

Oregon Silverspot Butterfly

(*Speyeria zerene hypolyta*)

State Status: Endangered, 1993 (extirpated)

Federal Status: Threatened, 1980

Recovery Plans: Federal, 2001

The Oregon silverspot butterfly is a small, darkly marked coastal subspecies of the zerene fritillary, a widespread butterfly species in montane western North America (Figure 1). The historical range of the subspecies extends from Westport, Grays Harbor County, Washington, south to Del Norte County, California (USFWS 2001). Within its range, the butterfly is known to have been extirpated from at least 11 colonies (2 in Washington, 8 in Oregon, and 1 in California).

Currently, Oregon silverspot butterfly populations occur at six sites (5 in Oregon, 1 in California). In Washington, the population on the Long Beach Peninsula was last documented in 1991 and is presumed extirpated (WDW 1993). A population at Westport disappeared sometime prior to 1982 (D. Hays, pers. comm.).

Habitat and limiting factors. The Oregon silverspot occupies three types of grasslands: coastal salt spray meadows, stabilized dunes, and montane meadows. The butterfly's primary larval host plant is the hookedspur violet (*Viola adunca*) (Figure 2). Important adult nectar plants include common yarrow (*Achillea millefolium*), western pearly everlasting (*Anaphalis margaritacea*), Canada goldenrod (*Solidago canadensis*), and Douglas aster (*Symphotrichum subspicatus* var. *subspicatus*). Soil conditions, wind, salt spray, and fire regimes historically maintained low, open grasslands within the species' range by suppressing encroaching trees and shrubs. Invasion by exotic species, natural succession, fire suppression, and land development have resulted in loss and modification of the species' habitat and the open meadow habitat has gradually been invaded by shrubs and trees. Management is needed to maintain sufficient habitat to sustain the species, curtail vegetative succession, and reduce other threats to the species and/or its habitat. Coastal sites are also under intense pressure from development and recreation. Much habitat has been destroyed by residential and commercial development. Other factors affecting silverspots include off-road vehicles, grazing, erosion, road kill, and pesticides.

Conservation activities. In Washington, WDFW and partners are gradually restoring suitable habitat. Habitat restoration and active management to maintain grassland is ongoing on the Long Beach Peninsula and Tarlat slough on the Willapa Bay National Wildlife Refuge, although no butterflies currently occupy these sites. The 30-acre Oregon Silverspot Butterfly Recovery unit of Johns River Wildlife Area, near the west side of Loomis Lake in Pacific County, provides some of the last remaining salt-spray meadows, including hookspur violets. Approximately 3 acres were cleared of trees in 2010–2011 to expand existing meadows. In addition, meadows are annually mowed to reduce encroachment by shrubs and small trees. The U.S. Fish and Wildlife Service is currently funding the production of native seed for habitat restoration efforts in southwest Washington and northeast Oregon. 2011 was



Figure 1. An Oregon silverspot nectaring on pearly everlasting (photo by Gary Falxa, USFWS).



Figure 2. Hookedspur violet, larval host of Oregon silverspots (photo by Gary Falxa, USFWS).

the first year of direct seeding from the seed production efforts.

Augmentation and reintroduction will be essential for the recovery of this species. A captive-rearing program designed to maintain genetic variability in the population and increase the likelihood of its natural recovery was initiated in 1999 by The Nature Conservancy, Oregon Zoo, and Woodland Park Zoo. Pupated larvae are returned to Cascade Head and two other sites on the Oregon Coast, where they emerge as adult butterflies.

Partners and cooperators: U.S. Fish and Wildlife Service, Oregon Zoo, Woodland park Zoo, Institute for Applied Ecology, Xerces Society, North Coast Land Conservancy, Willapa Bay National Wildlife Refuge.

Literature Cited

- USFWS (U.S. Fish and Wildlife Service). 2001. Oregon silverspot butterfly (*Speyeria zerene hippolyta*) revised recovery plan. U.S. Fish and Wildlife Service, Portland, Oregon. 113 pp.
- WDW (Washington Department of Wildlife). 1993. Status of the Oregon silverspot butterfly (*Speyeria zerene hippolyta*) in Washington. Washington Department of Wildlife, Olympia. Washington. 30 pp.