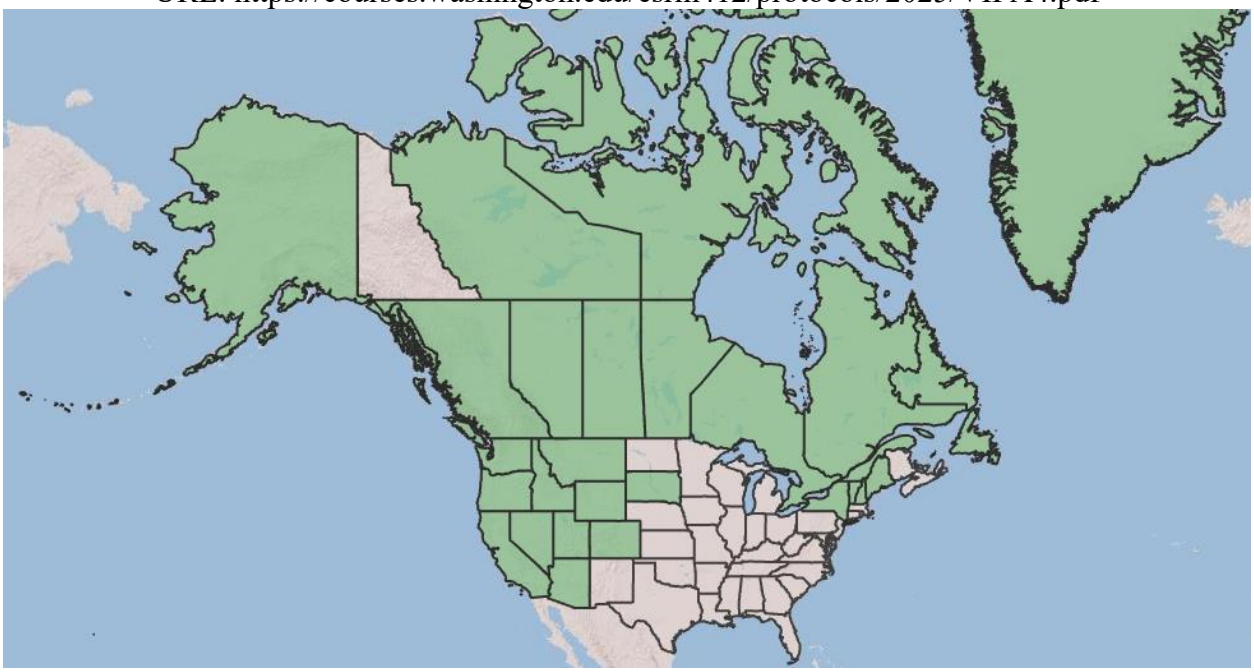
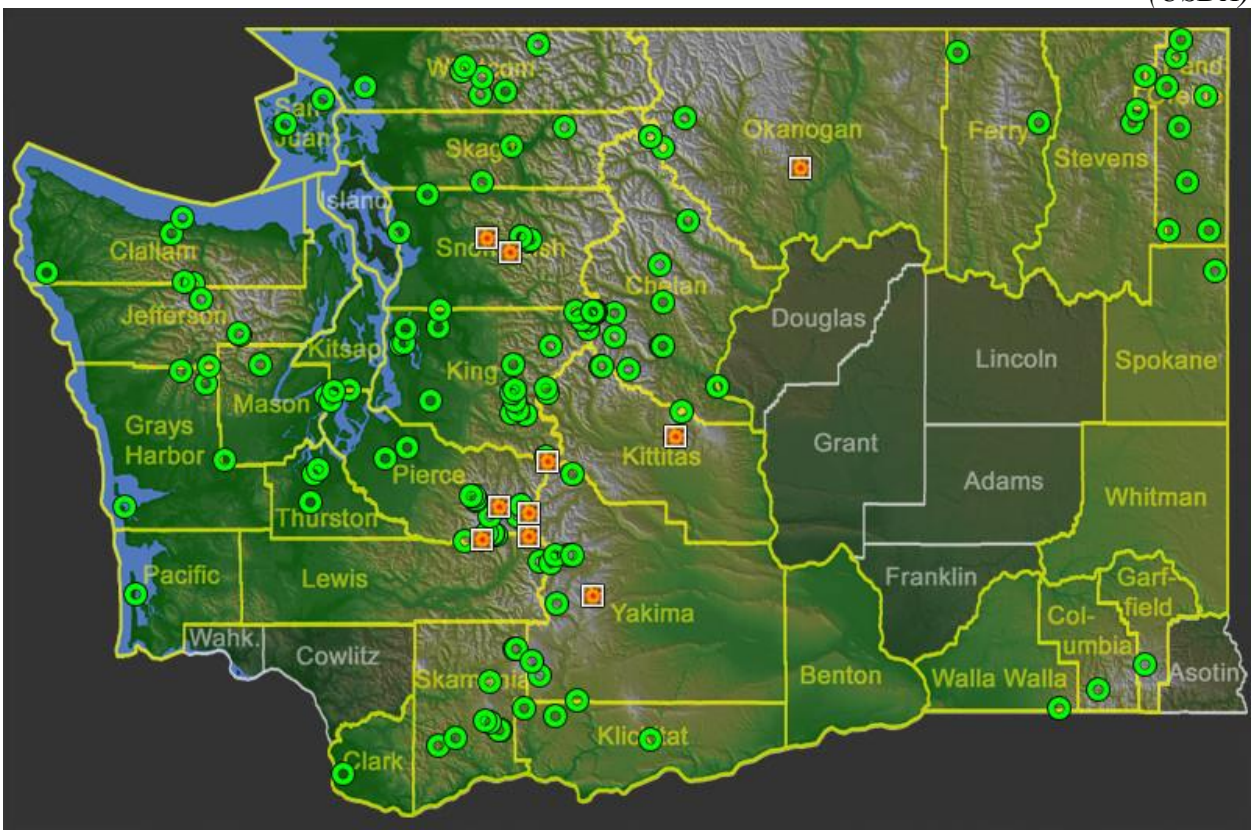
Plant Propagation Protocol for Viola Palustris
ESRM 412 – Native Plant Production
URL: https://courses.washington.edu/esrm412/protocols/2025/VIPA4.pdf



(USDA)



(Knoke)

TAXONOMY

Plant Family	
Scientific Name	*Violaceae*
Common Name	Violet family
Species Scientific Name	
Scientific Name	*Viola palustris* L.
Varieties	
Sub-species	*Viola palustris* L. var. *brevipes* (M.S. Baker) R.J. Davis *Viola palustris* L. var. *palustris* (*USDA*)
Cultivar	
Common Synonym(s)	
Common Name(s)	Marsh Violet
Species Code (as per USDA Plants database)	VIPA4
GENERAL INFORMATION	
Geographical range	See maps above.
Ecological distribution	Marshes and streambanks (Knoke). Soils need to be moist and are preferably acidic (Forbes).
Climate and elevation range	Elevation 0-1800 m (Viola palustris, 2025).
Local habitat and abundance	Grows best in partial shade, so it is found in both meadows and forests (Forbes).
Plant strategy type / successional stage	Can grow in wet, low-quality soils (Kendon, 2025). Shade tolerant (*Viola palustris*, 2025).
Plant characteristics	Perennial herb that “occurs in small colonies; individual plants are interconnected by stolons,” (Little, 2020). Flower petals are purple and white colored, 5 mm long (*Viola palustris*, 2025). Leaves are round and simple, “2.5-3.5 cm. broad," (Knoke). Seeds are dark brown, 1-2 mm in size (*Viola palustris*, 2025). Pollinated by many different bee species (*Marsh Violet)*.
PROPAGATION DETAILS	
Ecotype	No information found.
Propagation Goal	Plants
Propagation Method	Seed

Product Type	Container (plug)
Stock Type	No informaiton Found.
Time to Grow	11 months
Target Specifications	~10 cm tall
Propagule Collection Instructions	Flowers from May to July (Knoke). Collect seeds after this from August to October (Schultz, 2002). Carefully, collect seeds by hand, as capsules may be explosive (Schultz, 2002). Seed capsules are 6-10 mm long (Little, 2020).
Propagule Processing/Propagule Characteristics	Let seeds dry for 1-2 weeks before stratification, seeds are not cleaned (Schultz, 2002).
Pre-Planting Propagule Treatments	Cold stratify seeds for 90 days (Baskin, 2003).
Growing Area Preparation / Annual Practices for Perennial Crops	Seeds can be sown in any size container, with 2 seeds per cell (Schultz, 2002).
Establishment Phase Details	Moves seeds to greenhouse to germinate, keep soil damp but water gently. The temperature ranges from about 55°F in the winter to 100°F in the summer (Schultz, 2002).
Length of Establishment Phase	3 months, from February to April
Active Growth Phase	Fertilizer does not need to be used, “soil does not need to be consistently moist,” (Schultz, 2002).
Length of Active Growth Phase	5 months, from April to August
Hardening Phase	Around mid-March, move to a cold frame with partial sunlight. “Water less frequently,” (Schultz, 2002).
Length of Hardening Phase	1 month
Harvesting, Storage and Shipping	No information found.
Length of Storage	No information found.
Guidelines for Outplanting / Performance on Typical Sites	No information found.

Other Comments	(Schultz, 2002) is a propagation protocol for *Viola canadensis*, information from this source pertains to this species. Information for *Viola palustris* was used where available.
INFORMATION SOURCES	
References	Baskin, C., & Baskin, J. (2003). *Propagation protocol for production of Container (plug) Viola palustris L. plants University of Kentucky Lexington, Kentucky.* Native Plant Network; US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources. https://npn.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=violaceae-viola-2535 Forbes, R. (n.d.). *Viola palustris L., Marsh Violet*. Fermanagh Species Accounts . Retrieved May 7, 2025, from https://fermanagh.bsbi.org/viola-palustris-l Kendon, J. P., Novotna, A., Ramsay, M. M., Porter, A., & Sarasan, V. (2021). Large scale propagation and in vitro weaning for the restoration of Viola palustris to support assisted colonisation of a threatened butterfly. *The EuroBiotech Journal*, *5*(4), 170–179. https://doi.org/10.2478/ebtj-2021-0026 Knoke, Don , & Giblin, David . (n.d.). *Viola palustris*. Burke Herbarium Image Collection. Retrieved May 6, 2025, from https://www.burkeherbarium.org/imagecollection/taxon.php?Taxon=Viola+palustris Little, J., & Landon, M. (2020, July 30). *Viola palustris*. Flora of North America. http://dev.floranorthamerica.org/Viola_palustris 140 *Marsh Violet—Viola palustris.* (n.d.). Montana Field Guide.; Montana Natural Heritage Program. Retrieved May 7, 2025, from https://fieldguide.mt.gov/speciesDetail.aspx?elcode=PDVIO041G0 Schultz, J., Beyer , P., & Williams, J. (2002). *Propagation protocol for production of Container (plug) Viola canadensis L. plants USDA FS - Hiawatha National Forest Marquette, Michigan.* Native Plant Network. https://npn.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=violaceae-viola-2146 *USDA plants database*. (n.d.). Natural Resources Conservation Service; U.S. Department of Agriculture. Retrieved May 6, 2025, from https://plants.usda.gov/plant-profile/VIPA4 *Viola palustris*. (2025, March 19). The University and Jepson Herbaria; University of California, Berkeley. https://ucjeps.berkeley.edu/eflora/eflora_display.php?name=Viola%20palustris
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	Meineri, E., Skarpaas, O., Spindelböck, J., Bargmann, T., & Vandvik, V. (2014). Direct and size-dependent effects of climate on flowering performance in alpine and lowland herbaceous species. *Journal of Vegetation Science*, *25*(1), 275–286. http://www.jstor.org/stable/24035692 Ohkawara, K., & Higashi, S. (1994). Relative importance of ballistic and ant dispersal in two diplochorous Viola species (Violaceae). *Oecologia*, *100*(1-2), 135–140. https://doi.org/10.1007/BF00317 *Oregonflora*. (n.d.). Retrieved May 7, 2025, from https://oregonflora.org/taxa/index.php?taxon=9140
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