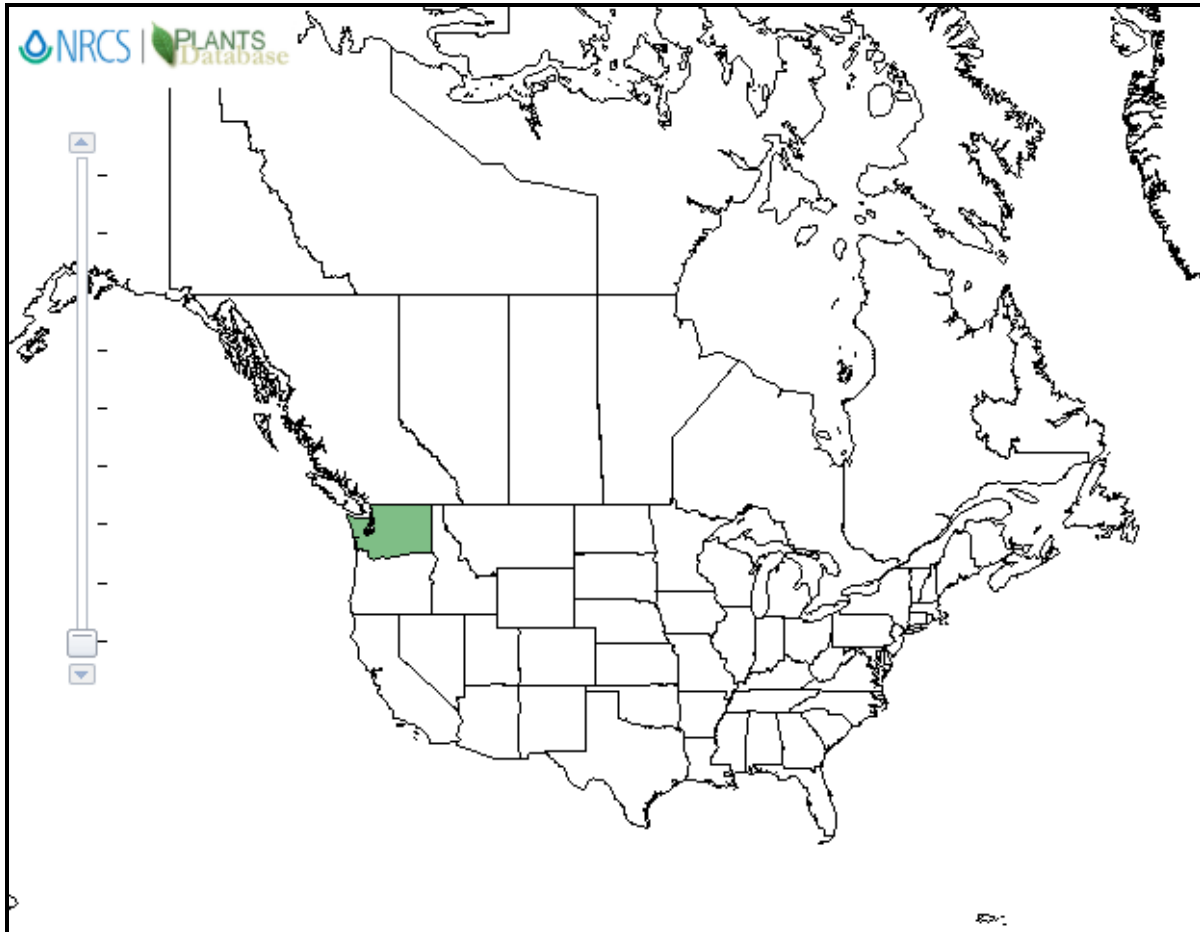


Plant Propagation Protocol for *Viola flettii*

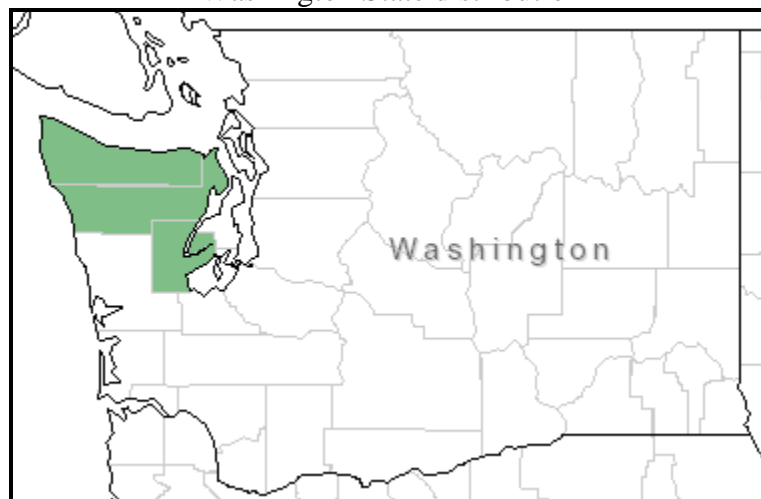
ESRM 412 – Native Plant Production

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

North America distribution



Washington State distribution



TAXONOMY	
Plant Family	
Scientific Name	<i>Violaceae</i>
Common Name	Violet family
Species Scientific Name	
Scientific Name	<i>Viola flettii</i> Piper
Varieties	N/A
Sub-species	N/A
Cultivar	N/A
Common Synonym(s)	N/A
Common Name(s)	Olympic violet, Flett's Violet
Species Code (as per USDA Plants database)	VIFL
GENERAL INFORMATION	
Geographical range	Washington- See maps above (1)
Ecological distribution	Endemic to the Olympic mountains, WA. (4)
Climate and elevation range	Seasonally moist climates, high elevation. (5)
Local habitat and abundance	Alpine rock crevices and talus slopes at high elevations. (5)
Plant strategy type/successio	No information.

nal stage	
Plant characteristics	General: glabrous perennial herb with erect stems (3-15cm) from fleshy rhizome. Leaves: broad, fleshy purplish-green leaves with reniform blades, finely-toothed; stipules are lanceolate. Flowers: 1.5 cm long with yellow and violet colored petals; style head is well bearded. Fruit is a 3-valved capsule. (4)
PROPAGATION DETAILS	
*(No information for <i>Viola flettii</i> Piper, propagation method for Violet family)	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Stem- tip cutting
Product Type	Cuttings
Stock Type	Cells, 4 in. pots
Time to Grow	No information.
Target Specifications	Cuttings
Propagule Collection Instructions	Collect cuttings in spring-early summer about 1-2 in long. If cuttings are from a greenhouse collect cuttings soon after growth has begun. Stems should be soft, almost succulent. (6)
Propagule Processing/Propagule Characteristics	No information
Pre-Planting Propagule Treatments	Cuttings loose moisture easily so it is important that roots are kept moist and well protected. (6)
Growing Area Preparation / Annual Practices for Perennial Crops	Cuttings should be inserted into a media mix that supports the cuttings and be sterile, water-retentive, and well aerated: Mixtures of peat, and grit, perlite, vermiculite or sand are among the best options. To insert cuttings into rooting media, make small holes and insert each cutting so that its leaves sit just above the surface. Place cuttings in a closed case or tent them under plastic (to keep humid) in bright light with a temperature between 65-70°F (6)
Establishment Phase Details	Once cuttings have rooted, up-pot to 4 in. pots and keep them encased with soilless potting mix. A cold frame, greenhouse, or plastic film-tunnel may be used for growing cuttings on or in warm climates; shade from strong sun. (6)
Length of Establishment Phase	4-8 weeks. (6)
Active Growth Phase	No information.
Length of Active Growth Phase	No information.
Hardening Phase	Period of hardening is essential for survival of cuttings. (6)
Length of Hardening Phase	No information.
Harvesting, Storage and Shipping	N/A
Length of Storage	N/A
Guidelines for Outplanting / Performance on Typical Sites	No information.
Other Comments	

INFORMATION SOURCES

References	<p>1. “<i>Viola flettii</i> Piper”. Retrieved from https://plants.usda.gov/core/profile?symbol=VIFL</p> <p>2. “Flora of North America.” Retrieved from http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=250100914</p> <p>3. “<i>Viola flettii</i>”. Retrieved from https://www.wildflower.org/plants/result.php?id_plant=VIFL</p> <p>4. “<i>Viola flettii</i>”. Retrieved from http://biology.burke.washington.edu/herbarium/imagecollection.php?Genus=Viola&Species=flettii</p> <p>5. “Alpine”. Retrieved from https://www.nps.gov/olym/learn/nature/alpine.htm</p> <p>6. Toogood, Alan. “The American Horticulture Society: Plant Propagation.” New York, NY, DK Publishing, 1999. 155, 213</p>
Other Sources Consulted	<p>“Turner Photographics: <i>Viola flettii</i>”. Retrieved from https://www.pnwflowers.com/flower/viola-flettii</p> <p>http://biology.burke.washington.edu/herbarium/waflora/checklist.php?Taxon=Viola%20flettii&ID=9413</p> <p>“Washington Flora Checklist: <i>Viola Flettii</i> Piper”. Retrieve from https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=22080#null</p> <p>“<i>Viola Flettii</i> Piper”. Retrieved from https://www.gbif.org/species/5331224</p> <p>http://explorer.natureserve.org/servlet/NatureServe?searchName=Viola+flettii</p>
Protocol Author	Sara Wallesen
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