

Plant Propagation Protocol for *Boykinia major*

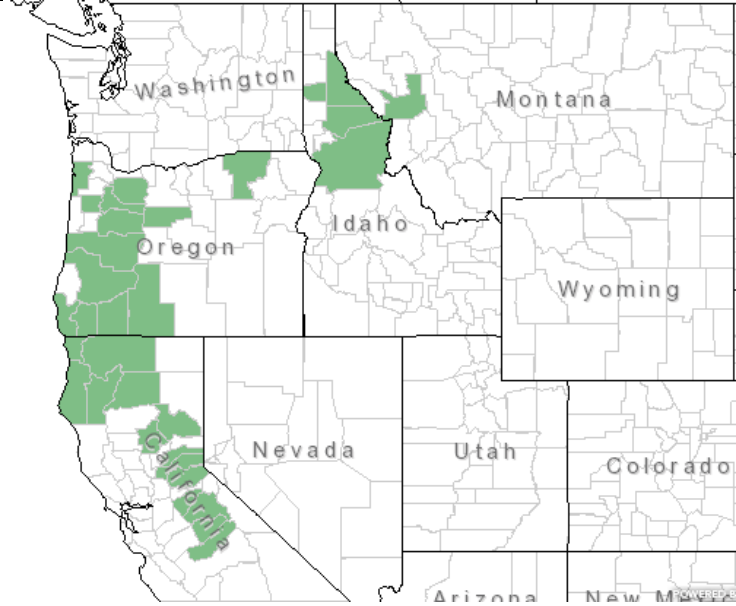
ESRM 412 – Native Plant Production

Protocol URL: [https://courses.washington.edu/esrm412/protocols/\[BOMA3.pdf\]](https://courses.washington.edu/esrm412/protocols/[BOMA3.pdf])



Source: Alfred Brousseau¹

TAXONOMY	
Plant Family	
Scientific Name	Saxifragaceae
Common Name	Saxifrage
Species Scientific Name	
Scientific Name	<i>Boykinia major</i> A. Gray
Varieties	<i>Boykinia major</i> A Gray var. <i>Intermedia</i> Piper
Sub-species	N/A
Cultivar	N/A
Common Synonym(s)	N/A
Common Name(s)	large boykinia, mountain boykinia, stream boykinia ³
Species Code (as per USDA Plants database)	BOMA3
GENERAL INFORMATION	
Geographical range	

	 <p>Found in the greater northwest excluding Washington state. Found along western Oregon, northern California and Idaho.</p> <p>Source: USDA Plant Database</p>
Ecological distribution	Found in meadows with part shade or near stream and riverbanks. ²
Climate and elevation range	Between 3900ft and 6170ft. ⁷ Grows in montane and subalpine elevations and environments. Zones 7-9. ⁵
Local habitat and abundance	Abundant in ditches and wetlands that are moist all year long. ⁷ Occasionally found growing with blazing star, cardinal flower, knotweed, and astilbe. ⁸
Plant strategy type / successional stage	Expands by rhizome.
Plant characteristics	Perennial herb. Alternate leaf arrangement and flowers are bisexual. ⁴ Grows from a rhizome underground. Cauline leaves with sharp tips. Inflorescence can grow up to a meter tall. White, crowded flowers, and plant height can vary between 12-36 inches. Bloom period from April to August. ²
PROPAGATION DETAILS	
Ecotype	N/A
Propagation Goal	plants
Propagation Method	Seed
Product	Container plug
Stock Type	Container
Time to Grow	16 weeks (Boykinia occidentalis) ¹³
Target Specifications	Flowering plants (Boykinia occidentalis) ¹¹
Propagule Collection Instructions	Seeds can be collected during the first growing season. (boykinia occidentalis) ¹³
Propagule Processing/Propagule Characteristics	50-500 black, oval seeds. ¹²

Pre-Planting Propagule Treatments	Sow seeds in a wet napkin and let seeds imbibe water for several weeks at 20°C. Germinate in light at temperatures of 70 degrees Fahrenheit. Seeds will not germinate in the dark. ⁹
Growing Area Preparation / Annual Practices for Perennial Crops	Grows best in well drained soils. Grows well in shady conditions with a layer of crushed granite rock to enhance soil drainage. (Boykinia occidentalis) ¹¹
Establishment Phase Details	2-3 weeks (Boykinia occidentalis) ¹³
Length of Establishment Phase	Germinate in spring or spring conditions if grown in a greenhouse. (Boykinia occidentalis) ¹⁰
Active Growth Phase	Sow into soil-based compost. Grows best in conditions of 15-20°C. (Boykinia occidentalis) ¹⁰ Grows happens rapidly in active growth phase. Flowering occurs within a year if sown earlier spring.
Length of Active Growth Phase	8-10 months (Boykinia occidentalis) ¹¹
Hardening Phase	Moved outside in september (boykinia occidentalis) ¹³
Length of Hardening Phase	May be left outside until outplanted (boykinia occidentalis) ¹³
Harvesting, Storage and Shipping	Keep plants well irrigated before and during shipping (boykinia occidentalis) ¹³
Length of Storage	N/A
Guidelines for Outplanting / Performance on Typical Sites	N/A
Other Comments	Very little information found for the propagation of Boykinia major. Propagation information for a species with the same genus (Boykinia occidentalis) is found to grow in similar habitats is provided to show similar propagation methods.

INFORMATION SOURCES

References	<ol style="list-style-type: none"> 1. Brousseau, A. (1995). CalPhotos. Retrieved May 21, 2020, from https://calphotos.berkeley.edu/cgi/img_query?query_src=photos_index 2. The Jepson Herbarium. (2020). Boykinia major. Retrieved May 21, 2020, from https://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=16006 3. U.S. National Plant Germplasm System. (n.d.). Taxon: Boykinia major A. Gray. Retrieved May 21, 2020, from https://npgsweb.ars-grin.gov/gringlobal/taxonomydetail.aspx?id=467104 4. Lady Bird Johnson Wildflower Center (Ed.). (2013, August 13). Plant Database. Retrieved May 21, 2020, from https://www.wildflower.org/plants/result.php?id_plant=BOMA3
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	<p>5. Mountain Boykinia — Boykinia major. Montana Field Guide. Montana Natural Heritage Program. Retrieved on May 21, 2020, from http://FieldGuide.mt.gov/speciesDetail.aspx?elcode=PDSAX04030</p> <p>6. Brewer, W. H. (n.d.). Flora of North America. Retrieved May 21, 2020, from http://www.efloras.org/florataxon.aspx?flora_id=1</p> <p>7. Calflora. (2020). Boykinia major. Retrieved May 21, 2020, from https://www.calflora.org/cgi-bin/species_query.cgi?where-taxon=Boykinia+major</p> <p>8. Karen. (2019, August 15). Plant Profile: Large Boykinia (Boykinia major). Retrieved May 21, 2020, from http://www.karensgardentips.com/plant-profiles-how-to-grow/plant-profile-large-boykinia-boykinia-major/</p> <p>9. Love SL, Akins CJ. 2018. Summary of the native seed germination studies of Norman C Deno: species with names beginning with letters A and B. Native Plants Journal 19(3):260–280.</p> <p>10. Plant World Seeds. (2019). BOYKINIA OCCIDENTALIS. Retrieved May 25, 2020, from https://www.plant-world-seeds.com/store/view_seed_item/4540</p> <p>11. Holm, R. W. (1960). A California Flora. Philip A. Munz and David D. Keck. Published for the Rancho Santa Ana Botanic Garden by the University of California Press, Berkeley, 1959. 1681 pp. Illus. 11.50. <i>Science</i>, 131(3405), 982-982.</p> <p>12. Gornall, R. J. (n.d.). Boykinia. Retrieved May 25, 2020, from http://dev.semanticfna.org/Boykinia</p> <p>13. Lee, R. E. (n.d.). Propagation protocol for production of Container (plug) Boykinia occidentalis Plants 262 ml (16 in³) container. USDA FS - Dorena Genetic Resource Center Cottage Grove, Oregon. In: Native Plant Network. Retrieved May 25, 2020, from https://rngr.net/npn/propagation/protocols/saxifragaceae-boykinia</p>
Other Sources Consulted	N/A
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