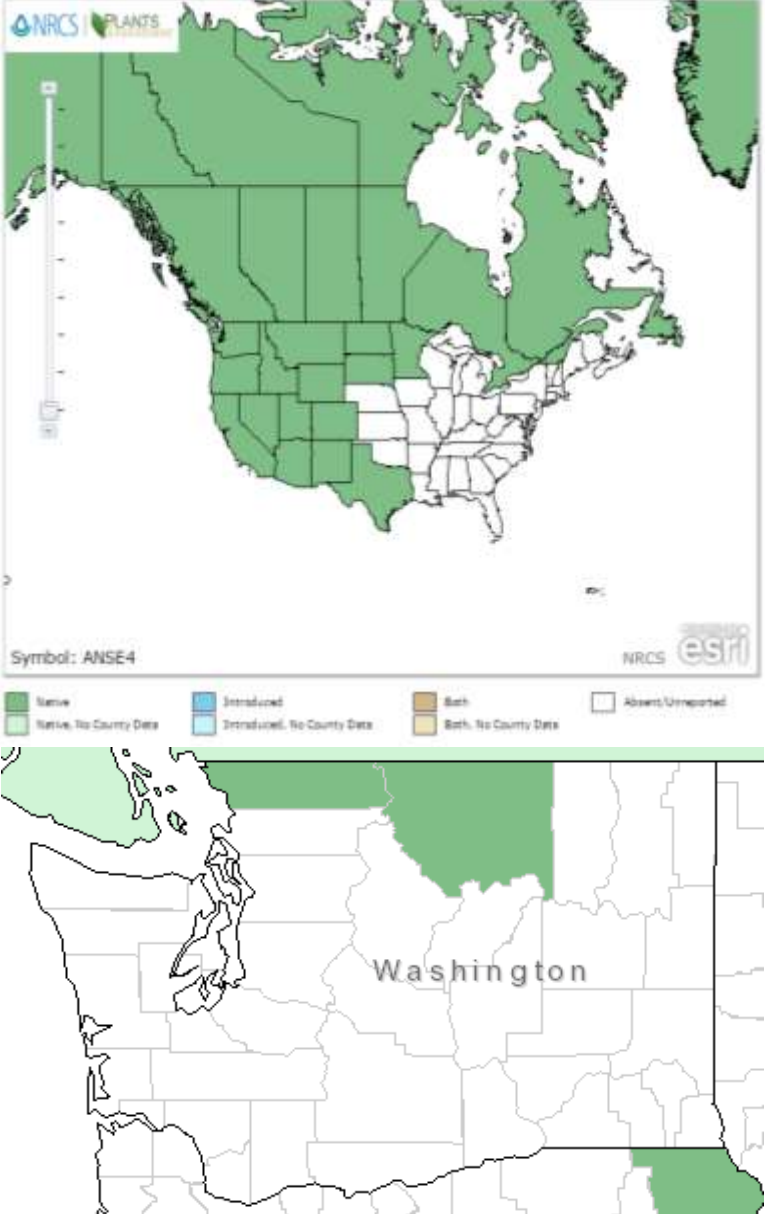


Plant Propagation Protocol for *Androsace septentrionalis*

ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols/ANSE4.pdf>

TAXONOMY	
Plant Family	
Scientific Name	Primulaceae ¹
Common Name	Pygmyflower Rockjasmine ¹
Species Scientific Name	
Scientific Name	<i>Androsace septentrionalis</i> L. ¹
Varieties	
Sub-species	<i>Androsace septentrionalis</i> subsp. <i>glandulosa</i> , (Woot. & Standl.) G.T. Robbins ¹ <i>Androsace septentrionalis</i> subsp. <i>puberulenta</i> , (Woot. & Standl.) G.T. Robbins ¹ <i>Androsace septentrionalis</i> subsp. <i>septentrionalis</i> , USDA, NRCS ¹ <i>Androsace septentrionalis</i> subsp. <i>subulifera</i> , (Woot. & Standl.) G.T. Robbins ¹ <i>Androsace septentrionalis</i> subsp. <i>subumellatai</i> , (Woot. & Standl.) G.T. Robbins ¹
Cultivar	
Common Synonym(s)	Pygmyflower Rockjasmine, Northern Rockjasmine, Northern Fairy Candelabra
Common Name(s)	
Species Code (as per USDA Plants database)	ANSE4 ¹
GENERAL INFORMATION	

Geographical range	 <p>The figure consists of two maps. The top map shows the distribution of ANSE4 across North America, with a legend indicating Native (dark green), Introduced (light green), Both (yellow), and Absent/Unrecorded (white) status. A scale bar is present on the left. The bottom map is a detailed inset of Washington state, showing county-level distribution with the same color coding.</p>
Ecological distribution	Occurs in facultative to obligate upland areas ¹ , Found in moist mountain soil throughout western mountains and east across Great Plains to Mississippi Valley ² . Circumboreal species ³ . Open areas with sand-gravel soil in grassland, shrub, forest, and tundra communities ⁴ .
Climate and elevation range	Occurs from low elevations at high latitudes to alpine tundra ⁴ .
Local habitat and abundance	Open areas with sand-gravel soil in grassland, shrub, forest, and tundra communities ⁴ . Prefers well-drained soils in low altitudes ⁵ .
Plant strategy type / successional stage	Drought tolerant, evergreen, handles variable soil conditions ³
Plant characteristics	Annual or biennial herb with simple leaves and bisexual flowers, typically less than 30cm in height. Morphology is complex and variable based on elevation, light and exposure. High elevations

	produce more petite specimen, lowlands can produce tall plants, shaded areas may have flowers with long stalks, exposed may have shorter stalks ⁴ . Takes full sun, produces a small white flower blooms mid to late spring ⁵ .
PROPAGATION DETAILS	
Ecotype	
Propagation Goal	Plants ³
Propagation Method	Seed ³
Product Type	Container (Plug) ³
Stock Type	
Time to Grow	
Target Specifications	Plants produced should be 3-25cm tall from a single taproot, stems are variable and may be hairless to short hairy to densely haired. Leaves are 1-3cm long oblate narrowing at the base. The flowers may be clusters or individual with 3-25 flowers on stems 1-5cm long, and consist of 5 rounded lobes. Fruit grows in capsules, top-shaped to round, approximately the size of the calix tube, seeds are dark brown and about 1mm long ⁶ .
Propagule Collection Instructions	Flowers produced from May-August.
Propagule Processing/Propagule Characteristics	Fruits, nearly globose ⁷
Pre-Planting Propagule Treatments	Seeds are non-dormant ³
Growing Area Preparation / Annual Practices for Perennial Crops	Optimal growing conditions: full sun with dry sandy soil, soil pH neutral or alkaline or acid ⁵
Establishment Phase Details	Germination occurs at 32°C day 22° C night alternating temperature cycle ³
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	Preferentially found in alpine rocky conditions, grows to 25 cm spreading to 20 cm ⁵
Other Comments	Not easily divided, may self sow ⁵
INFORMATION SOURCES	

References	<p>¹ USDA Natural Resources Conservation Service. (n.d.). <i>Androsace septentrionalis</i> L. Retrieved May 18, 2015, from plants.usda.gov: http://plants.usda.gov/core/profile?symbol=anse4</p> <p>² Lady Bird Johnson Wildflower Center. (2015). <i>NPIN: Native Plant Database: Androsace septentrionalis</i>. Retrieved May 18, 2015, from Wildflower.org: http://www.wildflower.org/plants/result.php?id_plant=ANSE4</p> <p>³ Baskin, C. C., & Baskin, J. M. (2002). <i>Propagation protocol for production of container Androsace septentrionalis</i> L. plants. Retrieved May 18, 2015, from Nativeplantnetwork.org: http://www.nativeplantnetwork.org/Network/ViewProtocols.aspx?ProtocolID=1484&referer=wildflower</p> <p>⁴ eFloras.org. (n.d.). <i>Flora of North America: Androsace septentrionalis</i> L. Retrieved May 18, 2015, from eFloras.org: http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=200016950</p> <p>⁵ Heritage Perennials. (2015). <i>Androsace septentrionalis</i> 'Star Dust'. Retrieved May 18, 2015, from Perennials.com: http://www.perennials.com/plants/androsace-septentrionalis-star-dust.html</p> <p>⁶ Plant-Life.org. (n.d.). <i>Northern Rock Jasmine Androsace septentrionalis</i> L. Retrieved May 18, 2015, from montana.plant-life.org: http://montana.plant-life.org/species/andro_septen.htm</p>
Other Sources Consulted	<p>Dave's Garden. (2015). <i>Pygmyflower Rockjasmine, Forthern Fairy Candelabra, Androsace septentrionalis</i>. Retrieved May 18, 2015, from Dave's Garden: http://davesgarden.com/guides/pf/go/133412/#b</p> <p>ITIS Report. (2015, May 18). <i>Androsace septentrionalis</i> L. Retrieved May 18, 2015, from Integrated Taxinomic Information System: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=23935</p> <p>Missouri Botanical Garden. (2015). <i>Androsace septentrionalis</i> L. Retrieved May 18, 2015, from Tropicos.org: http://www.tropicos.org/namesearch.aspx?name=androsace+septe ntrionalis</p> <p>Wa Native Plant Society. (2015). <i>Androsace septentrionalis</i>.</p>

	Retrieved May 18, 2015, from Burke Museum of Natural History and Culture: http://biology.burke.washington.edu/herbarium/imagecollection.php?ID=3590
Protocol Author	Rebecca Roth
Date Protocol Created or Updated	05/12/15