

Plant Propagation Protocol for *Salix myrtilifolia* Andersson

ESRM 412 – Native Plant Production

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

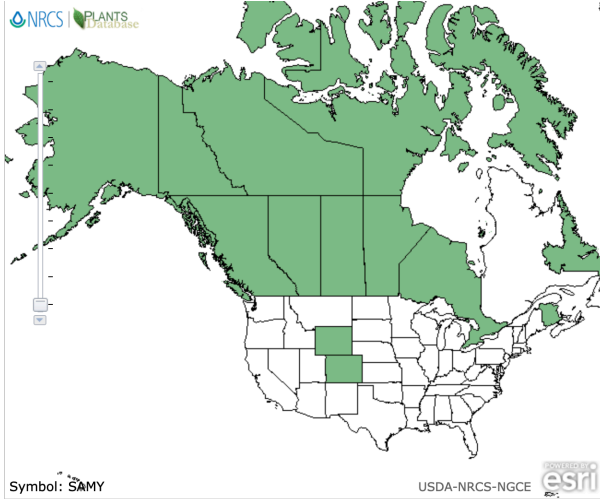


Figure 1 North American Distribution of Blueberry Willow



Figure 2 PNW Distribution of Blueberry Willow



Figure 3 Blueberry Willow

Figure 1, 2 & 3 “Plants Profile for *Salix Myrtilifolia* (Blueberry Willow).” plants.usda.gov

TAXONOMY	
Plant Family	
Scientific Name	Salicaceae
Common Name	Willow Family
Species Scientific Name	
Scientific Name	<i>Salix myrtillifolia</i> Andersson
Varieties	No recognized varieties
Sub-species	No recognized sub-species
Cultivar	No recognized cultivars
Common Synonym(s)	<i>Salix lingulata</i> Andersson, <i>Salix myrsinites</i> L. var. <i>curtiflora</i> Andersson, nom. inq., <i>Salix myrtillifolia</i> Andersson var. <i>curtiflora</i> (Andersson) Bebb ex Rose <i>Salix myrtillifolia</i> Andersson var. <i>lingulata</i> (Andersson) C.R. Ball <i>Salix novae-angliae</i> Andersson var. <i>myrtillifolia</i> (Andersson) Andersson <i>Salix novae-angliae</i> Andersson var. <i>pseudocordata</i> , <i>Salix pseudocordata</i> (Andersson) Rydb.
Common Name(s)	Blueberry Willow, Low Blueberry Willow, Tall Blueberry Willow
Species Code (as per USDA Plants database)	SAMY
GENERAL INFORMATION	

Geographical range	See Figure 1 & 2 for Distribution Map. Blueberry willow grows from interior Alaska east across northern Canada to Hudson and James Bay and south to southern British Columbia and southwestern Ontario. It grows as far south as Wyoming and Colorado. Outlying eastern populations occur on Prince Edward Island, and in New Brunswick and Newfoundland (1).
Ecological distribution	(FRES10) White - red - jack pine (FRES11) Spruce - fir (FRES23) Fir - spruce (FRES44) Alpine (1)
Climate and elevation range	6,000 - 10,000 feet elevation, requires moist conditions with full sun to thrive.
Local habitat and abundance	<i>Salix myrtilifolia</i> Andersson can be found in muskegs, fens, lake and river shores (2). Commonly associated with Western spruce, Great Lakes spruce, and Northeastern spruce.
Plant strategy type / successional stage	<i>Salix myrtilifolia</i> Andersson is an early successional species that follows after fires in lowland spruce stands, but will thin with later succession(3).
Plant characteristics	Life Form: Shrub Longevity: 30 years Seed characteristic: Many small lightweight seeds with cottony down to aid in dispersal. Height: Short Blueberry Willow between 8-24 inches. Tall Blueberry Willow between 6-8 feet. Type: Dioecious Physical Description: Small, narrow, alternate, deciduous leaves with woody branches. See Figure 3 for picture.
PROPAGATION DETAILS	
Ecotype	No recognized ecotypes
Propagation Goal	Plants and Cuttings

Propagation Method	Vegetative (seeding can be done, but willows do best with vegetative propagation)
Product Type	Container (plug)
Stock Type	Wild
Time to Grow	1 year (5)
Target Specifications	No data found
Propagule Collection Instructions	Cuttings can be taken of developed branches with woody material for tall blueberry willows. Low blueberry willows can be layered and soft cuttings may be taken once some rooting has developed. Cuttings should be taken in the late-winter to early spring so they have leaf development as a source of energy. (1)
Propagule Processing/Propagule Characteristics	Cutting should be 4-6 cm in length and 5 mm caliper wide (5).
Pre-Planting Propagule Treatments	Cuttings should be kept moist in transport and storage. Treat with 1000 ppm of IBA powder on proximal end of cutting. Strike in mistbed with bottom heat for 4-6 weeks (5).
Growing Area Preparation / Annual Practices for Perennial Crops	Media: 50% perlite and 50% sand (5). Area: Mistbed with intervals of 6 second sprays every 6 minutes with shade cloth overtop of cuttings. Adjust misting to plants tolerance as too much can cause rotting (5) Container: 800 ml plastic Other practices: After potting, move to outdoor shade house for four weeks, then to full sun exposure for the rest of the growing season (5).
Establishment Phase Details	Roots are formed on nodes below surface of media (5)
Length of Establishment Phase	4 to 6 weeks (5).

Active Growth Phase	After 4-6 weeks in mistbed, cuttings can be transplanted to 490 ml containers in media with 70% 6:1:1 milled sphagnum peat, perlite, and vermiculite 30% sand. After potting, move to outdoor shade house for four weeks, then to full sun exposure for the rest of the growing season (5).
Length of Active Growth Phase	8 weeks (5).
Hardening Phase	Gradually reduce irrigation for cuttings in September and October. Winterize cuttings with insulating foam (5).
Length of Hardening Phase	8 weeks (5).
Harvesting, Storage and Shipping	Harvest: After 1 year in the summer (protect in the winter from snow). Storage and shipping: No data found.
Length of Storage	5 months between nursery and outplanting (5).
Guidelines for Outplanting / Performance on Typical Sites	Plant in well-draining soil in fens or riparian areas of elevations above 6,000 feet. Plant as an early-successional species (4).
Other Comments	Blueberry willow can also be propagated by seed, but there is not enough information on that propagation method. Vegetative propagation is a well-known method for willows so information seen in this protocol relates to other willow species and has not yet been evaluated for this species.

INFORMATION SOURCES

References

- 1 *Salix Myrtilifolia*, www.fs.fed.us/database/feis/plants/shrub/salmyr/all.html.
- 2 Native Plant Network. *Reforestation, Nurseries and Genetics Resources*, npn.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=salicaceae-salix-1457&referer=wildflower.
- 3 Plants *Profile for Salix Myrtilifolia (Blueberry Willow)*, plants.usda.gov/core/profile?symbol=SAMY.
- 4 *Salix Myrtilifolia in Flora of North America* @ efloras.org, www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=242445799.
- 5 Native Plant Network. *Salix Artica*, npn.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=salicaceae-salix-169&referer=wildflower.

Other Sources Consulted	<p>6 <i>Plants Profile for Salix Arctica (Arctic Willow)</i>, plants.sc.egov.usda.gov/core/profile?symbol=SAAR27.</p> <p>7 <i>Salix Myrtillifolia</i> . Lady Bird Johnson Wildflower Center - The University of Texas at Austin, www.wildflower.org/plants/result.php?id_plant=SAMY.</p> <p>8 Brennan, Eugene. How to Grow Willow From Cuttings. <i>Dengarden</i>, Dengarden, 25 May 2019, dengarden.com/gardening/Growing-Willow-From-Cuttings.</p> <p>9 Ringgenberg, Stef. Willows of Colorado - Tree and Shrubs. <i>Boulder Tree</i>, 15 Nov. 2019, www.bouldertree.com/tree-identification/willows-colorado-tree-shrubs/.</p> <p>10 Hohey-Plants. <i>Salix Myrtillifolia</i> - Description and Flowering Period in Alaska, www.honey-plants.com/calendar/alaska/salix-myrtillifolia/</p>
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Date Protocol Created or Updated	06 May 2020

