



U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Species Account
BAY CHECKERSPOT BUTTERFLY
Euphydryas editha bayensis



CLASSIFICATION: Threatened
[Federal Register 52:35366](#); September 18, 1987

CRITICAL HABITAT: Revised Designation
Federal Register 72:48177; August 26, 2008
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RECOVERY PLAN: Final
[Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area](#)

DESCRIPTION

The bay checkerspot (*Euphydryas editha bayensis*) is a medium-sized butterfly in the brush-footed butterfly family (Nymphalidae). It has a wing span of little more than 2 inches. The forewings have black bands along all the veins on the upper surface, contrasting sharply with bright red, yellow and white spots.

All habitat for the bay checkerspot exists on shallow, serpentine-derived or similar soils ([see recovery plan](#)). These soils support the plants on which the caterpillars (*larvae*) feed. The primary larval host plant is dwarf plantain (*Plantago erecta*). In many years, the larvae require a second host plant when the plantain dries up. Under these conditions, the larvae move to purple owl's clover (*Castilleja densiflora* or *C. exserta*), which remains edible later in the season.

Adults emerge in early spring. They feed on nectar, mate and lay eggs during a flight season that typically lasts for four to six weeks between late February and early May.

Males typically emerge four to eight days before females. They find and mate with most females soon after they emerge. Males can mate many times, while most females mate only once. The average life span for adults is about ten days.

Eggs are typically laid in March and April. Females lay up to five egg masses of 5 to 250 eggs each, which they deposit near the base of the plantain, or, less often, the owl's clover or paintbrush. Larvae hatch from the eggs in about ten days. They grow for two weeks or more, shedding their skin three times.

Larvae that successfully reach the fourth instar enter a period of dormancy (*diapause*) that lasts through the summer. They pass this time under rocks or in cracks in the soil. The diapause ends with the onset of the next rainy season and the germination of dwarf plantain. The larvae then resume activity, feed and complete their development.

DISTRIBUTION

Historically, the Bay checkerspot occurred primarily along the spine of the San Francisco peninsula, from Twin Peaks to southern Santa Clara County and in a few pockets in Alameda and Contra Costa counties. However, habitat loss and fragmentation, extreme weather, air pollution, pesticides, vehicle strikes, fire, overgrazing, gopher control, illegal collecting, and invasion of exotic species have greatly reduced the butterfly's numbers. See the Federal Register notice for revised critical habitat (above) for more information.

THREATS

Threats include habitat loss and fragmentation, invasion of exotic/invasive plants, nitrogen deposition (including NOX and ammonia), pesticide application (including drift), illegal collecting, fire, overgrazing, and gopher control.

REFERENCES FOR ADDITIONAL INFORMATION

Thelander, C. ed. 1994. Life on the edge: a guide to California's endangered natural resources. BioSystem Books. Santa Cruz, CA. p 438-439.

U.C. Berkeley, Essig Museum of Entomology. [California's Endangered Insects](#)

Credits: [Bay checkerspot butterfly](#), John Cleckler, U.S. Fish & Wildlife Service

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Last updated August 26, 2008