

## Plant Propagation Protocol for *Anemone piperi*

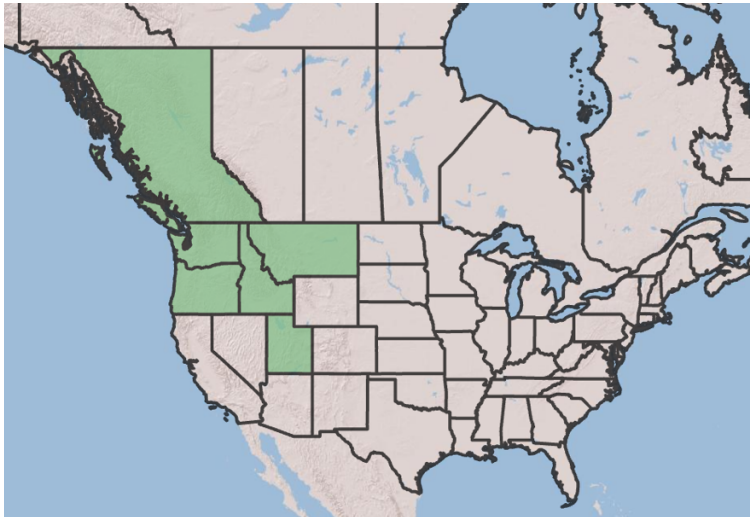
ESRM 412 – Native Plant Production

URL: <https://courses.washington.edu/esrm412/protocols/2022/ANPI.pdf>

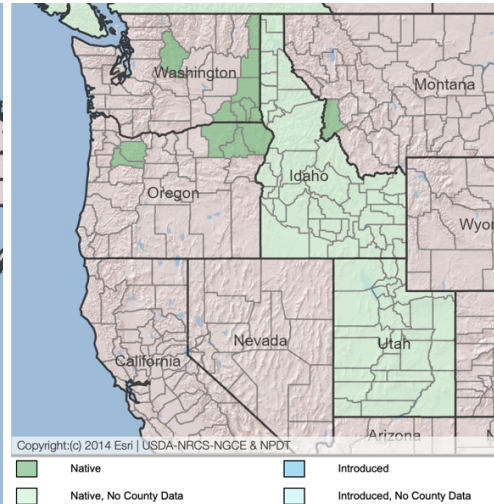


Source: Flora of British Columbia<sup>3</sup>

North American Distribution

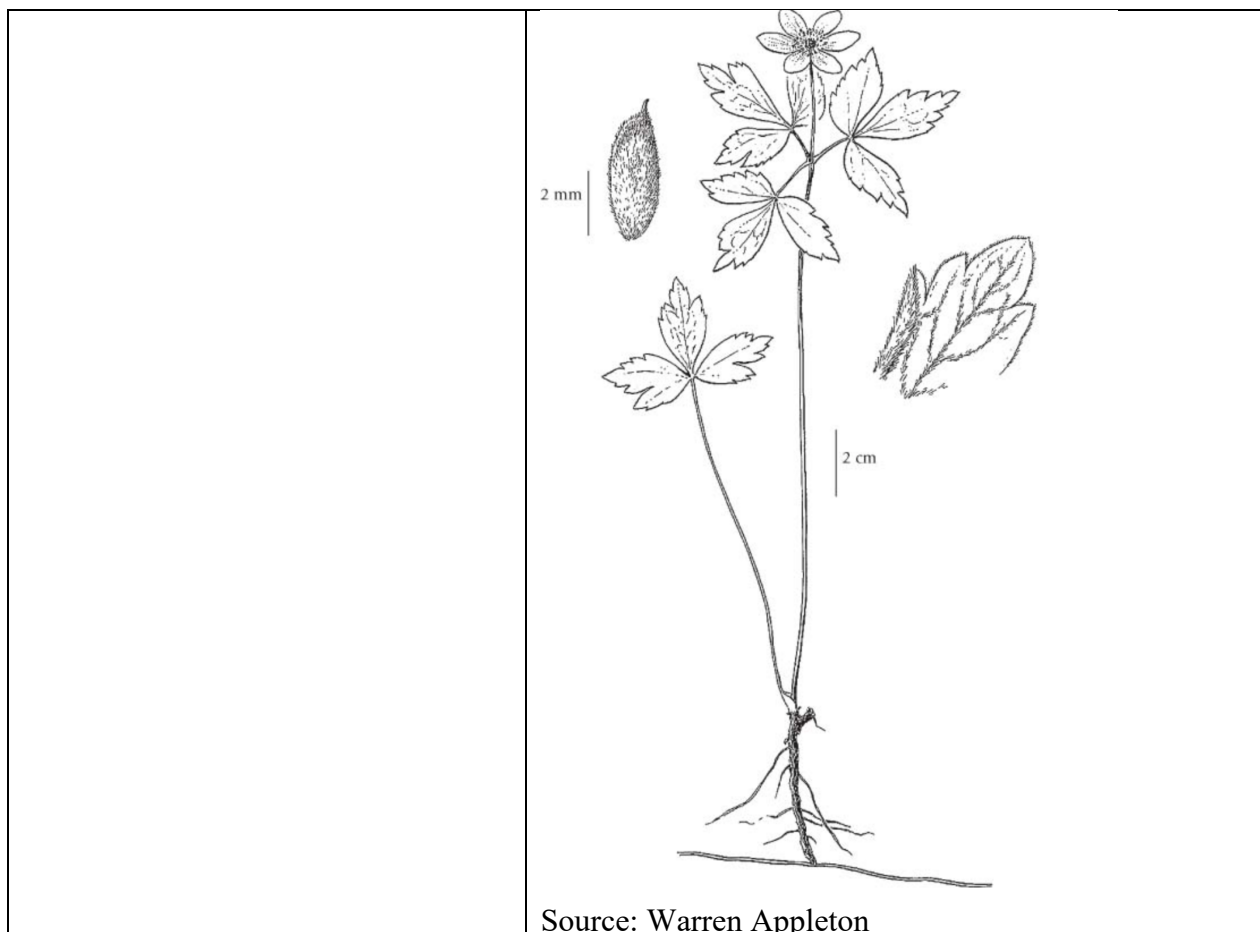


Pacific Northwest Distribution



Source: USDA Plant Database<sup>1</sup>

TAXONOMY	
Plant Family	
Scientific Name	Ranunculaceae
Common Name	Buttercup family
Species Scientific Name	
Scientific Name	<i>Anemone piperi</i> Britton ex Rydb
Varieties	
Sub-species	
Cultivar	
Common Synonym(s)	
Common Name(s)	Piper's anemone <sup>1</sup> , Windflower <sup>4</sup>
Species Code (as per USDA Plants database)	ANPI
GENERAL INFORMATION	
Geographical range	Maps above depict the North American and Pacific Northwest Distribution
Ecological distribution	Shaded, moist forest <sup>3</sup> , riparian areas <sup>5</sup> , mountainous terrain <sup>6</sup>
Climate and elevation range	Elevation: 0-10,000 ft range <sup>3</sup> Climate: medium drought tolerance <sup>3</sup> , partial shade/understory <sup>6</sup> pH: 5-6 <sup>8</sup>
Local habitat and abundance	Commonly associated with <i>Pinus ponderosa</i> , <i>Larix occidentalis</i> , <i>Pseudotsuga menziesii</i> , <i>Abeis grandis</i> <sup>11</sup>
Plant strategy type / successional stage	No information about <i>Anemone piperi</i> but <i>Anemone quinquefolia</i> is similar and is weedy/colonizer that makes colonies and creates groundcover for open woods <sup>12</sup> . <i>Anemone piperi</i> also spreads via rhizome root <sup>8</sup> .
Plant characteristics	General: Perennial, deep roots <sup>2</sup> , rhizome root structure <sup>8</sup> , flowering stems up to 14 inches tall <sup>7</sup> Leaves: basal leaves single, trifoliate, 3 leaves near the top of the stem below the flower <sup>2</sup> Flowers: single, 5-7 sepals, white or pale pink, bloom April-June <sup>2</sup>



Source: Warren Appleton

**PROPAGATION DETAILS: seeds\***

Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Propagules
Stock Type	N/A
Time to Grow	The seedlings can take up to 5 years to flower, if out planted prior to that time they will only spread via rhisome <sup>12</sup>
Target Specifications	4-8 inches, flower producing <sup>12</sup>
Propagule Collection Instructions	Flowers bloom in April-August <sup>7</sup> , collect seeds in this same time frame when the seed pods have almost entirely dried up <sup>13</sup> , remove the seeds from the pods prior to planting <sup>13</sup>
Propagule Processing/Propagule Characteristics	270,000 seeds per pound <sup>10</sup>
Pre-Planting Propagule Treatments	Seeds should be planted as close to collection as possible and should be kept moist until planted <sup>13</sup> . It is recommended to sow four to six times more seeds than the amount of plants you intend to grow because of low germination rate <sup>13</sup> .

Growing Area Preparation / Annual Practices for Perennial Crops	Use humus-rich, well- drained soil in an area with partial to full shade <sup>12</sup> , dampen soil prior to planting and water the area directly after seeding <sup>12</sup>
Establishment Phase Details	Seeds should be sown at around 20 degrees C (68 degrees F) <sup>9</sup> , the germination is slow <sup>9</sup> but once the seedlings appear they spread rapidly due to their rhizome root structure <sup>8</sup> . Plant the seeds and barely cover with soil or mulch, keep them moist with regular watering until leaves begin to appear <sup>13</sup> .
Length of Establishment Phase	No concrete time is recorded
Active Growth Phase	After two to three sets of leaves have grown from the lightly covered seeds, they can be replanted into deeper soil <sup>13</sup> . They should be regularly watered in order to maintain soil moisture and grown in an area with partial to full shade. <sup>13</sup>
Length of Active Growth Phase	Late spring (when the seeds should be harvested) to early fall <sup>13</sup>
Hardening Phase	N/A
Length of Hardening Phase	N/A
Harvesting, Storage and Shipping	Seeds should be collected April-August when the seed pods are almost entirely dried up <sup>13</sup> . They should be kept moist until they can be planted. <sup>13</sup> For the best germination rate, seeds should be planted as close to collection as possible <sup>13</sup> .
Length of Storage	There is no specific time but seeds have a better germination rate the less time they are stored <sup>13</sup>
Guidelines for Outplanting / Performance on Typical Sites	Plants generally perform well after being out planted. They spread via rhizome and after 3-5 years begin to flower and spread via seed as well. <sup>13</sup>
Other Comments	*there is very little information present about <i>Anemone piperi</i> so I used information from <i>Anemone quinquefolia</i> which is similar but grows primarily in the northeastern United States.
<b>INFORMATION SOURCES</b>	
References	See below
Other Sources Consulted	See below
Protocol Author	Elizabeth Leitz
Date Protocol Created or Updated	05/22/22

### References:

<sup>1</sup> USDA NRCS National Plant Data Team. *Anemone piperi* Britton ex Rydb. 22 May 2022.  
<<https://plants.usda.gov/home/plantProfile?symbol=ANPI>>

<sup>2</sup> Knoke, Don., Giblin, David. *Anemone piperi*: Piper's anemone, Piper's windflower. Burke Herbarium Image Collection. 23 May 2022.

<<https://biology.burke.washington.edu/herbarium/imagecollection/taxon.php?Taxon=Anemone%20piperi>>

<sup>3</sup> In Klinkenberg, Brian. *Anemone piperi*. E-Flora BC: Electronic Atlas of the Plants of British Columbia. Lab for Advanced Spatial Analysis, Department of Geography, University of British Columbia, Vancouver. 26 May 2022.

< <http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Anemone%20piperi&noTransfer=0>>

<sup>4</sup>Wildflowers of the United States. *Piper's Anemone, Windflower- Anemone piperi*. 26 May 2022.

< <https://uswildflowers.com/detail.php?SName=Anemone%20piperi>>

<sup>5</sup>Sullivan, Steven. *Piper's anemone*. Wildflower Search. 26 May 2022.

<<https://wildflowersearch.org/search?oldstate=gloc%3Az%3Bbloom%3AIgnore%3Bname%3AAnemone+piperi>>

<sup>6</sup>Idaho Mountain Wildflowers. *Buttercup Family, Ranunculaceae*. 26 May 2022.

< <https://www.larkspurbooks.com/ranun1.html#piperi>>

<sup>7</sup>Ladybird Johnson Wildflower Center. *Anemone piperi*. 2012. 26 May 2022.

< [https://www.wildflower.org/plants/result.php?id\\_plant=ANPI](https://www.wildflower.org/plants/result.php?id_plant=ANPI)>

<sup>8</sup>Warren Appleton. *Anemone piperi*. 26 May 2022.

< <http://www.warrenappleton.ca/ecology/species/a/anemone-piperi/>>

<sup>9</sup>Seed Germination Database. *Anemone lyallii*. 26 May 2022.

< <https://tomclothier.hort.net/page02.html>>

<sup>10</sup>Prairie Moon Nursery. *Anemone quinquefolia*. 27 May 2022.

<<https://www.prairiemoon.com/anemone-quinquefolia.html>>

<sup>11</sup> Ladybird Johnson Wildflower Center. *Anemone quinquefolia*. 27 May 2022.

< [https://www.wildflower.org/plants/result.php?id\\_plant=anqu](https://www.wildflower.org/plants/result.php?id_plant=anqu)>

<sup>12</sup>Gardenia. *Anemone quinquefolia*. 27 May 2022.

< <https://www.gardenia.net/plant/anemone-quinquefolia>>

<sup>13</sup>Rhode, Trent. *How to Grow Wood Anemone Flowers for Shady Areas*. Gardner's Path. 27 May 2022.

< <https://gardenerspath.com/plants/flowers/grow-wood-anemone/>>

### Other Sources Consulted:

Flora of North America. *Anemone piperi*. 24 May 2022.

<[http://www.efloras.org/florataxon.aspx?flora\\_id=1&taxon\\_id=233500081](http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=233500081)>

Hoot, Sara., Meyer, Kyle., and Manning, John. *Phylogeny and Reclassification of Anemone (Ranunculaceae), with an Emphasis on Austral Species*. Systematic Botany Vol. 37, Issue 1, 2012. 25 May 2022.