

Plant Propagation Protocol for *Arabis crucisetosa*

ESRM 412 – Native Plant Production

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



Image of *Arabis crucisetosa*¹

TAXONOMY	
Plant Family	
Scientific Name	Brassicaceae ²
Common Name	wetsoil rockcress ²
Species Scientific Name	
Scientific Name	<i>Arabis crucisetosa</i> Constance & Rollins ²
Varieties	
Sub-species	
Cultivar	
Common Synonym(s)	
Common Name(s)	wetsoil rockcress ² , cross-haired rockcress ³
Species Code	ARCR ²

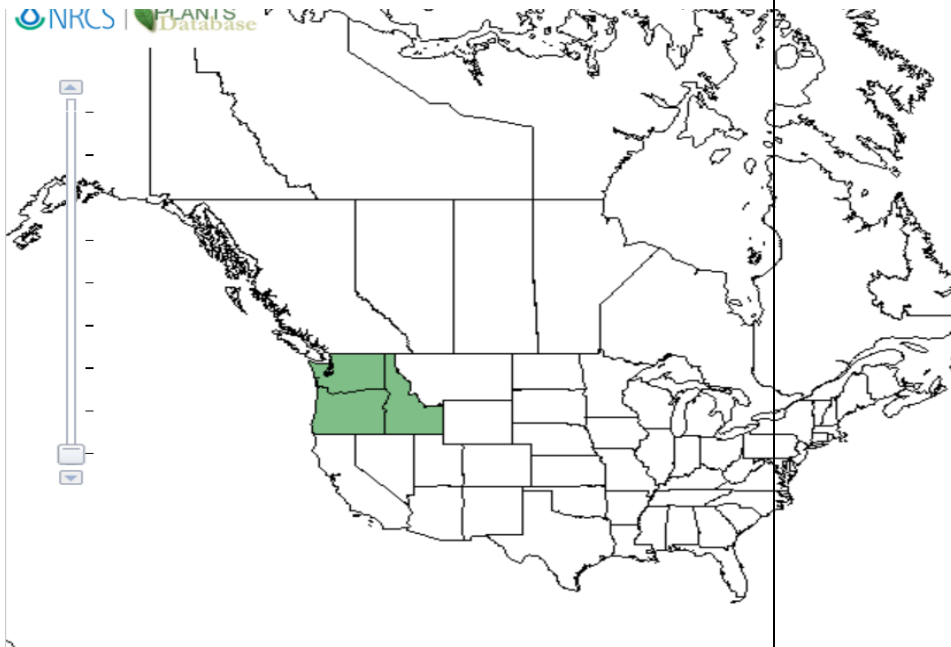
GENERAL INFORMATION

Geographical range

It is typically found in the southeastern corner of Washington—specifically within Snake River canyon, Asotin County, WA.⁴ In addition, it can be observed in western Idaho and eastern Oregon.⁵



Geographical range in WA²



Geographical range in North America²

Ecological distribution

It is generally found in wet banks to moist soils or coniferous forests⁴ as well as rocky bluffs, steep banks,

	and canyon margins. ⁶
Climate and elevation range	It can be found at elevations of 400-1800 m. ⁶
Local habitat and abundance	The lone population within Washington is located in a steep canyon grassland community dominated by <i>Festuca idahoensis</i> (Idaho fescue) in association with <i>Pinus ponderosa</i> (Ponderosa pine) and <i>Pseudotsuga menziesii</i> (Douglas-fir). ⁵ It does well in sedimentary, granitic, and basaltic soil types. ⁵
Plant strategy type / successional stage	It faces threats from livestock grazing and invasive species that outcompete it. ⁷
Plant characteristics	It is a short-lived perennial forb with singular to numerous stems and sparingly branched with a height of 1-4 dm tall. ⁴ Its few leaves form a basal rosette, is remotely serrate, and is tapered to a short petiole with stalked, cross-hairs on its lower surface. ⁵ It has inflorescence of 2-20 flowered racemes, slender pedicels, and glabrous 2-2.5 cm long seeds that are broad and slightly compressed. ⁴ It is a highly sensitive species found in the Rogersburg Area of southeastern Washington with only a single population composed of five polygons present in Washington. ⁷
PROPAGATION DETAILS for <i>Arabis platysperma</i> Gray var. <i>howellii</i> (S. Wats.) Jepson⁸ (due to extremely limited information on <i>Arabis crucisetosa</i>)	
Ecotype	Seeds were collected from Crater Lake National Park
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container (plug)
Stock Type	
Time to Grow	0
Target Specifications	
Propagule Collection Instructions	
Propagule Processing/Propagule Characteristics	
Pre-Planting Propagule Treatments	
Growing Area Preparation / Annual Practices for Perennial Crops	Fill cone-tainers with Sunshine #1 which is a soil-less peat-based media amended with Micromax and a slow release fertilizer (Osmocote 14-14-14). ⁸ Cover cone-tainers with polyethylene bags and place in a walk-in cooler for 5, 10, and 16 weeks. ⁸
Establishment Phase Details	Seedlings emerged within one week of removal from a 5-week cold-moist stratification. No significance difference was observed in emergence or seedling vigor between the 5, 10, and 16 weeks seeds.
Length of Establishment Phase	

Active Growth Phase	
Length of Active Growth Phase	
Hardening Phase	
Length of Hardening Phase	
Harvesting, Storage and Shipping	
Length of Storage	
Guidelines for Outplanting / Performance on Typical Sites	
Other Comments	In this study, most plants flowered during the first year while still in containers. ⁸
PROPAGATION DETAILS for the genus <i>Arabis</i>⁹(due to extremely limited information on <i>Arabis crucisetosa</i>)	
Ecotype	
Propagation Goal	Cuttings (from rosettes) ⁹
Propagation Method	Vegetative ⁹
Product Type	Propagules (cuttings) ⁹
Stock Type	
Time to Grow	
Target Specifications	
Propagule Collection Instructions	Remove nonflowering rosettes from parent plant, ensuring a clean cut (use sharp knife or secateurs). ⁹ Trim each cutting to below a node and remove the leaves. ⁹
Propagule Processing/Propagule Characteristics	
Pre-Planting Propagule Treatments	
Growing Area Preparation / Annual Practices for Perennial Crops	Place in quality multi-purpose compost with horticultural grit or perlite added. Use a dibber to place cuttings in a terracotta pot (to reduce chances of waterlogging) up to their leaves. ⁹
Establishment Phase Details	Once cuttings have produced some roots and leaves, pot them singly. ⁹
Length of Establishment Phase	
Active Growth Phase	
Length of Active Growth Phase	
Hardening Phase	
Length of Hardening Phase	
Harvesting, Storage, and Shipping	Keep cuttings at 10-15 degrees Celsius, out of direct sunlight. Cover with cloche or cold frame lid; but ventilate frequently. ⁹ Harvest August. ⁹
Length of Storage	
Guidelines for	

Outplanting/Performance on typical sites	
Other Comments	
INFORMATION SOURCES	
References	<ol style="list-style-type: none"> 1. Rush, T. (2018, May 15). [Photograph]. Burke Museum of Natural History and Culture, Seattle. http://biology.burke.washington.edu/herbarium/imagecollection.php?ID=864 2. Plants Profile for Arabis crucisetosa (wetsoil rockcress). (n.d.). Retrieved May 15, 2018, from https://plants.usda.gov/core/profile?symbol=ARCR 3. Locklear, J. H. (2011). Phlox colubrina. <i>Phlox a natural history and gardener's guide</i>. Retrieved May 18, 2015, from https://books.google.com/books?id=L9KgyxXBmCQC&pg=PA304&dq=arabis+crucisetosa&hl=en&sa=X&ved=0ahUKEwiYiobooYnbAhWHLmMKHU1vCHwQ6AEIMjAC#v=onepage&q=arabis%20crucisetosa&f=false 4. Giblin, D. (n.d.). Arabis crucisetosa. Retrieved May 15, 2018, from http://biology.burke.washington.edu/herbarium/imagecollection.php?ID=864 5. Camp, P., Gamon, John, & Arnett, Joseph. (2011). Field guide to the rare plants of Washington. Seattle: University of Washington Press. Retrieved May 15, 2018, from https://www.dnr.wa.gov/publications/amp_nh_arc.pdf?3dgj51xlr 6. Flora of North America Editorial Committee. (Eds.). (2010). <i>Flora of north america</i> (Vol. 7). New York, Oxford: Oxford University Press. Retrieved May 15, 2018, from https://books.google.com/books?id=I_KRof-OpX4C&printsec=frontcover#v=onepage&q&f=false 7. Analysis of the Management Situation. (2009). <i>Baker Resource Management Plan Revision</i>. Retrieved May 15, 2018, from https://www.blm.gov/or/districts/vale/plans/files/Baker_RMP_AMS.pdf 8. Bartow, Amy L. (2006). Propagation protocol for production of container (plug) Arabis platysperma Gray var. howellii (S. Wats.) Jepson plants USDA NRCS - Corvallis Plant Materials Center Corvallis,

	<p>Oregon. In: Native Plant Network. US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources. Retrieved May 15, 2018, from https://npn.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=brassicaceae-arabis-platysperma-2882</p> <p>9. Propagating arabis. (2018, March 02). Retrieved May 15, 2018, from https://www.gardenersworld.com/how-to/grow-plants/propagating-arabis/</p>
Other Sources Consulted	<p>Baskin, Jerry M.; Baskin, Carol C. (2002). Propagation protocol for production of Container (plug) Arabis lemmonii Wats. plants University of Kentucky Lexington, Kentucky. In: Native Plant Network. US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources. Retrieved May 15, 2018, from https://npn.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=brassicaceae-arabis-1517</p>
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