
Working to Restore Oregon Silverspot Butterfly (*Speyeria zerene hippolyta*) Populations on the Pacific Northwest Coast: Captive Rearing and Release Combined with Habitat Restoration and Monitoring

DAVID SHEPHERDSON¹, DEBBIE PICKERING², MARY JO ANDERSEN¹, BLAIR CSUTI¹, DAVE HAYS³, ERIN SULLIVAN⁴, GREG TOFFIC⁴, AND ANNE WALKER⁵

¹Oregon Zoo, 4001 SW Canyon Road, Portland, OR 97221, U.S.A., email shepherdsond@metro.dst.or.us

²The Nature Conservancy, 821 S.E. 14th Avenue, Portland, OR 97214, U.S.A.

³Washington Department of Fish and Wildlife, MS-43200 600 Capitol Way North, Olympia, WA 98501-1091, U.S.A.

⁴Woodland Park Zoo, 5500 Phinney Avenue N., Seattle, WA 98103, U.S.A.

⁵Oregon Fish and Wildlife Office, U.S. Fish and Wildlife Service, 2600 S.E. 98th Avenue, Suite 100, Portland, OR 97266, U.S.A.

Key Words: Oregon silverspot butterfly¹, hippolyta fritillary, *Speyeria zerene hippolyta*, habitat restoration, population supplementation, augmentation, ex-situ, captive rearing, conservation, Oregon

Abstract: The Oregon silverspot butterfly (*Speyeria zerene hippolyta*) is a federally threatened species that inhabits coastal grasslands near the Pacific Ocean from Washington south to northern California. The U.S. Fish and Wildlife Service listed the Oregon silverspot butterfly as a threatened species on 2 July 1980. Habitat loss and degradation from introduced species, natural succession, off-road vehicles, grazing, and erosion currently threaten extant populations. Habitat restoration techniques include controlled burns, mowing, herbicide applications, and localized shading to remove invasive species in the butterfly's grassland habitat, combined in some cases with reseeding and transplantation of native species. The relative effectiveness of these techniques is being assessed experimentally using carefully designed treatment plots. Annual butterfly population indices are established by standardized transect counts.

In 1999, following successive years of population decline, a decision was made by The Nature Conservancy and the U.S. Fish and Wildlife Service in partnership with the Oregon Zoo, Lewis and Clark College, and Seattle's Woodland Park Zoo to initiate a captive-rearing and population supplementation program. Since 1999, 493 caterpillars and pupae have been released at the Cascade Head site on the Oregon coast. Population supplementation activities are continuing in concert with intensive habitat restoration, and management and monitoring of both butterfly and host plant (*Viola adunca*) populations.

¹NatureServe Explorer (version 4.0, July 2004) lists the common name for *Speyeria zerene hippolyta* as hippolyta fritillary.