

# Bay Checkerspot Butterflies

## Endearing but Endangered

Perhaps more than any other species, butterflies age gracefully, transforming during a brief but dramatic lifetime from lowly caterpillars into one of the world's most tantalizing and pleasing creatures. Butterflies dance rather than just fly; they add color to nature's palate. Like puppies, rainbows and unicorns, they comprise one of childhood's favorite things.

But butterflies perform a greater service to man and his environment than just providing ornamentation. Butterfly pollinating, feeding and reproductive activities are crucial to the survival of flowering plants and even food crops. As barometers of environmental quality, the butterfly's good health is an indicator of our good health.

The bay checkerspot butterfly is one of more than a dozen subspecies of checkerspot butterflies found in California, which is home to 225 of North America's 700 species. The bay checkerspot's wings span a little more than two inches. Its forewings feature black bands along all the veins on the upper wing surface, which contrast sharply with the bright red and yellow spots. The black banding gives it a "checkered" appearance, and it also has spots, hence the name.

Historically, the bay checkerspot played an important role in the health of the grasslands with stands of native plantain that once encircled the entire Bay Area. But just as selected plants may have depended on the butterfly, the butterfly depended on these plants. The introduction of hearty, non-native grasses has crowded out the native plantain grasslands, and the bay checkerspot's habitat has shrunk to a few core areas.

As a result, the U.S. Fish and Wildlife Service has designated the bay checkerspot to be a threatened species and identified 23,903 acres of habitat in Santa Clara and San Mateo counties as crucial for its survival. Just being designated a critical habitat, however, does not preclude activities that may be unhealthy for the butterflies. Portions of this designated habitat area already are developed with shopping centers and residences.

In these circumstances, the preservation of permanent, prime habitat like the 140 acres donated by the Metcalf Energy Center become especially important for the butterfly's survival. Tulare Hill's serpentine soils are unusually high in magnesium and low in calcium, ideal for bay checkerspot habitat. Furthermore, Tulare Hill serves as a corridor helping connect other butterfly habitats, such as Santa Teresa County Park with Coyote Ridge.

Moderate grazing, such as occurs on Tulare Hill, actually helps the bay checkerspot. Cattle reduce the faster-growing non-native grasses that otherwise would crowd out the native grasses needed by the butterflies.

Human activities that introduce nitrogen into the atmosphere, on the other hand, benefit the non-native grasses, which make more efficient use than native grasses of what constitutes an air-borne fertilizer. To mitigate this nitrogen deposition, the Metcalf Energy Center has acquired 15 acres along Coyote Ridge in addition to the adjacent hill and riparian habitat. This ridge property is included with the Tulare Hill acreage in the gift to the Land Trust of Santa Clara County. It too becomes an important part of the Metcalf Energy Center's contribution to the endearing, but endangered bay checkerspot butterfly.



**METCALF ENERGY CENTER**

*A development of the Calpine Corporation*