

Plant Propagation Protocol for Kamchatka Rockcress (*Arabis kamchatica*)

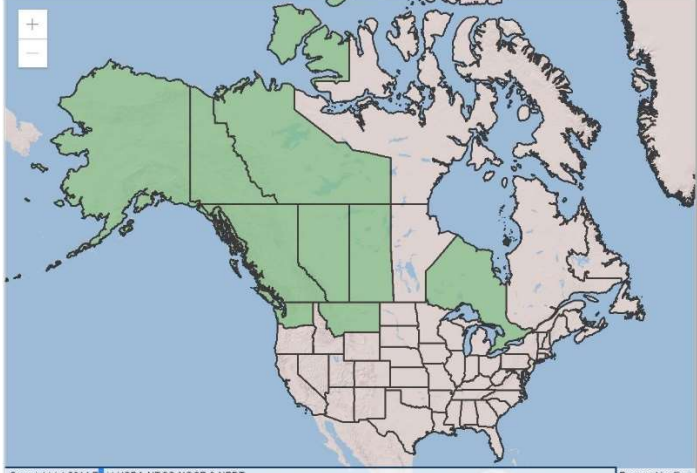
ESRM 412 – Native Plant Production

URL: <https://courses.washington.edu/esrm412/protocols/2021/ARKA6>



Burke Herbarium Image Collection, Burke Museum

TAXONOMY	
Plant Family	
Scientific Name	Brassicaceae / Cruciferae
Common Name	Mustard
Species Scientific Name	
Scientific Name	<i>Arabis kamchatica</i> (Fisch. ex DC.) Ledeb.
Varieties	N/A
Sub-species	<i>Arabidopsis lyrata</i> ssp. <i>kamchatica</i> (Fisch. ex DC.) O'Kane & Al-Shehbaz
Cultivar	N/A
Common Synonym(s)	<i>Arabidopsis lyrata</i> ssp. <i>kamchatica</i> (Fisch. ex DC.) O'Kane & Al-Shehbaz
Common Name(s)	Kamchatka rockcress
Species Code (as per USDA Plants database)	ARKA6
GENERAL INFORMATION	
Geographical range	<i>Arabis kamchatica</i> can be found in northwestern Washington, north to Alaska, and extending eastward to the northwest territory of Canada, Saskatchewan, and Ontario ^[8] .

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Ecological distribution	It is found in subalpine and alpine scree slopes, as well as lightly wooded habitats ^[1] .
Climate and elevation range	N/A
Local habitat and abundance	<p>Arabis Kamchatica occupies ledges, cliffs, gravels, and sands (known to be found in rocky outcroppings^[4]. Associated species are Broad-leaved ragwort (<i>Packera obovata</i>), Downny arrowwood (<i>Viburnum rafinesquianumaa</i>), and Early Saxifridge (<i>Micranthes Virginiensis</i>) ^[6]. It is pollinated by bees, moths, and butterflies ^[4].</p>
Plant strategy type / successional stage	Relatively tolerant of a wide range of substrates ^[4]
Plant characteristics	It is a biennial/ perennial forb that reaches up to 40 cm in height ^{[4] [6] [7]} . It has alternating smooth leaves that are mostly straight but sometimes slightly spoon shaped and taper at the base ^[6] . The flowers are small and white, containing four petals ^[6]
PROPAGATION DETAILS	
Ecotype	Well drained, sandy soils and open to partly shaded
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container
Stock Type	From seed, in containers
Time to Grow	Germination usually takes about 2-3 weeks but growing to size for outplanting might vary on the plant.
Target Specifications	10-40 cm ^[6]
Propagule Collection Instructions	Seeds are collected by hand in late summer when pods are dry ^{[3] [5]} . Seeds are then broken out of the pod and cleaned ^[3] .
Propagule Processing/Propagule Characteristics	Can be stored but may not last too long, best to plant after fruit ripens ^[3]

Pre-Planting Propagule Treatments	Cold-moist stratification for roughly five weeks ^[2]
Growing Area Preparation / Annual Practices for Perennial Crops	Seeds are placed in conetainers with sunshine #1 growing mix, slow release fertilizer, and added micronutrients ^[2] . Note: This is based off of a protocol for a related species and might need to be slightly changed
Establishment Phase Details	Cover trays of conetainers with polyethylene bags to perform the cold-moist stratification ^[2]
Length of Establishment Phase	One-three weeks ^[2]
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	Keep in containers until ready for outplanting
Length of Storage	Seeds can be successfully stored for short amounts of time ^[3] .
Guidelines for Outplanting / Performance on Typical Sites	Arabis will reach a height of 10-40 cm and will likely flower within the first year ^[2]
Other Comments	N/A

INFORMATION SOURCES

References	<p>[1] Baskin, Jerry M.; Baskin, Carol C.. 2002. Propagation protocol for production of Container (plug) <i>Arabis lemmonii</i> Wats. plants University of Kentucky Lexington, Kentucky. In: Native Plant Network. URL: http://NativePlantNetwork.org (accessed 2021/05/26). US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources.</p> <p>[2] Bartow, Amy L. 2006. Propagation protocol for production of Container (plug) <i>Arabis platysperma</i> Gray var. <i>howellii</i> (S. Wats.) Jepson plants USDA NRCS - Corvallis Plant Materials Center Corvallis, Oregon. In: Native Plant Network. URL: http://NativePlantNetwork.org (accessed 2021/05/26). US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources.</p> <p>[3] Lambert, Amy. "Hairy Rockcress (<i>Arabis Hirsuta</i>).” The Character Used to Best Describe North-American <i>Arabis</i>orth American <i>Arabis</i> Sp, 6 Apr. 2003, depts.washington.edu/propplnt/Plants/Arabis.htm.</p>
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	<p>[4] Cole, Kathryn. "Arabis Lyrata - L." Pfaf Plant Search, 24 Aug. 2001, pfaf.org/user/Plant.aspx?LatinName=Arabis%2Blyrata.</p> <p>[5] Akin, B, and I Kocaçaliskan. "In Vitro Propagation of Arabis Drabiformis Boiss. (Brassicaceae) an Endemic Rare Species of Uludağ Mountain (Bursa-Turkey)." African Journal of Biotechnology, 12 Dec. 2013, www.ajol.info/index.php/ajb/article/view/98610.</p> <p>[6] "Lyre-Leaved Rock-Cress." Lyre-Leaved Rock-Cress Mass.gov, Massachusetts Division of Fish and Wildlife, 2015, www.mass.gov/doc/lyre-leaved-rock-cress/.</p> <p>[7] "Arabis Kamchatica (Fisch. Ex DC.) Ledeb." Plants 3, USDA, plants.usda.gov/home/plantProfile?symbol=ARKA6.</p> <p>[8] Giblin, David. "Arabidopsis Kamchatica Lyreleaved Cress, Kamchatka Rockcress, Lyre-Leaved Rockcress, Western Rockcress." Burke Herbarium Image Collection, Burke Museum</p>
Other Sources Consulted	<p>"Rockcress, Wall." Explore Cornell - Home Gardening - Flower Growing Guides - Growing Guide, Cornell University, 2006, www.gardening.cornell.edu/homegardening/sceneabee.html.</p> <p>"Arabidopsis Lyrata (L.) O'Kane & Al-Shehbaz." Native Plant Trust: Go Botany, Native Plant Trust, gobotany.nativeplanttrust.org/species/arabidopsis/lyrata/.</p> <p>"Arabis Kamchatica Kamchatka Rockcress." <i>NatureServe Explorer 2.0</i>, Nature Serve, 30 Apr. 2021</p>
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