

Two California Butterflies Wing Toward Recovery

by Stephanie Weagley

The Palos Verdes and El Segundo blue butterflies are small, colorful creatures that survive on pockets of habitat within highly urbanized southern California. Conservation partners are helping the Fish and Wildlife Service make progress toward the recovery of these endangered species.

Palos Verdes Blue

In 1980, the Service listed the Palos Verdes blue butterfly (*Glaucopsyche lyg-*

damus palosverdesensis) as endangered. It based this action on threats from development and weed management practices that remove native vegetation, including locoweed, which was thought to be the butterfly's only host plant. Biologists feared that the butterfly became extinct in 1983 when the habitat supporting the only known population was developed. Much to everyone's surprise, a population was discovered in 1994 on a previously unknown host plant, deerweed, at the U.S. Navy's Defense Fuel Support Point in San Pedro, California. This provided a second chance to save the species from extinction. Soon, a captive-rearing facility for the Palos Verdes blue was established on the Naval facility.

The Palos Verdes blue butterfly now benefits from a second captive-rearing facility established in 2007 at America's Teaching Zoo at Moorpark College, California. This new facility serves as another vital step towards the recovery of the butterfly, which is named for its home, the Palos Verdes Peninsula in Los Angeles County.

A diverse array of partners are assisting the Service in the recovery of the Palos Verdes blue, including the U.S. Navy, U.S. Defense Logistics Agency, California Department of Fish and Game, The Urban Wildlands Group, Palos Verdes Peninsula Land Conservancy, and many other local organizations.

Recovery work underway includes habitat restoration at the Linden H. Chandler Preserve and other areas located on the Palos Verdes Peninsula.

Palos Verde blue butterfly.



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For example, the city of Rancho Palos Verdes is developing a habitat conservation plan with preserve areas suitable for reintroduction of the butterfly. Such cooperative efforts will provide more locations where captive-reared butterflies can be released.

El Segundo Blue

In June 2007, the El Segundo blue butterfly (*Euphilotes battoides allyni*) was spotted fluttering among beachgoers at two Los Angeles County beaches – places where it had been absent from the public's eye for decades. The natural resurgence of this butterfly along the coastal bluffs in Redondo Beach and Torrance is something wildlife experts never expected.

Also listed as endangered, the El Segundo blue butterfly is found only along the southeastern shores of Santa Monica Bay. Known populations exist on coastal dune habitat adjacent to Los Angeles International Airport, on the Chevron Refinery in El Segundo, at Malaga Cove in Torrance, and now two new sites along the beach in Torrance and Redondo Beach. The largest population inhabits the airport dunes.

In many ways, the reappearance of the butterfly at Redondo Beach and Torrance has been a surprise. First, previous scientific studies indicated the butterfly was relatively sedentary and typically did not fly distances farther than 200 feet (60 meters). The new sightings, however, challenge that notion. To arrive at its newfound locations, the El Segundo blue most likely flew 1,000 feet (305 m) across backyards from its nearest known habitat, thereby demonstrating that its dispersal capabilities are greater than once thought. Furthermore, this location may indicate that the species can naturally recolonize sites containing the native coastal dune vegetation upon which it depends.

Habitat restoration has played a key role in this butterfly's return. Since 2003, native vegetation reintroduction along the coastal bluffs of Redondo Beach and Torrance has been conducted by

residents, conservationists, government officials, and representatives from two nonprofit groups, The Urban Wildlands Group and the Los Angeles Conservation Corps Science, Education, and Adventure Lab program. The removal of non-native vegetation and the restoration of native scrub plants, such as coast buckwheat, California sunflower, deerweed, prickly pear cactus, and lupines, continue to this day. Restoration of coast buckwheat has been especially important because the El Segundo blue butterfly depends on this plant at each of its four life stages (egg, larva, pupa, and adult).

Despite these efforts, habitat modification and destruction remain a threat to the El Segundo blue. Coast buckwheat faces serious competition from vegetation that is not native to the coastal dunes ecosystem, including certain acacia, grass, and iceplant species. Therefore, if not actively managed, even habitat that is not threatened directly by development is still likely to become degraded and unsuitable for the El Segundo blue butterfly.

The previously known population sites for the El Segundo butterfly are off-limits to the public. Although protection and management activities have taken place with varying degrees of intensity over the past decade and are important for future recovery goals, no occupied sites have permanent protection. The butterfly remains in danger of extinction due to habitat loss and modification, limited range, small population numbers, and inadequate protection.

With the resurgence of the El Segundo blue butterfly at the two Los Angeles county beaches, however, we are hopeful that, if continuing conservation is ensured, this tiny creature can someday fully recover.

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El Segundo blue butterfly.



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Cover: The San Joaquin kit fox is one of the species expected to benefit from reintroduction into restored habitats in California's Central Valley.
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Opposite page: Biologists prepare to release Rio Grande silvery minnows at the mouth of Santa Elena Canyon in Big Bend National Park, Texas.
Aimee Roberson/FWS

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The Bulletin welcomes manuscripts on a wide range of topics related to endangered species. We are particularly interested in news about recovery actions and conservation partnerships.

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