

Plant Propagation Protocol for *Calochortus umpquaensis*


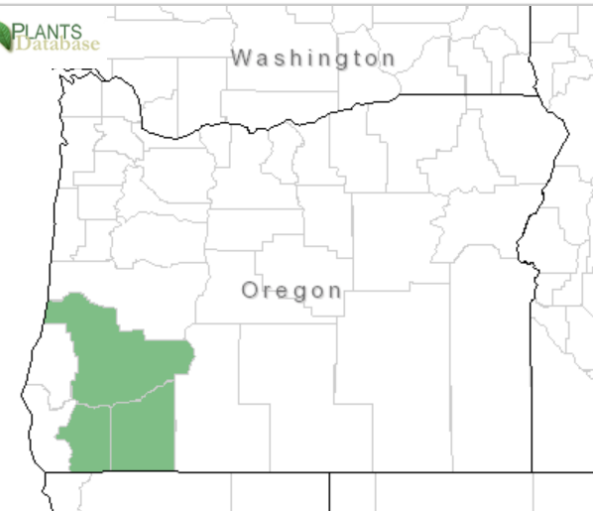
ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols/CAUM5>



Photo: Oregon Department of Agriculture

TAXONOMY	
Plant Family	
Scientific Name	Liliaceae
Common Name	Forb/herb
Species Scientific Name	
Scientific Name	<i>Calochortus umpquaensis</i> Fredricks
Varieties	
Sub-species	<i>C. umpquaensis</i> Fredricks ssp. <i>confertus</i> Callahan <i>C. umpquaensis</i> Fredericks ssp. <i>flavicomus</i> Callahan
Cultivar	
Common Synonym(s)	
Common Name(s)	Umpqua mariposa lily
Species Code (as per USDA Plants database)	CAUM5
GENERAL INFORMATION	

Geographical range	  <p>Photos from USDA Plants Database</p>
Ecological distribution	Native to Oregon, Umpqua mariposa lily grows in serpentine-derived soils. Prefers an open, grassy hillside or the Jeffery pine woodlands in Oregon. (8) (3)
Climate and elevation range	300-500 m elevation range located in southwestern Oregon. Found along the Umpqua river, they grow in open forest areas on north facing banks that can be steep or rocky. (5)(3)
Local habitat and abundance	Restricted to the Umpqua river drainage, the lily has been found at about 15 sites. These sites can support thousands of Umpqua mariposa lilies. Associated species include <i>Festuca idahoensis</i> , <i>Calocedrus decurrens</i> , <i>Danthonia californica</i> , and <i>Pinus jefferyi</i> . (3)(8)
Plant strategy type / successional stage	Preferring forest edges, the lily can withstand the high heavy metal concentration of serpentine soils that typically lack essential nutrients for growth. The plant grows in well drained soils and is able to tolerate moisture during dormancy.(3)(6)(8)
Plant characteristics	Umpqua mariposa lily is best identified when the plant is flowering. Blooming from May – June, the plant produces white flowers with blackish purple tones. White hairs also grow on the petals, near the base.

	Parallel rows of hairs also grow on the underside of its leaves. It is a perennial herb that can grow to about a foot tall. The lily also has 4cm pendant capsules (3)(5)(8)
PROPAGATION DETAILS	
Ecotype	N/A
Propagation Goal	Plant
Propagation Method	Seed
Product Type	Container (plug)
Stock Type	N/A
Time to Grow	N/A
Target Specifications	Tight root plug in container
Propagule Collection Instructions	Survey to identify population of the lily should be done in early summer. Seed collection of the pendant capsules should be done in mid- to late-July. (6)
Propagule Processing/Propagule Characteristics	N/A
Pre-Planting Propagule Treatments	N/A
Growing Area Preparation / Annual Practices for Perennial Crops	Well drained soils should be used for successful cultivation (5)
Establishment Phase Details	N/A
Length of Establishment Phase	N/A
Active Growth Phase	N/A
Length of Active Growth Phase	N/A
Hardening Phase	N/A
Length of Hardening Phase	N/A
Harvesting, Storage and Shipping	N/A
Length of Storage	N/A
Guidelines for Outplanting / Performance on Typical Sites	N/A
Other Comments	Discovered in 1989, there is little propagation information about Umpqua mariposa lily. To fill this data gap a nursery should conduct an experiment after collecting its seeds. The plant is endangered in Oregon and such an activity could help with its survival.
INFORMATION SOURCES	

References	<ol style="list-style-type: none"> 1. Calochortus umpquaensis Fredricks, Syst Bot. (n.d.) Flora of North America. Retrieved 27 May 2020, from http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=242101501 2. Callahan, F. (2015). Two New Subspecies of Calochortus umpquaensis (Liliaceae) from Southwestern Oregon: C. umpquaensis Fredricks ssp. confertus Callahan and C. umpquaensis Fredericks ssp. flavicomus Callahan. Phytologia. Retrieved 27 May 2020, from http://www.phytologia.org/uploads/2/3/4/2/23422706/97_4_275-281callahan_new_2_ssp_confert_and_flav.pdf 3. Holmes, R. (n.d.). Plant of the Week: Umpqua mariposa lily (Calochortus umpquaensis Fredricks). U.S. Forest Service. Retrieved 27 May 2020, from https://www.fs.fed.us/wildflowers/plant-of-the-week/calochortus_umpquaensis.shtml 4. ITIS Standard Report Page: Calochortus umpquaensis. (2020). Retrieved 27 May 2020, from https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topi c=TSN& search_value=501150#null 5. Pacific Bulb Society Calochortus Species Seven. (2019). Pacific Bulb Society. Retrieved 27 May 2020, from https://www.pacificbulbsociety.org/pbswiki 6. Plant Database: Calochortus umpquaensis. (2019). Ladu Bird Johnson Wildflower Center. Retrieved 27 May 2020, from https://www.wildflower.org/plants/result.php?id_plant=CAUM5 7. Plants Profile for Calochortus umpquaensis (Umpqua mariposa lily). (2020). Retrieved 27 May 2020, from https://plants.usda.gov/core/profile?symbol=CAUM5
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	<p>8. Umpqua mariposa lily (<i>Calochortus umpquaensis</i>) Profile. (n.d.). Oregon Department of Agriculture. Retrieved 27 May 2020, from https://www.oregon.gov/oda/shared/Documents/Publications/PlantConservation/CalochortusUmpquaensisProfile.pdf</p> <p>9. Umpqua mariposa lily - Encyclopedia of Life . (2020). Retrieved 27 May 2020, from https://eol.org/pages/1086630</p> <p>10. Umpqua Mariposa Lily – Oregon Conservation Strategy. (n.d.). Oregon Conservation Strategy. Retrieved 27 May 2020, from https://www.oregonconservationstrategy.org/strategy-species/umpqua-mariposa-lily/</p>
Other Sources Consulted	
Protocol Author	Kaitlin Allen
Date Protocol Created or Updated	05/27/2020