

USACE Natural Resource Management

Insects



Fender's Blue and Karner Blue Butterflies

Fender's Blue Butterfly (*Icaricia icarioides fenderi*): This is a smaller butterfly with an average wingspan of just 1 inch. The upper wings of males are brilliant blue. They have a wing margin that is black and a white fringe on scales. The upper wings of females are brown with white fringe scales. For both sexes, the under wings are a cream-tan color with black spots that are encircled with a white border or halo. The life cycle of a Fender's blue butterfly begins in late spring or early summer when an adult female deposits an egg on the underside of a Kincaid's lupine leaflet. When the egg hatches, the larva feeds on lupine leaflets. (USFWS)

Status: *Endangered, listed 2000*

NatureServe: *Critically Imperiled Subspecies*

Karner Blue Butterfly (*Lycaeides melissa samuelis*): The Karner Blue Butterfly (KBB) is a small butterfly with a wingspan of about 1 inch. Males and females differ in appearance. The dorsal surface of the male's wings are silvery or dark blue with narrow black margins. Female wings, however, are grayish brown, particularly on the outer portions of the wings to blue on the topside with irregular bands of orange crescents within the black border. The underside of both sexes is gray with a continuous band of orange crescents along the edges of both wings and with scattered black spots circled in white. (USFWS)

Status: *Endangered listed, 1992*

NatureServe: *Critically Imperiled*

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Subspecies

G1
Critically
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Family: *Lycaenidae* is the second largest family of butterflies with over 6,000 species worldwide. About 100 species are found in North America. These butterflies are known as the Gossamer-Winged butterflies because their wings, like the fabric, appear delicate and shimmery. (ISU.EDU)

Photos Left to Right:
Fender's Blue (USFWS), Fender's Blue (Wes Messinger, USACE), Karner Blue (The Nature Conservancy), & Karner Blue (USFWS)

Management and Protection:

- The Fender's Blue butterfly is a subspecies of Boisduval's blue butterfly which is endemic to the Willamette Valley in western Oregon. It was thought that this subspecies had gone extinct in 1937, but the Fender's blue was rediscovered in 1989. Sites occupied by Fender's blue butterfly are located almost exclusively on the western side of the valley, within 21 miles of the Willamette River. (USFWS)
- The primary reason for the Fender's blue listing was the loss of habitat stemming from urbanization, agriculture, encroachment of shrubs and trees into prairie habitats due to fire suppression, invasion of nonnative plants and so forth. (USFWS)
- The Fender's Blue was proposed for downlisting to Threatened in June of 2021.
- The Karner blue butterfly inhabits oak savannas and pine barren ecosystems from eastern Minnesota east to the Atlantic seaboard. Historically it was found in a continuous band throughout its range, however wild blue lupine (*Lupinus perennis*) is the only food plant for the Karner caterpillar. Thus, Karners are now found along the northern band of the lupine range. (USFWS)
 - Habitat throughout the range of the Karner blue butterfly has been lost as a result of land development and lack of natural disturbance, such as wildfire and grazing by large mammals. (USFWS)



USACE ROLE: On June 20, 2014, a Presidential Memorandum titled, "Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators" directed agencies to develop plans to enhance pollinator habitat. Under section 3, subsection K of the Memorandum, "The Army Corps of Engineers shall incorporate conservation practices for pollinator habitat improvement on the 12 million acres of lands and waters at resource development projects across the country, as appropriate." In response to the Memorandum, the USACE set out to work with others to promote education, awareness, and management practices that provide for improved bee and pollinator populations and habitat. Efforts were made to identify existing policy and/or guidance and modify it for pollinator health. Additionally, USACE strived to implement conservation and best management practices for pollinator health.

What is USACE NRM Doing: Within the Willamette River basin, which contains the entire range of Fender's blue butterfly, the USACE operates 13 dams. When the Fender's blue was discovered on USACE lands in 1998 and then listed as Endangered in 2000, the Willamette Valley Projects' staff began to incorporate land management practices that would benefit the species. Actions taken include the restoration of prairie habitat by planting the butterfly's larval host plant, Kincaid's lupine and the control of invasive species. Additionally, steps were taken to improve survey and monitoring efforts which resulted in new populations of Fender's Blue butterfly being discovered.

In 2011 USACE surveys estimated a population of just 1,687 butterflies. By 2012, USACE estimates more than doubled to 3,769 spanning across 11 sites near the reservoir west of Eugene, Oregon. Recovery of the Fender's blue butterfly and other prairie species of Western Oregon and Southwest Washington is a collaborative effort between the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, U.S. Bureau of Land Management, U.S. Geological Survey, Oregon and Washington state agencies, and a variety of non-governmental organizations.



This fact sheet has been prepared as an unofficial publication of the U.S. Army Corps of Engineers (USACE). This online publication is produced to provide its readers information about best management practices related to special status species. Editorial views and opinions expressed are not necessarily those of the Department of the Army. Mention of specific vendors does not constitute endorsement by the Department of the Army or any element thereof.

