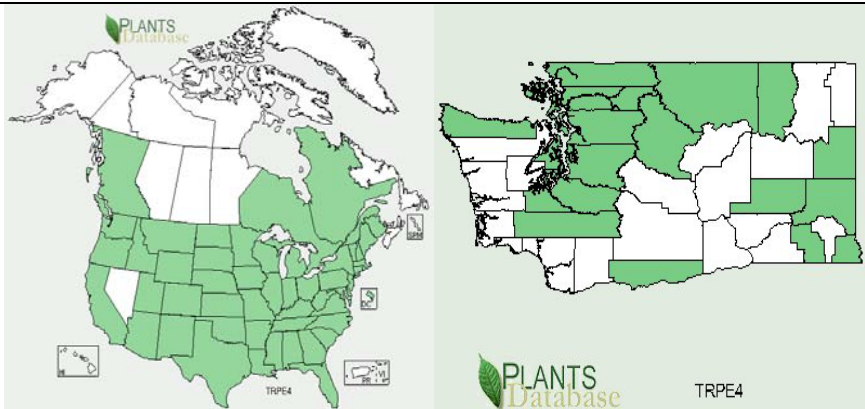



Plant Propagation Protocol for [*Triodanis perfoliata*]
ESRM 412 – Native Plant Production



TAXONOMY	
Family Names	
Family Scientific Name	Campanulaceae
Family Common Name:	Bellflower family
Scientific Names	
Genus:	<i>Triodanis</i> Raf. Ex Greene
Species:	<i>Triodanis perfoliata</i> (L.) Nieuwl.
Species Authority:	Nieuwl.
Variety:	<i>perfoliata</i>
Sub-species:	
Cultivar:	
Authority for Variety/Sub-species:	Nieuwl.
Common Synonym(s)	<i>-Legousia perfoliata</i> (L.) Britton <i>-Specularia perfoliata</i> (L.) A. DC. <i>-Triodanis perfoliata</i> (L.) Nieuwl. Var. <i>perfoliata</i>
Common Name(s):	clasping Venus's looking-glass
Species Code	TRPE4
The above information obtained from USDA plant database	
GENERAL INFORMATION	

Geographical range	 <p>Key: Plant occurs in areas shaded green and not present in white areas</p>	
Ecological distribution	FACW Facultative Wetland, usually occurs in wetlands (probability 67%-99%) (2)	
	Various habitats, from the valleys and plain to mountains (4)	
Climate and elevation range	Moderate elevations in the mountains (4)	
Local habitat and abundance; may include commonly associated species	Occurs in: Ditches, Ravines, Depressions, Hillsides, Slopes, Woodlands edge, Opening, Prairie, Plains, Meadows, Pastures, Savannahs (1)	
	Abundant, (4)	
	“No concern” conservation status (4)	
Plant strategy type / successional stage	This plant can be weedy or invasive depending on the authoritative source. (2)	
	A pioneer species that is present during early successional stage (12)	
	Grows well in dry shady areas (2)	
Plant characteristics	An herb that is 1-3 ft tall (1)	
	Annual (1)	
	Blooms: April, May, August (2,4)	
	Leaves: rounded and clasping (3)	
	Flowers: widely-spreading petals (3)	
	Blue, Purple in color (2)	
	The seed has “three teeth” (3)	
	Fruits: capsules, oblong, 3 or 4-lobed (4)	
PROPAGATION DETAILS		
Ecotype	Floodplain of the Hocking River in Athens Co. Ohio. (10) (This was not for a propagation protocol)	
Propagation Goal	Plants	

Propagation Method	Seeds
Product Type	Bareroot, container, or seeds (10)
Stock Type:	Seeds, can be harvested from the wild (10)
Time to Grow	Plants can sowed directly outside (6) If grown in container, transplanted in 1 month (10)
Target Specifications	N/A
Propagule Collection	<p>There are tiny seed capsules in the axils of the leaves</p>  <p>Taken from mature (ripen) capsules (7) Collected right before seed dispersal (10) Collection times are from May until early July (9)</p>
Propagule Processing/Propagule Characteristics	<p>3,000,000 seeds/ounce (5) Air-dried at least two months (10) Seeds are dry and can be taken straight from capsule</p>
Pre-Planting Propagule Treatments	Seeds can be cold-moist stratified for 30 days or sowed after being collected (10)
Growing Area Preparation	<p>Soil pH: Circumneutral, pH 6.8-7.2 (2) Soil Moisture: Dry (2) Soil type: Sandy, Sandy loam, Medium loam, Clay (2) loam, Clay, limestone-based (2) Light requirement: Shade (2) Water use: Low (2)</p>
Establishment Phase	<p>Sow seeds at about 70 degrees Fahrenheit (6) Can be germinated on moist filter paper (10)</p>
Length of Establishment Phase:	7-14 days (6)
Active Growth Phase	Annual plant, continues to grow until winter then withers and die (11)
Length of Active Growth Phase:	Spring-Winter
Hardening Phase	N/A, an annual plant
Length of Hardening Phase:	N/A
Harvesting, Storage and Shipping	<p>Air dry for 2 months then can be stored (10) Can be shipped in packets (5)</p>
Length of Storage	N/A
Guidelines for Outplanting	<p>Flowering time: April, May, August (2,4) Sow at around 70 degrees Fahrenheit (8)</p>
Other Comments	The plant does well in dry shady areas.

INFORMATION SOURCES	
References (full citations):	<p>(1) http://www.wildflower.org/plants/result.php?id_plant=TRPE4</p> <p>(2) http://plants.usda.gov/java/profile?symbol=TRPE4</p> <p>(3) http://wisplants.uwsp.edu/</p> <p>(4) http://biology.burke.washington.edu/herbarium/imagecollection.php?Genus=Triodanis&Species=perfoliata</p> <p>(5) http://www.prairiemoon.com/</p> <p>(6) http://tomclothier.hort.net/</p> <p>(7) Shetler, Stanwyn G., and Nancy R. Morin. "Seed Morphology in North American Campanulaceae." <u>Annals of the Missouri Botanical Garden</u>. 73. 4 (1986): 653-688.</p> <p>(8) http://pleasantvalleyconservancy.org/</p> <p>(9) http://ucjeps.berkeley.edu/cgi-bin/get_consort.pl</p> <p>(10) Gara, Brian, and Gayle Muenchow. "Chasmogamy/Cleistogamy in Triodanis Perfoliata (Campanulaceae): Some CH/CL Comparisons in Fitness Parameters." <u>American Journal of Botany</u>. 77. 1 (1990): 1-6.</p> <p>(11) http://www.biology-online.org/3/10_growth_patterns.htm</p> <p>(12) http://www.physicalgeography.net/fundamentals/9i.html</p> <p>*All websites were accessed on 04/20/10</p>
Other Sources Consulted	<p>Bradley, Ted R. "Hybridization Between Triodanis Perfoliata and Triodanis Biflora (Campanulaceae)." <u>Brittonia</u>. 27. 2 (1975): 110-114.</p> <p>Ross, Robert A., and Henrietta L. Chambers. <u>Wildflowers of the Western Cascades</u>. Portland, Or: Timber Press, 1988.</p> <p>Courtenay, Booth, and James Hall Zimmerman. <u>Wildflowers and Weeds</u>. New York: Van Nostrand Reinhold, 1972.</p> <p>Enari, Leonid. <u>Plants of the Pacific Northwest; 663 Selected Northwest Wild Flowers, Shrubs, Trees, and Weeds</u>. Portlan</p> <p>Hitchcock, C. Leo, and Arthur Cronquist. <u>Flora of the Pacific Northwest; An Illustrated Manual</u>. Seattle: University of Washington Press, 1973.</p>
Protocol Author	Kevin Nguyen
Date Protocol Created or Updated	04/20/10

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