

**Plant Propagation Protocol for Pipsissewa (*Chimaphila menziesii*)**  
 ESRM 412 – Native Plant Production  
 University of Washington  
 Spring 2008



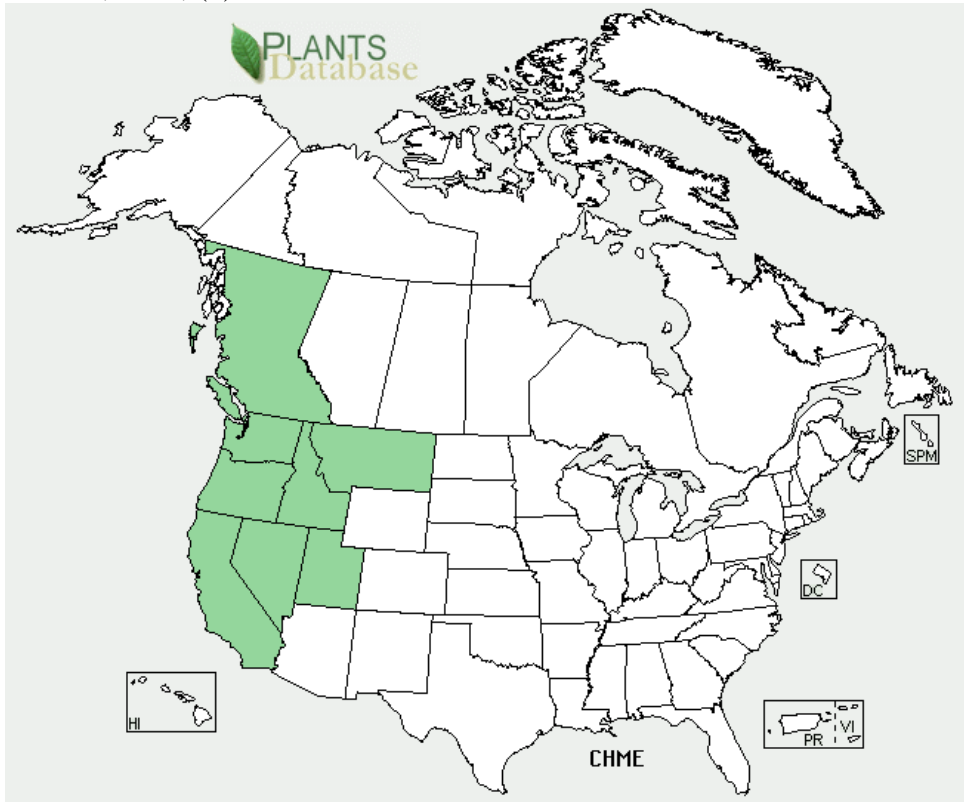
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<b>TAXONOMY</b>	
Family Names	
Family Scientific Name:	Pyrolaceae
Family Common Name:	Wintergreen
Scientific Names	
Genus:	<i>Chimaphila</i>
Species:	<i>menziesii</i>
Species Authority:	(R. Br. ex D. Don) Spreng
Variety:	
Sub-species:	

Cultivar:	
Authority for Variety/Sub-species:	
Common Synonym(s)	Sometimes classified under the Ericaceae family, but usually Pyrolaceae is distinguished as a separate family. <sup>4</sup>
Common Name(s):	little prince's pine, pipsissewa
Species Code (as per USDA Plants database):	CHME

### GENERAL INFORMATION

Geographical range	<p>British Columbia, Washington, Idaho, Montana, Oregon, California, Nevada, Utah, (1)</p>  <p style="text-align: right;">2</p>
Ecological distribution:	Well drained sites in either open or dense coniferous forests, also in clearings, humus and on rotting wood. It is not on the outer coast <sup>2</sup> It is a shade tolerant understory shrub <sup>3</sup>
Climate and elevation range:	Low to mid elevation <sup>2</sup> 2500 - 8000 feet <sup>5</sup>
Local habitat and abundance;	<i>Chimaphila menziesii</i> is similar to and associated with <i>Chimaphila umbellata</i> (which shares the common names “Princes Pine”, and “Pipsissewa”) of which there are three sub species, the one growing in the northwest being <i>Chimaphila umbellata</i> (L.) W. Bartram ssp. <i>occidentalis</i>

	(Rydb.) Hultén. <sup>2</sup> <i>Chimaphila menziesii</i> is easily distinguished from its taller counterpart by a reddish stem and alternate leaf pattern.
Plant strategy type / successional stage:	Occurs at all succession stages, but after fires, usually only late stage. <sup>3</sup>
Plant characteristics :	Shrub, creeping rhizomes, evergreen, reddish stems up to 15 cm tall, without hairs.  Leaves: alternate, 2-5 cm long, usually sharply toothed <sup>2</sup>  Though sensitive to fire, it is known to resprout from rhizomes following a fire. Severely hindered by fires, and survival is usually associated with weak fires, or safe sites that weren't burned. <sup>3</sup>
<b>PROPAGATION DETAILS</b>	
Ecotype:	Not applicable
Propagation Goal:	Plants
Propagation Method:	Vegetative
Product Type:	Container (plug)
Stock Type:	4 inch pots
Time to Grow:	4 months
Target Specifications:	8cm tall plant
Propagule Collection:	Lift plant out of earth and harvest rhizomes ideally in early spring (Northern Hemisphere: March-April) before new growth, <sup>9</sup> or in late fall after the growing season is over. <sup>11</sup>  Note: for seed collection purposes, <i>Chimaphila</i> Blooms June – August <sup>6</sup> , producing tiny capsules <sup>2</sup> .
Propagule Processing/Propagule Characteristic:	Be sure that each rhizome has at least one node. Sever rhizome as near to the base as possible without harming parent plant. Ignore rhizomes that appear to be old or dry. Retain root hairs if possible. <sup>10</sup>
Pre-Planting Propagule Treatments (cleaning, dormancy treatments, etc):	Rhizomes need to be planted or stored immediately to prevent drying. <sup>10</sup>  Optional: to propagate more individuals, further divide rhizomes at internodes, being sure that each severed rhizome retains at least one eye (node). <sup>10</sup>
Growing Area Preparation / Annual Practices for Perennial Crops:	Bury rhizomes horizontally 3-6cm under soil. If the divisions are too long, bury them in a U-shape, with cut end(s) pointing up. <i>Chimaphila</i> may like slightly acid soils. <sup>8</sup> Pot in 4 inch containers.

Establishment Phase:	Sprouting from rhizomes could begin after a few days, or take as long as a month. Keep moist, but do not overwater, lest the rhizomes rot. <sup>7</sup> Generally, rhizome divisions produce branches fairly quickly, but their adventitious roots emerge much later because the rhizomes have already stored adequate nutrients for leaf growth. <sup>11</sup>
Length of Establishment Phase:	1 week-1 month <sup>7</sup>
Active Growth Phase:	Unknown.
Length of Active Growth Phase:	Unknown.
Hardening Phase:	Unknown.
Length of Hardening Phase:	Unknown.
Harvesting, Storage and Shipping:	Rhizomes should be kept slightly moist – achievable by storing with moist soil or peat moss (but not soaking). <sup>7</sup> Because the nodes of rhizomes remain dormant during winter, refrigeration may induce a dormancy effect for longer term storage, as observed with seeds, but this is not referenced in literature.
Length of Storage:	Unknown.
Guidelines for Outplanting / Performance on Typical Sites:	May enjoy a mulch of pine needles. <sup>8</sup> Grows from 10-15cm tall.
Other Comments:	The common name "pipsissewa" comes from the Cree names "pipisisikweu" which means "it breaks into small pieces" because the leaves supposedly contain a substance that dissolves kidney stones. <sup>2</sup>

### INFORMATION SOURCES

References:	<ol style="list-style-type: none"> <li>1. USDA <a href="http://www.plants.usda.gov/java/profile?symbol=CHME">http://www.plants.usda.gov/java/profile?symbol=CHME</a>. Last access: April 27, 2008. <a href="http://plants.usda.gov/java/profile?symbol=CHUMO2">http://plants.usda.gov/java/profile?symbol=CHUMO2</a></li> <li>2. Pojar, Jim and Andy MacKinnon. Plants of the Pacific Northwest Coast. Lone Pine: Vancouver, British Columbia. 1994. Pg. 226.</li> <li>3. US Forest Service. <a href="http://www.fs.fed.us/database/feis/plants/shrub/chimen/all.html">http://www.fs.fed.us/database/feis/plants/shrub/chimen/all.html</a>. Last access: April 27, 2008.</li> <li>4. Calflora. <a href="http://www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=1993">http://www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=1993</a>. Last access: April 27, 2008.</li> <li>5. California Native Plant Link Exchange. <a href="http://www.cnplx.info/nplx/species?taxon=Chimaphila+menziesii">http://www.cnplx.info/nplx/species?taxon=Chimaphila+menziesii</a>. Last access: April 27, 2008.</li> <li>6. Williams, Margaret. US Forest Service. <a href="http://www.fs.fed.us/wildflowers/regions/northern/index.shtml.php?ID">http://www.fs.fed.us/wildflowers/regions/northern/index.shtml.php?ID</a></li> </ol>
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	<p>=5617. Last access: April 28, 2008.</p> <p>7. Robinson, Ralph and Olive Robinson. <a href="http://www.robsviolet.com/propagating.htm">http://www.robsviolet.com/propagating.htm</a>. Last access: April 28, 2008.</p> <p>8. Suite 101. "Pipsissewa". September 23, 2002. <a href="http://www.suite101.com/article.cfm/herbalism/95292">http://www.suite101.com/article.cfm/herbalism/95292</a>. Last access: April 29, 2008.</p> <p>9. Seddon, George and Andrew Bicknell. <u>Plants Plus</u>. Rodale Press: Emmaus, Pennsylvania. 1987. Pg. 13, 104.</p> <p>10. Tobey, Peter. <u>Pirating Plants</u>. Tobey Publishing Co. Inc: New Cannan Connecticut. 1975. Pg. 132, 133.</p> <p>11. Hartmann and Kester. <u>Plant Propagation</u>. Prentice-Hall Inc: Englewood Cliffs, New Jersey. 1959. Pg. 447, 448.</p>
Other Sources Consulted:	<ul style="list-style-type: none"> <li>• Toogood, Alan. <u>Plant Propagation Made Easy</u>. Timber Press: Portland, Oregon. 1993.</li> <li>• Native Plant Network. <a href="http://www.nativeplantnetwork.org">www.nativeplantnetwork.org</a>. Last access: April 29, 2008.</li> <li>• Washington Native Plant Society. <a href="http://www.wnps.org">www.wnps.org</a>. Last access: April 29, 2008.</li> </ul>
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