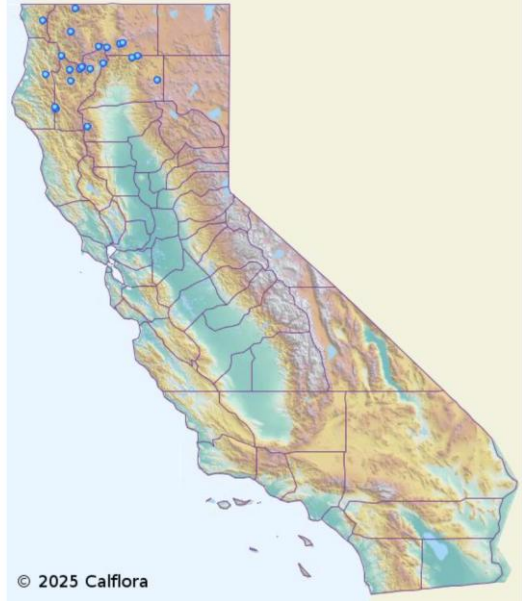


Plant Propagation Protocol for *Silene grayi* (Gray's Champion)

ESRM 412 – Native Plant Production

URL: [https://courses.washington.edu/esrm412/protocols/\[2025\]/\[SIGR3\]](https://courses.washington.edu/esrm412/protocols/[2025]/[SIGR3])



TAXONOMY¹	
Plant Family	Caryophyllaceae ¹
Scientific Name	<i>Silene grayi</i> S. Watson ¹
Common Name	Gray's Champion; Gray's Catchfly ^{1 2}
Species Scientific Name	<i>Silene grayi</i> S. Watson ¹
Scientific Name	<i>Silene grayi</i> S. Watson ¹
Varieties	None recognized in the USDA Plants database
Sub-species	None recognized in the USDA Plants database
Cultivar	None
Common Synonym(s)	None known
Common Name(s)	Gray's Champion; Gray's Catchfly; Maui Catchfly ^{1 2}
Species Code (as per USDA Plants database)	SIGR3 ¹
GENERAL INFORMATION	
Geographical range	Native to the mountains of Oregon and northern California. Native to the Klamath Mountains. ²
Ecological distribution	Commonly found in mountain forests and alpine talus slopes ²
Climate and elevation range	Found in elevations between 1,200 and 2,900 meters. ²
Local habitat and abundance	Commonly associated with oceanspray, Gray's bedstraw, and littleleaf silverback. ²
Plant strategy type / successional stage	Stress-tolerant perennial adapted to high-elevation, rocky environments. ^{2 3}
Plant characteristics	Growth form: Perennial herb. Stem: Erect stems up to 20-30 cm long from a woody caudex.

	<p>Leaves: Basal leaves. Smaller narrower leaves farther up the stems.</p> <p>Flowers: Each flower has a tubular calyx of fused sepals lined with ten green or red veins. Open at the tip, revealing five pink or purple petals. ⁴</p>
PROPAGATION DETAILS	
Ecotype	Wind-collected seed, mountain slopes around elevations between 1,100 and 2,770 meters. ¹
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container
Stock Type	10 cubic inch containers
Time to Grow	6-9 months from seeding to outplanting ⁴
Target Specifications	Well rooted plugs, approximately 10-15cm tall, with multiple leaves and established roots. ⁴
Propagule Collection Instructions	<p>Collect mature seeds in late summer to early fall (August-September) when capsules are dry.</p> <p>Shake or cut the seed heads into small paper bags. ⁴</p>
Propagule Processing/Propagule Characteristics	<p>The seeds are small, dark brown.</p> <p>Clean seeds by removing debris.</p>
Pre-Planting Propagule Treatments	<p>Cold stratification at 1-5C for 4-6 weeks is recommended to improve germination rates.</p> <p>Press seeds lightly into the soil surface.</p> <p>Avoid burying seed, light will ensure germination. ⁴</p>
Growing Area Preparation / Annual Practices for Perennial Crops	<p>Use a well-draining mix. Ratio (2:1:1)</p> <p>Includes:</p> <ul style="list-style-type: none"> - Peat moss - Perlite - Sand <p>Sow seeds in flats or containers in late fall.</p> <p>Greenhouse temperatures are between 18-22C and provide bright, indirect light.</p> <p>Medium must be moist. ⁴</p>
Establishment Phase Details	<p>Medium must be moist. Allow and provide 16 hours of light per day.</p> <p>Avoid pests. ⁴</p>
Length of Establishment Phase	2-4 weeks
Active Growth Phase	Water regularly to keep the soil moist.

	<p>Maintain temperatures around 18-22 C and provide bright, indirect light.</p> <p>Ensure good air circulation to reduce the risk of fungal diseases. ¹</p>
Length of Active Growth Phase	4-6 months ³
Hardening Phase	<p>Gradually reduce watering and stop fertilizing 2-4 weeks before out planting</p> <p>Move seeds to a cold frame. Ensure an unheated greenhouse. Natural light and environmental functions.</p> <p>Ensure no frost and heavy rain. ¹</p>
Length of Hardening Phase	2-4 weeks. ^{1 3}
Harvesting, Storage and Shipping	<p>Transplant the seedlings when they are around 10cm tall. Plants should have green foliage and no signs of pest damage.</p> <p>If immediate out planting is not possible, seedlings can be stored in a cool, shaded area for around 2 weeks.</p> <p>Ship seedlings in sturdy trays, ensuring that the foliage is protected from crushing. ²</p>
Length of Storage	Stored for up to 2 weeks. ²
Guidelines for Outplanting / Performance on Typical Sites	Choose locations that mimic the natural habitat, which is high elevation, well drained rocky soils, typically in subalpine meadows. ^{2 1}
Other Comments	<p>Monitor for pests like aphids, which can occasionally appear on young plants,</p> <p>As a high elevation species, they prefer well-drained soils and exposure. ²</p>
INFORMATION SOURCES	
References	<p>¹"<i>Silene grayi</i>." <i>Calflora: Information on California Plants for Education, Research and Conservation</i>, The Calflora Database, 2025, https://www.calflora.org/app/taxon?crn=7598.</p> <p>²"Propagation Protocol for <i>Silene</i> (Caryophyllaceae)." <i>Native Plant Network</i>, 2020, https://nnp.rngr.net/npn/propagation/protocols/caryophyllaceae-silene-697/</p> <p>³"Gray's Catchfly (<i>Silene grayi</i>)." <i>Calscape</i>, California Native Plant Society, 2025, https://calscape.org/Silene-grayi-(Gray's-Catchfly).</p>

	⁴ " <i>Silene grayi</i> ." <i>Flora of North America North of Mexico</i> , vol. 5, edited by Flora of North America Editorial Committee, 2005, New York and Oxford, http://dev.floranorthamerica.org/Silene_grayi .
Other Sources Consulted	
Protocol Author	Rukia Yosif
Date Protocol Created or Updated	05/24/2025