

***Lupinus sulphureus* Dougl.
ssp. *kincaidii* (Smith) Hitchc.**

Kincaid's sulfur lupine
Fabaceae (Pea Family)

Status: State Endangered, USFWS Threatened
Rank: G5T2S1

General Description: Perennial with a branched crown, the usually numerous stems mostly simple, 16-32 inches tall, strigillose to somewhat whitish- or brownish-sericeous; basal leaves usually present and persistent until after flowering, the lowermost petioles 3-5 times as long as the blades, the upper cauline leaves with petioles sometimes shorter than the blades; leaflets 9-11, rather narrowly oblanceolate, usually acutish, 1 to 1½ inches long, glabrous above; racemes short-pedunculate, 4 to 7 inches long; flowers rather numerous but not closely crowded, scattered to imperfectly verticillate, ⅜ to ½ inch long, yellowish-cream colored, often with shades of blue on the keel; pedicels ⅛ to ⅜ inch long; calyx silky, often noticeably asymmetrical but not truly saccate or spurred, the upper lip bidentate, the lower entire; banner not much reflexed from the wings and keel, glabrous or very sparsely hairy on the back; wings glabrous; keel usually ciliate most of the length but sometimes glabrous; pods ¾ to 1⅛ inch long; seeds 4-5, pinkish-brown.

Identification Tips: With its low growing habit and unbranched inflorescence, *Lupinus sulphureus* ssp. *kincaidii* is easily distinguished from other members of the genus which occur in the same range.

Phenology: Flowers April through June.

Range: Regional endemic: Douglas County, OR north to Lewis County, WA.

Habitat: Native upland prairies as well as open oak woodlands. Soils are mesic to slightly xeric.

Ecology: The prairie habitat occupied by *Lupinus sulphureus* ssp. *kincaidii* was historically maintained by periodic disturbance; without disturbance, trees invade the prairies. *Lupinus sulphureus* ssp. *kincaidii* is the primary host plant of the endangered Fender's blue butterfly (*Icaricia icarioides fenderi*). Adult butterflies lay their eggs on the lupine "host" plants during May

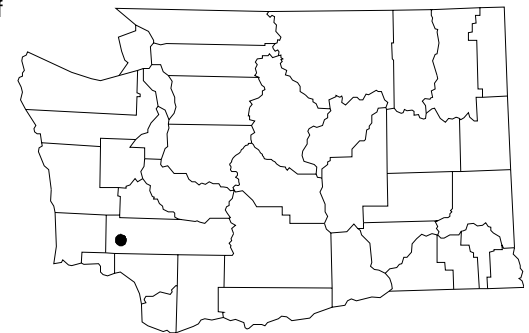
Lupinus sulphureus* ssp. *kincaidii

Kincaid's sulpher lupine



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Known distribution of
Lupinus sulphureus
ssp. *kincaidii* in
Washington



● Current (1980+)
○ Historic (older than 1980)

Lupinus sulphureus* ssp. *kincaidii

Kincaid's sulphur lupine



Photo by Mark Sheehan



Photo by WNHP

Lupinus sulphureus* ssp. *kincaidii

Kincaid's sulphur lupine

Ecology (continued): and June. Newly hatched caterpillars feed and develop on the host plant until they transform into adult butterflies the following spring (USFWS 1998a).

State Status Comments: This species is a rare, regional endemic. It is currently only known from 2 locations in Washington less than a mile apart.

Inventory Needs: Suitable habitats throughout southwestern Washington need to be systematically inventoried for this taxon.

Threats and Management Concerns: Habitat loss due to agricultural activities, urban development, roadside maintenance, and herbicide application is the greatest threat to the taxon.

References:

Hitchcock, C. L., A. Cronquist, M. Ownbey, and J.W. Thompson. 1961. *Vascular Plants of the Pacific Northwest, Part 3: Saxifragaceae to Ericaceae*. University of Washington Press, Seattle. 614 pp.

Liston, A., K. St. Hilaire, and M.V. Wilson. 1995. Genetic diversity in populations of Kincaid's lupine, host plant of Fender's blue butterfly. *Madrono* 42(3): 309-322.

U.S. Fish and Wildlife Service. 1998a. "Federal protection proposed for butterfly and two plants from remnant native prairie of Oregon's Willamette Valley". U.S. Fish and Wildlife Service Region 1, News Release 98-08 (January 27, 1998).

U.S. Fish and Wildlife Service. 1998b. "Endangered and threatened wildlife and plants; proposed endangered status for *Erigeron decumbens* var. *decumbens* (Willamette daisy) and Fender's blue butterfly (*Icaricia icarioides fenderi*) and proposed threatened status for *Lupinus sulphureus* ssp. *kincaidii* (Kincaid's lupine)." Federal Register, Volume 63, No. 17 (January 27, 1998).