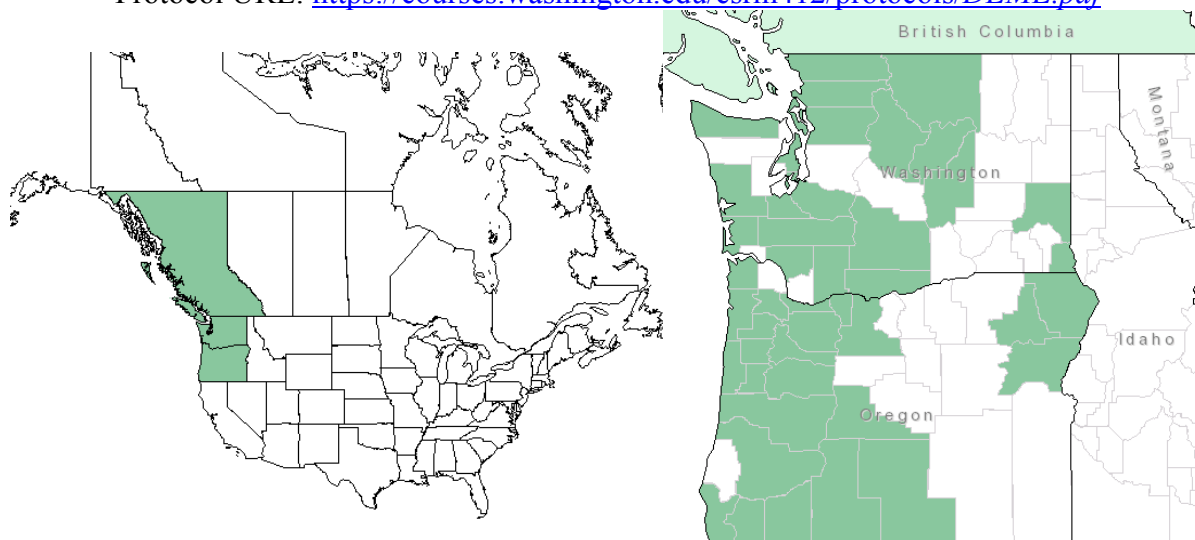


Plant Propagation Protocol for *Delphinium menziesii*

ESRM 412 – Native Plant Production

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



TAXONOMY	
Plant Family	
Scientific Name	Ranunculaceae
Common Name	Buttercup family
Species Scientific Name	
Scientific Name	<i>Delphinium menziesii</i> DC
Varieties	
Sub-species	
Cultivar	
Common Synonym(s)	
Common Name(s)	Menzies' larkspur, dandelion hawkbeard. ⁴
Species Code (as per USDA Plants database)	DEME
GENERAL INFORMATION	
Geographical range	Found largely on the West coast, as far south as Oregon and as far north as Vancouver B.C. ⁵
Ecological distribution	Grows on coastal bluffs, spring-wet grasslands, meadows, and lower mountain slopes. ⁶
Climate and elevation range	Found at low Elevations. ⁶
Local habitat and abundance	Found West of the Cascades in Washington. Also on the Oregon coast, where it is associated with <i>Carex rossii</i> communities. These communities also have <i>Pteridium aquilinum</i> and <i>Collinsia parviflora</i> populations. ³
Plant strategy type / successional stage	

Plant characteristics	Herbaceous perennial with tuberous roots and slender, erect stems (simple or branched at top), 35-70 cm tall. Stems slightly hairy and usually reddish at the base. Leaf blades are rounded and palmately divided, roughly 1.5-5 cm long and 3-9 cm wide, with entire margins. Flowers in terminal racemes with 3 to 15 flowers. flowers are bilaterally symmetric and 4-petaled, with the top two united, blue. Bracts are linear and green-blue. 5 sepals, blue to purple. ⁴
Seed Propagation¹	
Ecotype	Lane co, Oregon (near Eugene) ¹
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container
Stock Type	N/A
Time to Grow	N/A
Target Specifications	N/A
Propagule Collection Instructions	N/A
Propagule Processing/Propagule Characteristics	N/A
Pre-Planting Propagule Treatments	Flats of cone-tainers were covered with poly-ethylene bags and placed in a walk-in cooler (35-40 degrees) for 90 days. ¹
Growing Area Preparation / Annual Practices for Perennial Crops	Seeds were sown into cone-tainers filled with Sunshine # 1, a soil-less peat-based media, and amended with micro-nutrients (Micromax) and a slow-release fertilizer (Osmocote 14-14-14). ¹
Establishment Phase Details	Flats were removed from the cooler after 90 days and placed in greenhouse set at moderate temperatures (70 degree days/ 50 degree nights.) ¹
Length of Establishment Phase	120 days.
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	
Cutting Propagation²	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Vegetative
Product Type	Container

Stock Type	
Time to Grow	
Target Specifications	5-15 cm long cutting. ²
Propagule Collection Instructions	Take cuttings in late winter/ early spring. ²
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	Stand cutting in about 2.5cm of water, with a coarse layer of sand at the bottom, until the cutting has made a few centimeters of root. Alternately, cuttings can be rooted in perlite. ²
Length of Establishment Phase	Roots will start to form at 3-5 weeks. ²
Active Growth Phase	After the cutting has rooted, it should be transferred into a larger container filled with compost. Potted cuttings should be stored in a shady place, and kept moist. ²
Length of Active Growth Phase	
Hardening Phase	Once the cuttings “appear happy,” pinch off the tip of each stem to cause formation of new shoots. ²
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	This protocol is part of a guide to Delphiniums in general. <i>A Plantsman's Guide to Delphiniums</i> tends to focus on cultivated species of Delphinium. ²
INFORMATION SOURCES	
References	<p>1) Bartow, Amy. "Protocol Information, Delphinium Menziesii DC." <i>Native Plant Network</i>. N.p., n.d. Web. 18 May 2015. http://www.nativeplantnetwork.org/Network/ViewProtocols.aspx?ProtocolID=2918.</p> <p>2) Cooper, Leslie. "Propagation." <i>A Plantsman's Guide to Delphiniums</i>. London: Ward Lock, 1990. N. pag. Print.</p> <p>3) Franklin, Jerry F., and C. T. Dyrness. <i>Natural Vegetation of Oregon and Washington</i>. Portland, Or.: Pacific Northwest Forest and Range Experiment Station, Forest Service, U.S. Dept. of Agriculture, 1973. Print.</p> <p>4) Klinkenberg, Brian. (Editor) 2014. <i>E-Flora BC</i>:</p>

	<p><i>Electronic Atlas of the Plants of British Columbia</i> [eflora.bc.ca]. Lab for Advanced Spatial Analysis, Department of Geography, University of British Columbia, Vancouver. [Accessed: 5/18/2015 12:44:32 PM]</p> <p>5) "Plants Profile for Delphinium Menziesii (Menzies' Larkspur)." <i>Plants Profile for Delphinium Menziesii (Menzies' Larkspur)</i>. N.p., n.d. Web. 18 May 2015.</p> <p>6) Pojar, Jim, A. MacKinnon, and Paul B. Alaback. <i>Plants of the Pacific Northwest Coast: Washington, Oregon, British Columbia & Alaska</i>. Redmond, WA: Lone Pine Pub., 1994. Print.</p>
Other Sources Consulted	<p>7) "Delphinium Menziesii Menzies' Larkspur Wildflowers of the Pacific Northwest." <i>Delphinium Menziesii Menzies' Larkspur Wildflowers of the Pacific Northwest</i>. N.p., n.d. Web. 18 May 2015.</p> <p>8) "Delphinium Menziesii." - <i>Puget Prairie Plants</i>. N.p., n.d. Web. 18 May 2015. <http://wikis.evergreen.edu/pugetprairieplants/index.php/Delphinium_menziesii#Propagation>.</p> <p>9) Giblin, David. "Delphinium Menziesii Menzies' Larkspur." <i>WTU Herbarium Image Collection</i>. N.p., n.d. Web. 17 May 2015. <http://www.biology.burke.washington.edu/herbarium/imagecollection.php?SciName=Delphinium%2520menziesii>.</p> <p>10) Turner, Mark, and Phyllis Gustafson. <i>Wildflowers of the Pacific Northwest</i>. Portland, Or.: Timber, 2006. Print.</p>
Protocol Author	Colleen Brennan
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