

## Plant Propagation Protocol for [*Trifolium wormskioldii*]


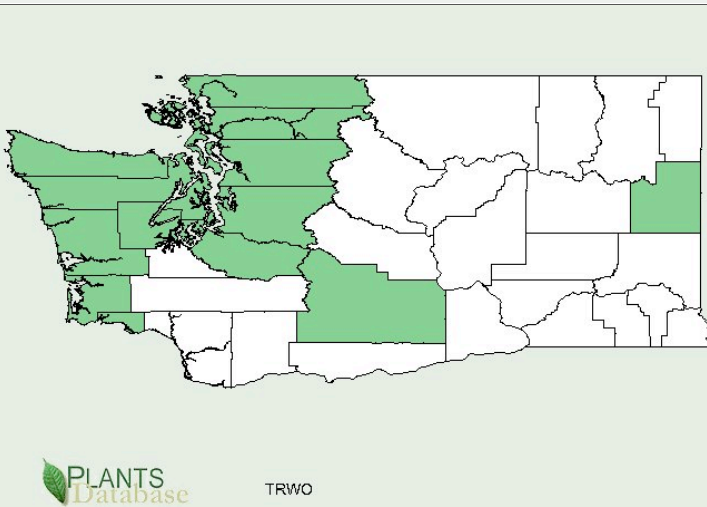
ESRM 412 – Native Plant Production

Protocol URL: [https://courses.washington.edu/esrm412/protocols/\[TRWO.pdf\]](https://courses.washington.edu/esrm412/protocols/[TRWO.pdf])



William & Wilma Follette @ USDA-NRCS  
PLANTS Database / USDA NRCS. 1992. Western  
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West Region, Sacramento.

TAXONOMY	
Plant Family	
Scientific Name	Fabaceae
Common Name	Legume
Species Scientific Name	
Scientific Name	<i>Trifolium wormskioldii</i> Lehm.
Varieties	
Sub-species	
Cultivar	
Common Synonym(s)	<i>Trifolium wormskjoldii</i> , <i>T. involucratum</i> . Ortega 2
Common Name(s)	Springbank clover, Cows clover, marsh clover, perennial clover <sup>1</sup>
Species Code (as per USDA Plants database)	TRWO <sup>4</sup>
GENERAL INFORMATION	
Geographical range	

	
	
Ecological distribution	Wet and periodically inundated places, such as high salt and brackish marshes, coastal dunes, wet meadows, and stream banks. <sup>3, 5</sup>
Climate and elevation range	elevations below 3200m <sup>3</sup>
Local habitat and abundance	Commonly associated with Pacific silverweed. Occurs from beaches to mountain meadows, ridges, generally open, moist, or marshy places. <sup>3, 5</sup>
Plant strategy type / successional stage	
Plant characteristics	Perennial herbs that have palmately compound green leaves with three leaflets. Stems are erect and creeping. <sup>3</sup>
<b>PROPAGATION DETAILS</b>	
Ecotype	
Propagation Goal	Plants

Propagation Method	Vegetative
Product Type	Plug
Stock Type	
Time to Grow	
Target Specifications	retain only healthy, vigorous sections, each should have a new shoot and rhizome bud when dividing. 3
Propagule Collection Instructions	Late fall or winter dig up and separate plants. Split plant clumps into pieces by hand, then cut rhizomes into sections, each with one or more bud. 3
Propagule Processing/Propagule Characteristics	
Pre-Planting Propagule Treatments	Do not allow to dry out. 3
Growing Area Preparation / Annual Practices for Perennial Crops	Cut back old top growth and replant the divided plant sections to the same depth as before the division process. When planting ensure that the roots are well spread out, water newly planted divisions thoroughly. 3
Establishment Phase Details	
Length of Establishment Phase	
Active Growth Phase	Spring-late fall. 3
Length of Active Growth Phase	
Hardening Phase	
Length of Hardening Phase	
Harvesting, Storage and Shipping	
Length of Storage	Make sure plant does not dry out- replant divisions as soon as possible. If replanting is delayed, dip the plants into water and keep them in a cool, shady place until you are ready to plant them out. 3
Guidelines for Outplanting / Performance on Typical Sites	Plants should be planted in full sun, with 12-18" centers. In one year plants should fill in and make solid clover stands. 3
Other Comments	Plants may need to be protected from herbivores. Wild harvesting should be restricted to salvage sites with appropriate approval. Springbank clover tolerates brackish conditions. 3

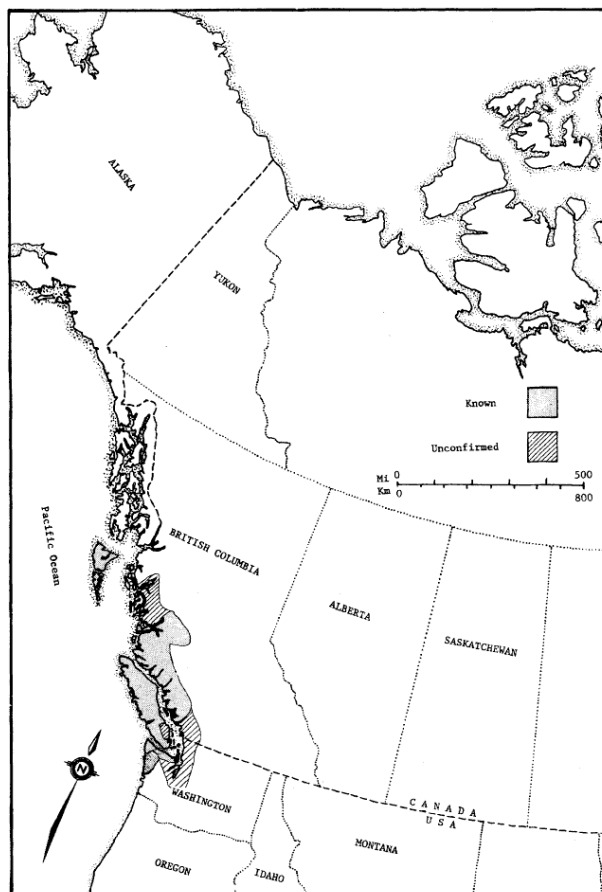


Fig. 11. The extent of traditional use of *Trifolium wormskioldii* rhizomes by native peoples of northwestern North America.

The roots of springbank clover are an important food source for native people. <sup>2</sup>

## INFORMATION SOURCES

References	See Below
Other Sources Consulted	See Below
Protocol Author	Alex Harwell
Date Protocol Created or Updated	05/19/14

## Resources

1. Plants For A Future. <http://www.pfaf.org/user/Plant.aspx?LatinName=Trifolium+fimbriatum>
2. Turner, Nancy J. and Harriet V. Kuhnlein. "Two Important "Root" Foods of the Northwest Coast Indians: Springbank Clover (*Trifolium wormskioldii*) and Pacific Silverweed (*Potentilla anserina* spp. *pacifica*).<sup>2</sup> *Economic Botany*. Vol 36 (4). 1982, pp. 411-432.

3. USDA NRCS National Plant Data Center. Plant Guide: Springbank Clover. Baton Rouge, Louisiana. [http://plants.usda.gov/plantguide/pdf/cs\\_trwo.pdf](http://plants.usda.gov/plantguide/pdf/cs_trwo.pdf)
4. USDA. Plants Database: *Trifolium wormskioldii* Lehm. <https://plants.usda.gov/core/profile?symbol=TRWO>
5. Weinmann, Fred et al. Wetland Plants of the Pacific Northwest. Army Corps of Engineers: Seattle District. 1984.
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### **Other Sources Consulted**

Calflora. *Trifolium wormskioldii*. [http://www.calflora.org/cgi-bin/species\\_query.cgi?where-taxon=Trifolium+wormskioldii](http://www.calflora.org/cgi-bin/species_query.cgi?where-taxon=Trifolium+wormskioldii).

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Sagebud. "Cows Clover" <http://sagebud.com/cows-clover-trifolium-wormskioldii/>

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