide number of owls is now thought to be continuing to decline by about 8 percent per year due to urban development. The Institute for Bird Populations conducted a follow-up statewide survey in 2007 and 2008, and preliminary data indicates owl populations continue to decline in most areas of the state. Breeding owls have been largely eliminated from Sonoma, Napa, Marin, western Contra Costa, San Francisco, San Mateo, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange and San Diego counties.

Most of the state's remaining breeding owls are concentrated in the Imperial Valley, an area that makes up only 2.5 percent of the state's land area. These owls face threats from conversion of agricultural lands to urban development, plans to line earthen canals with concrete, and ground-squirrel eradication. Throughout the vast majority of the owl's range in California, breeding owls persist in only small, declining populations of birds that are highly susceptible to extirpation.

The Department's conclusions regarding the burrowing owl listing petition were widely criticized by owl experts as fraught with inaccuracies, speculation and inconsistencies. The agency's reasoning that listing of the burrowing owl was not warranted relied on erroneous premises: that there was insufficient information on the historic range and abundance of the species; that a shift in owl population density has occurred, with increased densities appearing in the Imperial Valley balancing out reduced densities elsewhere in the state; that significant exchange occurs between regional populations; and that the Imperial Valley and other larger populations can maintain the species by augmenting declining populations elsewhere.

But banding data on [owls](#) in [California](#) shows little evidence of connectivity between regional populations, and larger southern populations have never been shown to serve as source populations for declining owl colonies elsewhere. The recent decline in the Imperial Valley undermines the Department's arguments about a stable overall state population. Significant breeding-owl declines have been shown in almost every part of the state; the species is threatened in a significant portion of its range.

Provided by Center for Biological Diversity

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