

SPECIES FACT SHEET

Common Name: Silver-bordered fritillary

Scientific Name: *Boloria selene*

Phylum: Mandibulata

Class: Insecta

Order: Lepidoptera

Family: Nymphalidae

Technical Description:

The eggs are shaped like elongated igloos and are green in color (Pyle 2002). Larvae are blackish with yellowish spines and black spines extending over the head (Allen et al. 2005). The chrysalis is tan and adorned with metallic silver spots and thornlike projections. Adults are 1 3/8 – 2 7/8 inches (35 – 47 mm) in length (Opler and Wright 1999). According to Pyle (2002), wings are bright orange above with black marks occurring in a sparse pattern. Below, the forewings are orange, and the chestnut-colored hindwings have four rows of metallic silver spots radiating out from the base to margin; black dots and tan patches occur between these spots. The central silver spot is elongated.

Life History:

According to Pyle (2002), adults lay eggs on or near violets, usually marsh violet (*Viola palustris*) and bog violet (*V. nephrophylla*). Butterfly adults feed on nectar from species in the mint and *Verbena* genera, as well as various composites including species from the aster (such as goldenrod) and sunflower (black-eyed susan) families. Between early June to mid-August populations in the vicinity of Big Summit Prairie, Crook County and in central Grant County fly in a single annual brood (Warren 2005). Two annual broods are likely to occur in Baker Co. from mid- and late May. Pyle observed depredation by ambush bugs (*Phymata*) in 2002.

Range, Distribution, and Abundance:

This species of butterfly can be found throughout much of the Northern Hemisphere, south in the Appalachians, Midwest, Rockies, and Cascades. It is also not uncommon to find them in S.E. British Columbia. *Boloria selene* is known possibly from twenty sites in Washington in the Pend Oreille, Okanogan, Columbia and Yakima drainages (Pyle 2002). In Oregon, these butterflies have been found in Big Summit Prairie, Crook Co. the Strawberry Mountains, Grant Co., and in the Southern Wallow Range north of Halfway, and Baker Co. (Christensen 1981; Pyle 2002; Warren 2005). Occurrences of these butterflies have been documented in the Prineville District BLM and in the Malheur and Wallowa Whitman National forests.

Habitat Associations:

Boloria selene can be found in bogs, open riparian areas, and in marshes containing a large amount of *Salix* and larval food plants (Warren 2005). Sunny wet habitats encourage adult flight.

Threats:

Habitat succession and drying have put many populations under stress (Pyle 2002).

Conservation Considerations:

Habitats known to contain these butterflies should be managed to maintain hydrology, and the continued existence of violets by monitoring willow succession (Scheuring 2006). Vegetation treatments to reduce conifer encroachment may be needed at some sites. The use of pesticides which may negatively impact this butterfly or the northern bog violet should be avoided. Additional efforts to locate sites occupied by *B. selene* may also be helpful (Larsen et al. 1995).

Conservation Status:

Boloria selene is globally ranked G5 -- widespread, abundant and secure throughout its range (Oregon Natural Heritage Information Center 2007). In Oregon this species of butterfly is ranked S2 -- imperiled. Populations have recently been put under stress due to habitat drying and succession.

ATTACHMENTS:

- (1) Photo of *Boloria selene*
- (2) Information Sources

Preparer: Heather Andrews

Date Completed: 6/13/10

Reviewed and edited by Rob Huff, Conservation Planning Coordinator, FS/BLM and Robin Vora, Deschutes and Ochoco National Forests, September 2010.

Update on adult nectar sources by Rob Huff, 10/5/2015

ATTACHMENT 1: Photo of *Boloria selene* (Photo by Jeff Pippen)



ATTACHMENT 2: Information Sources

Allen, T.J., J.P. Brock, et al. 2005. Caterpillars in the Field and Garden, a Field Guide to the Butterfly Caterpillars of North America. Oxford University Press, Oxford, England. 232 pp.

Christensen, J.R. 1981. A Field Guide to the Butterflies of the Pacific Northwest. A Northwest Naturalist Book. The University Press of Idaho, Moscow, Idaho. 116 pp.

Larsen, E.M., E. Rodrick, et al. 1995. Management Recommendations for Washington's Priority Species, Volume I. 42-46 pp.

Opler, P. and A.B. Wright. 1999. A Field Guide to Western Butterflies. Houghton Mifflin Company, Boston, Massachusetts. 540 pp.

Oregon Natural Heritage Information Center. 2007. Rare, Threatened and Endangered Species of Oregon. Oregon Natural Heritage Information Center Institute for Natural Resources. Oregon State University, Portland, OR. Available Online (<http://oregonstate.edu/ornhic/publications.html>). 100 pp.

Pyle, R.M. 2002. The Butterflies of Cascadia, A Field Guide to All the Species of Washington, Oregon, and Surrounding Territories. Seattle Audobon Society, Seattle, Washington. 420 pp.

Scheuering, E. 2006. Silver-bordered fritillary (*Boloria selene atrocotalis*) species fact sheet. Edit update by R. Huff in 2007. Interagency Special Status/ Sensitive Species Program (ISSSSP) webpage. USDA Forest Service/ USDI Bureau of Land Management, Oregon and Washington. Available Online (<http://www.fs.fed.us/r6/sfpnw/issssp/species-index/fauna-invertebrates.shtml>).

Warren, A.D. 2005. Lepidoptera of North America 6, Butterflies of Oregon: Their Taxonomy, Distribution, and Biology. Contributions of the C.P. Gillette Museum of Arthropod Diversity. Colorado State University, Fort Collins, Colorado. 405 pp.