

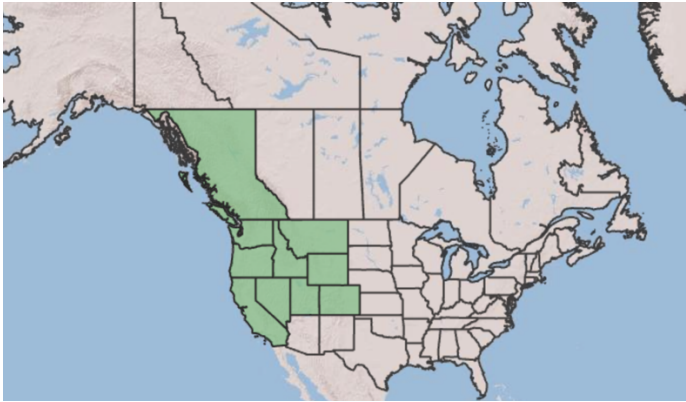
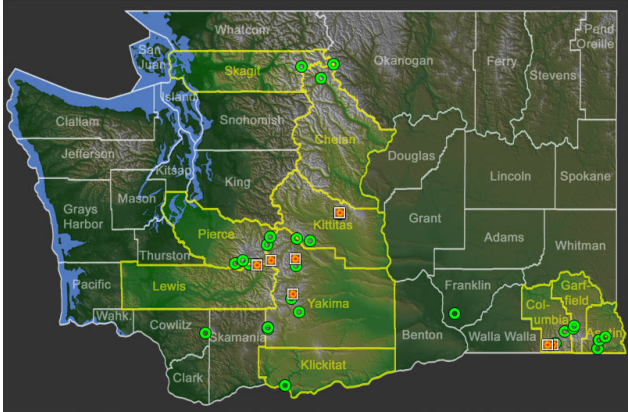
Plant Propagation Protocol for *Lewisia triphylla*

ESRM 412 – Native Plant Production

URL: <https://courses.washington.edu/esrm412/protocols/2024/LETR2>



Photo by Gerald D. Carr

TAXONOMY	
Plant Family	
Scientific Name	<i>Portulacaceae</i>
Common Name	Purslane family
Species Scientific Name	
Scientific Name	<i>Lewisia triphylla</i> (S. Watson) B.L. Rob
Varieties	N/A
Sub-species	N/A
Cultivar	N/A
Common Synonym(s)	<i>Claytonia triphylla</i> S. Watson <i>Erocallis triphylla</i> (S. Watson) Rydb.
Common Name(s)	Threeleaf lewisia, threeleaf bitter root
Species Code (as per USDA Plants database)	LETR2
GENERAL INFORMATION	
Geographical range	 <p>Source: USDA Plant Database</p>  <p>Source: Burke Herbarium Image Collection</p>
Ecological distribution	Ponderosa pine forests and subalpine meadows ³ .
Climate and elevation range	Elevation: 1300-3400 m ⁷
Local habitat and abundance	Gravelly or moist-sandy slopes ^{2,3}
Plant strategy type / successional stage	Drought tolerant. Goes into dormancy after releasing seeds ¹ .

Plant characteristics	A succulent/herbaceous perennial with shallow, tuberous roots ⁴ . Many flowering stems, 3-10 cm long. Few basal leaves, 2-3 cauline leaves in a whorled pattern attached right above the ground. Flowers arranged 2-25 in a bracteate. 2 oval, rounded sepals and 5-9 petals with a pinkish-white color, sometimes white with pink venation. Short style with 3-5 long stigmas.
PROPAGATION DETAILS	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container (plug)
Stock Type	N/A
Time to Grow	N/A
Target Specifications	N/A
Propagule Collection Instructions	Collection should occur in the fall after flowering (May through August) ⁴ , when seeds are mature ¹ , 1 mm in size with a shiny, smooth black to brown coat.
Propagule Processing/Propagule Characteristics	Capsules contain 8-25 seeds
Pre-Planting Propagule Treatments	To improve germination of <i>Lewisia</i> species, acid scarification, gibberellic acid, or stratification can be used ⁸ . For warm-moist stratification, seeds can be chilled at 19 degrees Celsius for 6 weeks to aid in germination ⁸ . Cold stratification can also be used for seed germination. Seeds can be placed in a moist paper towel and then in a petri dish and paced in a cool environment (5 to 10 degrees Celsius) for up to 3 weeks ⁵ .
Growing Area Preparation / Annual Practices for Perennial Crops	Growing media must have adequate drainage or else may experience crown rot ¹ .
Establishment Phase Details	Once seeds have been treated with either stratification, scarification, or gibirellic acid ⁸ , the seeds can be planted in a gravelly loam soil either in flats or 4” containers. Seed flats or containers are then placed in cold storage at 15 degrees C ⁵ .
Length of Establishment Phase	3 to 4 weeks.
Active Growth Phase	Once seeds have germinated. The plants can be placed in a greenhouse with full sun and moist conditions ⁵ .
Length of Active Growth Phase	3 to 4 weeks.
Hardening Phase	N/A
Length of Hardening Phase	Up to 2 years.
Harvesting, Storage and Shipping	N/A
Length of Storage	N/A

Guidelines for Outplanting / Performance on Typical Sites	It can take up to 2 years for the plant to fully mature and being flowering. Outplanting should take place in the fall when the autumn growth phase occurs ¹ .
Other Comments	Since seed requirements for this genus are general ⁵ , propagation techniques were collected from literature pertaining to several species of <i>Lewisia</i> including <i>Lewisia tweedyi</i> , <i>Lewisia cotyledon</i> , and <i>Lewisia leana</i> .
INFORMATION SOURCES	
References	Full list of references is below
Other Sources Consulted	<p><i>Threeleaf Lewisia</i>, <i>Lewisia triphylla</i>. Calscape. (n.d.). https://calscape.org/Lewisia-triphylla-()</p> <p>Wilkinson, K. M., Landis, T. D., Haase, D. L., Daley, B. F., & Kasten Dumroese, R. (2014). Containers. In <i>Tropical Nursery Manual: A Guide to Starting and Operating a Nursery for Native and Traditional Plants</i> (pp. 123–139). essay, U.S. Department of Agriculture, Forest Service.</p>
Protocol Author	Eva Rueter
Date Protocol Created or Updated	05/22/2024

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2. Currin, K., & Merritt, A. (2023). *Pacific Northwest Native Plant Primer: 225 plants for an earth-friendly garden*. Timber Press.
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