

Benton County Special Management Species: Fender's blue butterfly

FENDER'S BLUE BUTTERFLY (*Icaricia icarioides fenderi*) is native to the Willamette Valley. It was first described in 1931, and shortly after was thought to be extinct as of the 1940's but was rediscovered in the 1980's.

The Willamette Valley was historically grassy prairie dominated by oak trees. When human development increased, prairieland shrunk which endangered many species. Less than one percent of the original prairie habitat that once existed is still present today!¹

Fender's blue butterfly is about one-inch wide. Females have tan wings and males have blue wings. Both sexes have striped black and white antennae and a white fringe around the outside of their wings.

Fender's blue is dependent on specific plants to complete its life cycle. Kincaid's lupine (*Lupinus sulphureous var. kincaidii*) is the key host plant for Fender's blue butterflies, and much of a butterfly's life cycle takes place around a single plant. Spur and sickle-keeled lupine can also act as host plants.

Adult butterflies lay their eggs on the leaves of Kincaid's lupine in May-June and the larvae



Photo: C Schultz, USFWS

(caterpillars) hatch a few weeks later. They feed on the plant for a few more weeks before going dormant in the soil around the plant until the following spring. After larvae emerge, they feed on the young leaves of the plant, and build a chrysalis. They emerge as adult butterflies in early May.

Adults feed on nectar of many native species of plants. Fender's blue butterflies only travel up to 1.2 miles between Kincaid's lupine patches to reproduce. They also travel up to 0.3 miles from their native lupine patch to forage for nectar.

TINY HELPERS

Many species of blue butterflies, including Fender's, rely on ants to help caterpillars survive. A caterpillar in danger might signal for help using sound, smell, or both. Ants will then protect the caterpillar by swarming around it, standing on it, or even carrying it underground into ant tunnels. The caterpillar then says 'thank you' to the ants by producing a sugary substance which they can eat.² Research has also shown that ant-tending activity increases after fires, showing that natural disturbance can be very important for these types of prairie species.

¹ Black, S. H., and D. M. Vaughan. 2005. Species Profile: *Icaricia icarioides fenderi*. In Shepherd, M. D., D. M. Vaughan, and S. H. Black (Eds). Red List of Pollinator Insects of North America. CD-ROM Version 1 (May 2005). Portland, OR: The Xerces Society for Invertebrate Conservation.

² Plank 2020. Prairie Appreciation Day: Species interactions in a prairie butterfly: Puget blues, ants and nectar plants. Accessed online 4 April 2022. <https://www.prairieappreciationday.org/2020/05/27/species-interactions-in-a-prairie-butterfly-puget-blues-ants-and-nectar-plants/>

³ Warchola et al. 2015. Fire increases ant-tending and survival of the Fender's blue butterfly larvae. *J. of Insect Conservation* 19:1063-1075.