

Umpqua mariposa lily (*Calochortus umpquaensis*)



ENDANGERED



Flower (left), habit (center), and habitat (right) of Umpqua mariposa lily. Photos by Nancy Fredricks (left and center) and ODA staff (right). If downloading images from this website, please credit the photographer.

Family

Liliaceae

Plant description

Umpqua mariposa lily (*Calochortus umpquaensis*) is a bulbous perennial, 2-3 dm tall with a basal leaf averaging 32 cm in length. Like the closely related *C. howellii*, *C. umpquaensis* has hairs in parallel rows along the veins on the underside of the leaf. The one to several broadly cup-shaped flowers are 5.3-10.5 cm in diameter, hairy, and white to cream colored with a dark purple or black petal spot. Capsules are between 3 and 5.4 cm long and become pendant shortly after the flowers senesce.

Distinguishing characteristics

Umpqua mariposa lily is most closely related to *Calochortus howellii* (Howell's mariposa lily); both species are endemic to serpentine derived soils, and both have showy white flowers. However, Umpqua mariposa lily has a dark purple petal spot on petals averaging 3.5 cm in length, and pendant capsules averaging 4 cm in length, whereas Howell's mariposa lily has a lime green petal spot covered with dark hairs on 2.7 cm-long petals, and erect capsules averaging 2 cm in length. Additionally, the ranges of these two species do not generally overlap, as Howell's mariposa lily is restricted to the Illinois River Valley, and *C. umpquaensis* has not been reported from this area.

Calochortus umpquaensis is also easily distinguished from the common *Calochortus uniflorus* (meadow mariposa lily), which has pink flowers, distinctive blue pollen, few or no hairs on the petals, and often produces bulblets at the base of the leaf. *Calochortus tolmiei* (cat's ear mariposa lily), another common mariposa lily, typically has white or yellowish white petals, which can be purple-tinged and are noticeably smaller (1.2- 2.5 cm) than those of *C. umpquaensis*. *Calochortus coxii* (crinite mariposa lily), another Douglas County endemic, has pale pink to white flowers with yellow hairs above pink petal spots. Although occupying the same range, this species is not known to co-occur in sites with *C. umpquaensis*.

When to survey

Due to potential difficulties in identifying Umpqua mariposa lily, surveys should be conducted when plants are in flower (late May to mid June).

Habitat

The Umpqua mariposa lily is largely restricted to serpentine-derived soils in the Umpqua River drainage, although it has been reported from isolated areas of serpentine substrate in Josephine and Jackson counties. Preferred habitat includes the ecotone between open, grassy hillsides and Jeffrey pine woodlands, although some populations are located within forested areas. Associated species include *Calocedrus decurrens*, *Danthonia californica*, and *Festuca idahoensis*.

Range

Umpqua mariposa lily, as the name implies, is largely restricted to the Umpqua River drainage in Douglas County. Originally discovered near Glide, this species has since been reported from approximately 15 sites, several of which support thousands of individuals. Two populations south of the Douglas County grouping are located in northern Jackson and Josephine counties, and future surveys may discover additional populations.

Oregon counties

Douglas, Jackson, Josephine

Federal status

Species of Concern

Threats

Habitat damage due to logging potentially threatens this species. Additionally, competition from weedy non-native species occurs in some populations, and the beautiful nature of this bulbaceous plant puts it at risk from bulb collectors.

Conservation planning

A conservation agreement signed by Bureau of Land Management (BLM), U.S. Forest Service (USFS), and U.S. Fish and Wildlife Service (USFWS) in 1996 reduces logging threats for Umpqua mariposa lily populations located on public land.

Did you know?

Umpqua mariposa lily was discovered and described by Oregon State University student Nancy Fredricks in 1989.

References

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