



# El Segundo Blue Butterfly

**El Segundo Refinery maintains one of just two small habitats for this endangered species.**

## What is the El Segundo Blue Butterfly?

The El Segundo Blue Butterfly (*Euphilotes battoides allyni*) is one of the 25 insects on the Endangered Species List. The tiny butterfly, with a wing span of less than one inch, once graced 36 square miles stretching southward from what is now downtown Los Angeles. But urban development has reduced its habitat to just two small areas: sand dune remnants near the Los Angeles International Airport and two acres within Chevron's El Segundo Refinery.

## When did Chevron first discover the Blue?

Chevron first learned of the butterfly's existence in 1975, when an amateur lepidopterist (a person who studies butterflies) discovered the Blue on refinery grounds - one year before it was classified as an endangered species.

## What did Chevron do after discovering the endangered species?

An alert Chevron environmental coordinator sensed the importance of the find and notified Chevron refinery management. Soon, a six-foot chain-link fence topped with barbed wire was erected to protect the butterflies' habitat and the wild buckwheat plant, without which the Blue cannot live.

It was hoped that restricted access would insure survival of the buckwheat and, consequently, the Blue. However, it became apparent that the plants were threatened by aggressive tumbleweeds, rye grass and ice plant. The buckwheat was being choked out and not re-seeding itself and the Blue faced death by starvation.

## Who did Chevron contact to provide assistance with the Blue's habitat?

Chevron obtained the assistance of private consultant and entomologist, Dr. Richard A. Arnold, whose specialty is rare and endangered insects. With Dr. Arnold's counsel, Chevron began a program to inhibit the weed growth and stimulate the buckwheat.

Dr. Arnold collected seeds from refinery buckwheat plants in 1981 and used them to grow 600 plants. In October 1983, the two-year-old plants were transplanted to the sand dunes

to take advantage of the wet winter season. Nearly as many butterflies were counted around the new clusters as the older, bushy plants. As a result of this success, Chevron planted another 60 clusters in October 1984, and seeding now takes place on a regular basis. More than 15,000 buckwheat plants have been transplanted at the refinery since 1983.

The plant and butterfly populations of the Chevron El Segundo Refinery are being used as the basis for computer models that Dr. Arnold hopes will be helpful in aiding the Blues, as well as other endangered species. He believes that stabilizing this area can lead to re-establishing other elements of the natural biological community adapted to sand-dune life.

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Left: A female El Segundo Blue Butterfly. Right: The vivid wings of a male El Segundo Blue.

## What does the El Segundo Blue look like?

The male butterfly is characterized by brilliant purplish-blue coloring on the upper side of its wings, while females are a brown-gold color. Both have silver-gray undersides and black edgings, and a pattern of black spots with a row of orange spots.

## What is the life cycle of the El Segundo Blue?

The El Segundo Blue lives as an adult butterfly about one to two weeks. Females lay eggs on the buckwheat flowers in July and August. Larvae emerge after one week, feeding on the flower heads for a few weeks. They then crawl to the sand at the base of the buckwheat, where they transform into pupae. About ten months later a new generation of adult butterflies emerge.