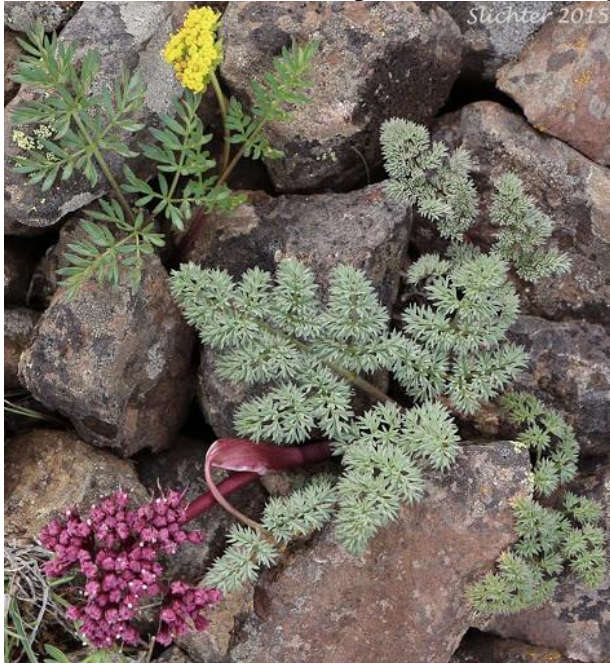


Plant Propagation Protocol for *Lomatium erythrocarpum*
ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols/LOER2.pdf>




Photos: Halley Hosting and U.S. Forest Service

TAXONOMY

Plant Family	
Scientific Name	Apiaceae
Common Name	Forb/herb
Species Scientific Name	
Scientific Name	<i>Lomatium erythrocarpum</i> Meinke
Varieties	N/A
Sub-species	N/A
Cultivar	N/A
Common Synonym(s)	<i>Lomatium erythrocarpum</i> Constance
Common Name(s)	Redfruit desertparsley
Species Code (as per USDA Plants database)	LOER2

GENERAL INFORMATION

<p>Geographical range</p>	 <p>Photos: USDA Plants Database</p>
<p>Ecological distribution</p>	<p>All known populations of the forb are located on F.S. land. Found in northeastern Oregon in the Blue Mountains. Specifically limited to the Elkhorn Ridge. Grows between shrub steppe and subalpine woodland zones, where there is full sun. (9)</p>
<p>Climate and elevation range</p>	<p>Occurs at elevations > 7600 ft Dry, south facing slopes that are gravely/talus-covered (9)</p>
<p>Local habitat and abundance</p>	<p>The desertparsley is associated with <i>Cercocarpus ledifolius</i>, <i>Artemisia tridentate</i>, <i>Pinus albicaulis</i>, and <i>Picea engelmannii</i>. There are 11 known populations, ranging from 30 to 6900 individuals located on the Blue Mountains. (9) (4) (7)</p>
<p>Plant strategy type / successional stage</p>	<p>Flowers 2-4 weeks earlier than the other Apiaceae species at the same elevation. Red-fruit desertparsley grows in a dry, warm, and sunny microclimate, making it tolerant of such conditions.</p>

	<p>Mountain goats consume the plant, two of the desertparsley's sites have seen negative impacts due to the goats. The populations are also disturbed by hikers.</p> <p>It is a critically imperiled species (9)(7)(5)(4)</p>
Plant characteristics	<p>This plant is a perennial forb, with many overlapping leaves and winged rachises, maximizing the amount of photosynthesis that it is able to do. It grows close to the ground with broad leaves, that lay flat, and flowers in June. This Lomatium is also morphologically similar to lower elevation Lomatium, suggesting that it moved into the mountains as glaciers receded. Red fruit desertparsley only grows 2-7cm tall with purple stems. (9)(1)</p>
PROPAGATION DETAILS	
Ecotype	N/A
Propagation Goal	Plant
Propagation Method	Seeds
Product Type	Container (plug)
Stock Type	N/A
Time to Grow	N/A
Target Specifications	Tight root plug in container
Propagule Collection Instructions	The plant's fruit matures around mid-July and mericarps drop around late July/early August. Seeds should be collected at this time otherwise wind will disperse the seeds. (1)(7)
Propagule Processing/Propagule Characteristics	N/A
Pre-Planting Propagule Treatments	N/A
Growing Area Preparation / Annual Practices for Perennial Crops	N/A
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 /	N/A

Performance on Typical Sites	
Other Comments	Discovered in 1982, there is little propagation information about <i>Lomatium erythrocarpum</i> which is endemic to a small region in Oregon. The species is critically imperiled and propagation experiments could help ensure the survival of the species.
INFORMATION SOURCES	
References	<ol style="list-style-type: none"> <li data-bbox="581 478 1554 604">1. Heineman, K. (n.d.). Plant Profile • Center for Plant Conservation. Retrieved 27 May 2020, from https://saveplants.org/national-collection/plant-search/plant-profile/?CPCNum=2662 <li data-bbox="581 667 1554 846">2. Heritage Ranking Form – Global Rank (<i>Lomatium erythrocarpum</i>). (n.d.). Oregon State. Retrieved 27 May 2020, from https://inr.oregonstate.edu/sites/inr.oregonstate.edu/files/lomatium_erythrocarpum_global.pdf <li data-bbox="581 909 1554 1087">3. ITIS Standard Report Page: <i>Lomatium erythrocarpum</i>. (2020). Retrieved 27 May 2020, from https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=503535 <li data-bbox="581 1171 1554 1350">4. <i>Lomatium erythrocarpum</i>, redfruit desert parsley, n.d. <i>Critically Imperiled Plant Profile (Not Listed or Proposed under the Endangered Species Act)</i>. USDA. Retrieved 27 May 2020, from https://www.fs.fed.us/wildflowers/Rare_Plants/profiles/Critically_Imperiled/lomatium_erythrocarpum/index.shtml <li data-bbox="581 1402 1554 1476">5. NatureServe Explorer 2.0. (2020). Retrieved 27 May 2020, from https://explorer.natureserve.org/Taxon/ELE <li data-bbox="581 1528 1554 1623">6. Plants Profile for <i>Lomatium erythrocarpum</i> (redfruit desertparsley), n.d. Retrieved 27 May 2020, from https://plants.usda.gov/core/profile?symbol=LOER2 <li data-bbox="581 1675 1554 1812">7. Red-fruited lomatium (<i>Lomatium erythrocarpum</i>). (n.d.). Oregon Department of Agriculture. Retrieved 27 May 2020, from https://www.oregon.gov/oda/shared/Documents/Publications/PlantConservation/LomatiumErythrocarpumProfile.pdf

	<p>8. Red-fruited Lomatium – Oregon Conservation Strategy. (2020). Retrieved 27 May 2020, from https://www.oregonconservationstrategy.org/strategy-species/red-fruited-lomatium/</p> <p>9. Yates, Gene. (2005) Final Report Lomatium erythrocarpum Survey. Retrieved 27 May 2020, from https://www.fs.fed.us/r6/sfpnw/issssp/documents/inventories/inv-rpt-va-loer-waw-surveys-2005-10.pdf</p>
Other Sources Consulted	10. http://science.halleyhosting.com/nature/basin/5petal/pars/lom/lomatium.htm (photo)
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