

## Plant Propagation Protocol for *[Insert Species]*

ESRM 412 – Native Plant Production

URL: [https://courses.washington.edu/esrm412/protocols/\[year\]/\[USDA Species Code\].pdf](https://courses.washington.edu/esrm412/protocols/[year]/[USDA Species Code].pdf)



Photo by Charmaine Delmatier. [http://www.easterncoloradowildflowers.com/Androsace\\_chamaejasme.htm](http://www.easterncoloradowildflowers.com/Androsace_chamaejasme.htm)

### TAXONOMY

Plant Family	There are few propagation information about <i>Androsace chamaejasme</i> , so some propagation detail listed includes information about other plants from the same genus.
Scientific Name	Primulaceae
Common Name	Primrose
Species Scientific Name	
Scientific Name	<i>Androsace chamaejasme</i> Wulfen
Varieties	No literature found
Sub-species	No literature found
Cultivar	No literature found
Common Synonym(s)	No literature found
Common Name(s)	Sweet-flower Rock-jasmine, Sweetflower Rock Jasmine, Sweetflower Rockjasmine
Species Code (as per USDA Plants database)	ANCH

### GENERAL INFORMATION

Geographical range	<p>Copyright:(c) 2014 Esri   USDA-NRCS-NGCE &amp; NPDT</p> <p> <span style="display: inline-block; width: 10px; height: 10px; background-color: #4CAF50; border: 1px solid black; margin-right: 5px;"></span> Native         <span style="display: inline-block; width: 10px; height: 10px; background-color: #2196F3; border: 1px solid black; margin-left: 20px; margin-right: 5px;"></span> Introduced         <span style="display: inline-block; width: 10px; height: 10px; background-color: #FF9800; border: 1px solid black; margin-left: 20px; margin-right: 5px;"></span> Bo       </p> <p> <span style="display: inline-block; width: 10px; height: 10px; background-color: #C8E6C9; border: 1px solid black; margin-right: 5px;"></span> Native, No County Data         <span style="display: inline-block; width: 10px; height: 10px; background-color: #BBDEFB; border: 1px solid black; margin-left: 20px; margin-right: 5px;"></span> Introduced, No County Data         <span style="display: inline-block; width: 10px; height: 10px; background-color: #FFCC80; border: 1px solid black; margin-left: 20px; margin-right: 5px;"></span> Bo       </p> <p>Native Status:</p> <p> <span style="display: inline-block; width: 10px; height: 10px; background-color: #4CAF50; border: 1px solid black; margin-right: 5px;"></span> L48         <span style="display: inline-block; width: 10px; height: 10px; background-color: #4CAF50; border: 1px solid black; margin-left: 10px; margin-right: 5px;"></span> AK         <span style="display: inline-block; width: 10px; height: 10px; background-color: white; border: 1px solid black; margin-left: 10px; margin-right: 5px;"></span> HI         <span style="display: inline-block; width: 10px; height: 10px; background-color: white; border: 1px solid black; margin-left: 10px; margin-right: 5px;"></span> PR         <span style="display: inline-block; width: 10px; height: 10px; background-color: white; border: 1px solid black; margin-left: 10px; margin-right: 5px;"></span> VI         <span style="display: inline-block; width: 10px; height: 10px; background-color: white; border: 1px solid black; margin-left: 10px; margin-right: 5px;"></span> NAV         <span style="display: inline-block; width: 10px; height: 10px; background-color: #4CAF50; border: 1px solid black; margin-left: 10px; margin-right: 5px;"></span> CAN         <span style="display: inline-block; width: 10px; height: 10px; background-color: white; border: 1px solid black; margin-left: 10px; margin-right: 5px;"></span> GL       </p> <p>(USDA)</p>
Ecological distribution	<i>Androsace chamaejasme</i> grows in rocky ridges and slopes in high alpine open tundra.
Climate and elevation range	<i>Androsace chamaejasme</i> can be found in elevation from 8500 to 11700 feet.
Local habitat and abundance	<i>Androsace chamaejasme</i> ranges from dry rocky meadow in Rocky Mountain tundra up to Canada and Alaska. It can also be found under cover of other alpine subshrubs and high-mountain cushion plants like manzanita.
Plant strategy type / successional stage	No literature found
Plant characteristics	<i>Androsace chamaejasme</i> is a perennial herb that grows to 1 inch tall and forms mats with scapes up to 4 inches tall. Its leaves grow in multiple rosettes with 3-15 mm in length and 3-4 mm in width. The leaves have ciliate margins, hirsute to glabrescent surface.

	Flowers of white and pink blooms during June, July, and August.
<b>PROPAGATION DETAILS</b>	
Ecotype	No
Propagation Goal	Seeds
Propagation Method	Seeds
Product Type	Container (plug)
Stock Type	No literature found
Time to Grow	No literature found
Target Specifications	No literature found
Propagule Collection Instructions	No literature found
Propagule Processing/Propagule Characteristics	No literature found
Pre-Planting Propagule Treatments	No literature found
Growing Area Preparation / Annual Practices for Perennial Crops	No literature found
Establishment Phase Details	(Androsace septentrionalis) Do not like dry and warm environment. Seed emergence is the highest (79%) when soil water level is -0.03MPa with temperature of 15°C. Germination in 25°C is 200% faster than in 20°C. (Blackshaw, 2003) (general primrose family) Well drained soil with pH between 5.5 and 6 (Linwick, 1996).
Length of Establishment Phase	10 to 14 days
Active Growth Phase	No literature found
Length of Active Growth Phase	4 to 6 weeks
Hardening Phase	(general primrose family) A reduction of temperature to 14-18°C is recommended (Hartnett, 1993).
Length of Hardening Phase	No literature found

Harvesting, Storage and Shipping	No literature found
Length of Storage	No literature found
Guidelines for Outplanting / Performance on Typical Sites	No literature found
Other Comments	None
<b>INFORMATION SOURCES</b>	
References	<p>Delmatier, C. (2016). <i>U.S. Forest Service</i>. Sweetflower Rock Jasmine. Retrieved May 24, 2022, from <a href="https://www.fs.fed.us/wildflowers/plant-of-the-week/androsace_chamaejasme_carinata.shtml">https://www.fs.fed.us/wildflowers/plant-of-the-week/androsace_chamaejasme_carinata.shtml</a></p> <p>USDA. (n.d.). <i>Androsace chamaejasme</i> Wulfen. USDA plants database. Retrieved May 24, 2022, from <a href="https://plants.usda.gov/home/plantProfile?symbol=ANCH">https://plants.usda.gov/home/plantProfile?symbol=ANCH</a></p> <p><i>Androsace chamaejasme</i> Wulfen ex Host subsp. <i>lehmanniana</i> (Sprengel) Hultén, Fl. Alaska Yukon. 8: 1280. 1948.</p> <p>Baskin, C.J. and Baskin, J.M. <i>Seeds: Ecology, Biogeography and Evolution in Dormancy and Germination</i>, Academic Press, 1998. Chapter 10: A Geographical Perspective on Germination Ecology: Temperate and Arctic Zones, pages 331 to 458.</p> <p>Blackshaw, R. E. (2003). Soil temperature and soil water effects on Pygmyflower (<i>Androsace septentrionalis</i>) emergence. <i>Weed Science</i>, 51(4), 592–595. <a href="https://doi.org/10.1614/0043-1745(2003)051[0592:staswe]2.0.co;2">https://doi.org/10.1614/0043-1745(2003)051[0592:staswe]2.0.co;2</a></p> <p>Linwick, T. (1996). <i>Primula</i> culture made easy. <i>GrowerTalks</i> 60(2):47, 52.</p> <p>Hartnett, G. (1993). Focus on <i>primula</i> pro- duction. <i>Professional Plant Growers Assn. News</i> 24(7):4–7, 10–11, 14.</p> <p>Host, W. ex, &amp; Kelso, S. (2020). <i>Androsace Chamaejasme</i>. <i>Androsace chamaejasme</i> - FNA. Retrieved May 24, 2022, from <a href="http://floranorthamerica.org/Androsace_chamaejasme">http://floranorthamerica.org/Androsace_chamaejasme</a></p> <p>Fasciani, P., Pirone, G., &amp; Pace, L. (2011, September). Plant biodiversity at high altitude: in vitro preservation. In <i>VII International</i></p>

	<p><i>Symposium on In Vitro Culture and Horticultural Breeding</i> 961 (pp. 159-166).</p> <p>Karlsson, M. G. (2001). Primula culture and production. <i>HortTechnology</i>, 11(4), 627–635.  <a href="https://doi.org/10.21273/horttech.11.4.627">https://doi.org/10.21273/horttech.11.4.627</a></p>
Other Sources Consulted	
Protocol Author	Yutong Sun
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