

## Cusick's lupine (*Lupinus lepidus* var. *cusickii*)



### ENDANGERED



Flowers (left), habit (center), and habitat (right) of Cusick's lupine. Photos by Robert Meinke (left and right) and Rebecca Currin (center). If downloading images from this website, please credit the photographer.

### Family

Fabaceae

### Taxonomic notes

Synonyms: *Lupinus cusickii*, *L. aridus* var. *cusickii*, *L. lepidus* ssp. *cusickii*

The genus *Lupinus* poses many taxonomic challenges due to the extremely variable nature of the species and intergradations between recognized taxa, a situation that in many instances is likely the result of or complicated by free interbreeding that has obscured species boundaries. Lupine populations designated by the epithet *cusickii* have been treated in a myriad of ways: as a species, as a variety of *L. aridus*, and as a subspecies, variety, or synonym of *L. lepidus*.

### Plant description

Cusick's lupine is an erect, caespitose perennial 2-11 cm tall. Stems are sparingly branched at the base, with upper stem internodes 1-3 cm long. Upper stem nodes often bear a lateral branch terminating in an inflorescence. Leaves are mainly basal, the petioles 2-6 cm long, the 5-9 oblanceolate leaflets abundantly hairy on both surfaces, 0.7-1.9 cm long by 0.3-0.7 cm wide. Peduncles are 1-6 cm long, subequal to or shorter than the racemes. Racemes are 1-6 cm long, and held at about the height of the vegetative crown when mature. Flowers are crowded and whorled, borne on slender pedicels 0.4-0.5 cm long at anthesis. The calyx is hairy and not saccate or spurred. The corolla is bluish, the banner usually lighter in color, glabrous, and 0.4-0.6 cm wide.

### Distinguishing characteristics

At least four other varieties of *Lupinus lepidus* occur in eastern Oregon: var. *sellulus*, var. *utahensis*, var. *lobbii*, and var. *aridus*. Cusick's lupine is distinguished by its combination of erect growth, short stature (up to 11 cm tall), elongated stem internodes (1-3 cm), low raceme position (mature racemes partly or completely obscured by foliage), long and slender flower pedicels (0.4-0.5 cm long at anthesis), and wide banner (0.4-0.6 cm).

**When to survey**

Surveys should be completed in July when the species flowers.

**Habitat**

Cusick's lupine occurs on eroding hillsides of volcanic ash on moderate to extreme slopes at elevations ranging from 1170-1280 m (2850-4200 ft).

Although the immediate areas occupied by Cusick's lupine are sparsely vegetated, the species is usually associated with occasional junipers and low-growing perennials including *Eriogonum* spp., *Allium* spp., and *Lomatium* spp. Associated annuals include *Mimulus nanus*, *Phacelia lutea*, *Calyptidium umbellatum*, and *Camissonia* sp. Other occasional associates include *Artemisia tridentata*, *Astragalus* sp., *Phlox* sp., and *Silene* sp.

**Range**

Cusick's lupine appears to be an extremely localized endemic restricted to the area southeast of the Blue Mountain foothills near the town of Unity in Baker County, Oregon. Only five small populations are known to exist.

**Oregon counties**

Baker (possibly Grant, Harney, Malheur, Umatilla)

**Federal status**

Species of Concern

**Threats**

Little is known about Cusick's lupine or the factors influencing its survival. Potential threats to the species include off-road vehicle use, grazing by livestock and native herbivores, and small population sizes, which may lead to low genetic viability and increased likelihood of extirpation due to stochastic events. Research indicates that annual climatic variation may significantly influence population density and plant performance in Cusick's lupine, suggesting that a series of unfavorable years could pose a serious threat to survival of the species.

**Did you know?**

Botanist William Cusick collected the type specimen of Cusick's lupine in 1886 on a hillside above the upper Burnt River, presumably near the town of Unity, Oregon. Watson described the species the following year, naming it in honor of its discoverer.

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