

## Golden paintbrush (*Castilleja levisecta*)



### ENDANGERED



Inflorescences (left), habit (center), and habitat (right) of golden paintbrush. Photos by Thomas Kaye. If downloading images from this website, please credit the photographer.

### Family

Orobanchaceae

### Taxonomic notes

The genus *Castilleja* was formerly included within the Scrophulariaceae.

### Plant description

Golden paintbrush is a perennial with many stems growing from a short branching base. Stems are usually simple, erect, or slightly decumbent at the base, 10-50 cm tall, and softly viscid-villous. Leaves are viscid-villous to hispidulous, 2-4 cm long, closely ascending, the lower leaves linear-lanceolate and entire, the upper leaves oblong-ovate or -obovate with 1-4 pairs of shallow lobes toward the apex. The inflorescences are straight and erect, with flowers remote and mostly hidden by overlapping bracts. Bracts are golden yellow, sometimes tinged with reddish-orange, about equal to the width of the upper leaves, oblong, obtuse, and usually lobed at the apex. The calyx is 1.5-1.8 cm long, externally pubescent, deeply and subequally cleft above and below, the primary lobes again deeply 2-lobed with linear obtuse segments. The corolla is 2.0-2.3 cm long, the slender galea 0.6-0.9 cm long, puberulent, and about 3-4 times longer than the unpouched lower lip.

### Distinguishing characteristics

The bright golden to yellow floral bracts of golden paintbrush distinguish it from all other *Castilleja* species that occur within its range.

### When to survey

Surveys for golden paintbrush should be completed from late April to early June when the species is flowering.

### Habitat

Extant populations of golden paintbrush occur in sandy, well-drained soils of glacial origin, in areas influenced by sea spray. The species inhabits flat grasslands, mounded prairies, and steep, grassy bluffs.

In the Willamette Valley of Oregon, golden paintbrush is believed to have historically occurred in the well-drained soils of upland prairies that were maintained by fires set by Native Americans. It also potentially inhabited gravel outwashes of the Columbia and Santiam Rivers.

Associated species include *Festuca idahoensis*, *F. rubra*, *Camassia quamash*, *Holcus lanatus*, *Achillea millefolium*, *Pteridium aquilinum*, *Vicia* spp., and *Bromus* spp.

### **Range**

Golden paintbrush historically ranged from the Willamette Valley of Oregon north to British Columbia. The species is now believed to be extirpated in Oregon, its current range restricted to 11 known extant occurrences in the Puget Trough of Washington and British Columbia.

### **Oregon counties**

Benton\*, Lane\*, Linn, Marion, Multnomah

\*Introduced populations only. ODA does not require surveys in counties where the only known occurrence of the species in that county is an introduced population.

### **Federal status**

Threatened

### **Threats**

Habitat loss due to agricultural, residential, and commercial development is one of the primary threats facing golden paintbrush. Habitat degradation caused by encroachment of native and non-native woody shrubs that produce shade and compete with golden paintbrush is also a serious threat. Major damage due to herbivory by deer, rabbits, and voles has been observed in golden paintbrush populations; herbivory by insects has also been observed and poses a minor threat to the species. Ill-timed fires at critical points in the growing season and soil erosion pose documented threats to this species, and with its showy inflorescences, golden paintbrush is vulnerable to over-collection at public sites with high recreational use.

### **Conservation planning**

A U.S. Fish and Wildlife Service [Recovery Plan](#) (pdf document, 4.03 MB) was released for golden paintbrush in 2000.

A [5-Year Review](#) (pdf document, 265 kB) for golden paintbrush was completed in 2007 by U.S. Fish and Wildlife Service.

A U.S. Fish and Wildlife Service [Recovery Plan for prairie species of western Oregon and southwestern Washington](#) (pdf document, 9.63 MB) was released in 2010 and addresses conservation needs of golden paintbrush.

### **Did you know?**

Natural occurrences of golden paintbrush have not been sighted in Oregon since 1938, although recent efforts have been made to establish new populations of the species in the Willamette Valley.

## References

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