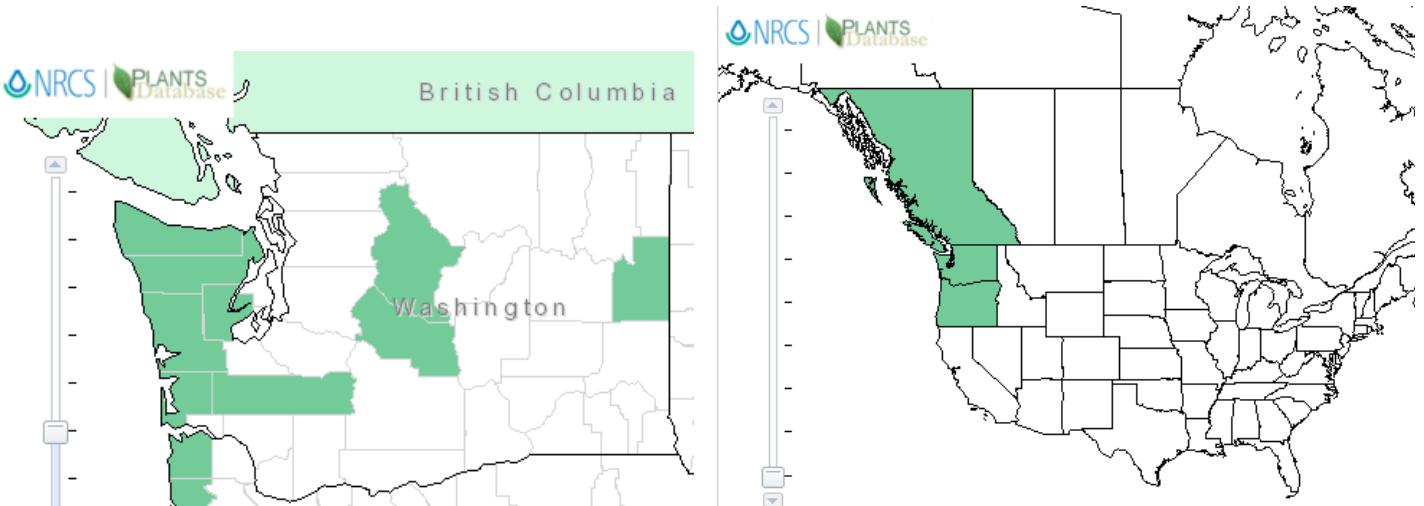


Plant Propagation Protocol for *Allium crenulatum*

ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols/ALCR4.pdf>



TAXONOMY^[1,2]	
Plant Family	
Scientific Name	Liliaceae
Common Name	Lily
Species Scientific Name	
Scientific Name	<i>Allium crenulatum</i> Wiegand
Varieties	None
Sub-species	None
Cultivar	None
Common Synonym(s)	<i>Allium cascadense</i> M. Peck <i>Allium vancouverense</i> Macoun <i>Allium watsonii</i> Howell
Common Name(s)	Olympic onion Scalloped onion
Species Code (as per USDA Plants database)	ALCR4
GENERAL INFORMATION	
Geographical range	Oregon, Washington, and British Columbia ^[1]
Ecological distribution	Occurs in lowland, montane, and alpine zones, in clearings, meadows, dry rock outcrops, and rockslides. ^[2,3]
Climate and elevation range	From 600 to 2500 meters. ^[4]
Local habitat and abundance	In Washington state, occurs in Chelan, Kittitas, Clallam, Jefferson, Mason, Grays Harbor, Lewis, Spokane, and Pacific County. ^[1,3] Abundant in its American range, but vulnerable in Canada. ^[2,3]

Plant strategy type / successional stage	Unknown
Plant characteristics	Perennial forb/herb with an ovoid bulb and flowering, flattened stems 5-8 cm tall. Usually 2 curved, flattened, smooth, hooked basal leaves, 1-3 mm wide. Flowers range from white to pink to rose purple ^[2,8] , bell-shaped with 6 tepals 6-12 mm long. Fruits are egg-shaped 3-lobed capsules. Up to 6 black seeds. ^[2] Blooms from May to July. ^[3]
PROPAGATION DETAILS	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Seed or vegetative (bulblets, offsets, or clump division)
Product Type	N/A
Stock Type	N/A
Time to Grow	Unknown
Target Specifications	N/A
Propagule Collection Instructions	Collect seeds from plant. When removing offsets, do it when the plant is dormant. When increasing by division of clumps, divide the clumps in Spring. ^[10]
Propagule Processing/Propagule Characteristics	Unknown seed density. Allium seeds have short longevity; less than 2 years. ^[13]
Pre-Planting Propagule Treatments	Seeds can be stored in a fridge for about a year, but Allium seeds are generally considered not to store well. Seeds stored in a fridge will produce flowers later than normal. ^[11,7] Scarify seeds before planting, either by scratching them with sandpaper or putting them into boiling water and letting the water cool before removing them. ^[7]
Growing Area Preparation / Annual Practices for Perennial Crops	Grows best in a bulb frame. Does not generally flourish in sandy or heavy soils. ^[8,6]
Establishment Phase Details	Sow your seeds in Spring at about 55F°, 2 to 3 inches deep in the ground. ^[9,10] If planting in a field or garden bed, plant 3 to 4 inches apart. ^[9] When planting mature bulbs, set them in the soil at approximately 1.5 times the depth of the bulb. ^[10]
Length of Establishment Phase	Unknown
Active Growth Phase Details	Keep well-ventilated and moist; dry progressively as foliage dies back. ^[10] Accustomed to hot sunshine, sharp drainage, and heavy rainfall during the growing season. ^[12]
Length of Active Growth Phase	Unknown
Hardening Phase Details	Unknown
Length of Hardening Phase	Unknown
Harvesting, Storage and Shipping	Pricking out and potting seedlings is easiest when they

	have become dormant. ^[10]
Length of Storage	Unknown
Guidelines for Outplanting / Performance on Typical Sites	Alliums usually start producing flowers two years after planting. ^[7] <i>A. crenulatum</i> propagules collected from the Cascades region seem to produce white flowers rather than pink ones. ^[8]
Other Comments	N/A
INFORMATION SOURCES	
References	<p>[1] “Plants profile for Allium crenulatum (Olympic onion).” <i>USDA Natural Resources Conservation Service</i>. 13 May 2017. https://plants.usda.gov/core/profile?symbol=ALCR4</p> <p>[2] “Allium crenulatum.” <i>E-Flora BC: Electronic Atlas of the Flora of British Columbia</i>. 13 May 2017. http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Allium%20crenulatum</p> <p>[3] “Allium crenulatum.” <i>Burke Museum of Natural History and Culture</i>. 13 May 2017. http://biology.burke.washington.edu/herbarium/imagecollection.php?SciName=Allium%20crenulatum</p> <p>[4] “Allium crenulatum.” <i>eFlora</i>. 13 May 2017. http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=242101347</p> <p>[6] Wright, W. <i>Cassell's Dictionary of Practical Gardening: An Illustrated Encyclopædia of Practical Horticulture for All Classes, Volume 1</i>. London, Paris, New York, and Melbourne: Cassell and Company Ltd., 1901. Print.</p> <p>[8] North American Rock Garden Society. <i>Bulbs of North America</i>. Portland: Timber Press, 2009. Print.</p> <p>[7] “How To Grow Alliums From Seed.” <i>SFGate</i>. 15 May 2017. http://homeguides.sfgate.com/grow-alliums-seed-49045.html</p> <p>[9] Miles, B. <i>The Wonderful World of Bulbs</i>. D. Van Nostrand, 1963. Print.</p> <p>[10] Royal Horticultural Society. <i>Manual of Bulbs</i>. Portland: Timber Press, 2003. Print.</p>

	<p>[11] Biernbaum, J. "All About Alliums." <i>Michigan State University Department of Horticulture</i>. 13 May 2017. http://www.hrt.msu.edu/uploads/535/78622/All-About-Alliums-2pgs.pdf</p> <p>[12] Davies, D. <i>Alliums: The Ornamental Onions</i>. Portland: Timber Press, 1993.</p> <p>[13] "Onions, Green Bunching." <i>Oregon State University Department of Horticulture</i>. 13 May 2017. http://horticulture.oregonstate.edu/content/onions-green-bunching</p>
Other Sources Consulted	<p>"Allium crenulatum." <i>Pacific Bulb Society</i>. 15 May 2017. http://www.pacificbulbsociety.org/pbswiki/index.php/Allium_crenulatum</p>
Protocol Author	Natalia Hamilton
Date Protocol Created or Updated	05/23/17