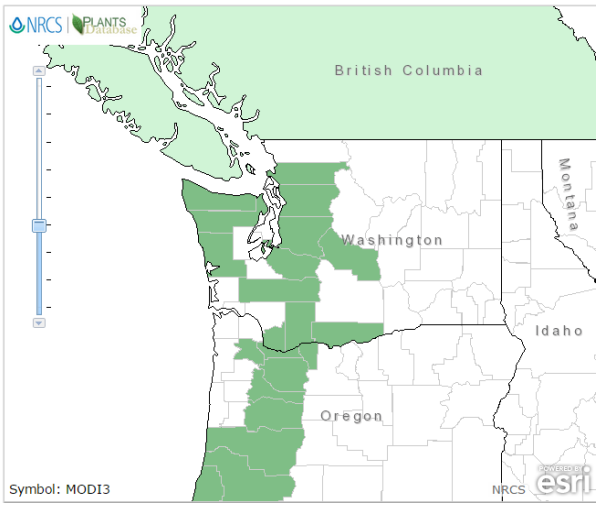
Plant Propagation Protocol for *Montia diffusa*
ESRM 412 – Native Plant Production
Spring 2015
Protocol URL: https://courses.washington.edu/esrm412/protocols/MODI3.pdf



(Source: Smith[11])

North American Distribution



Washington State Distribution

From the USDA Plants Database[12]

TAXONOMY	
Plant Family	
Scientific Name	*Portulacaceae*
Common Name	Purslane
Species Scientific Name	
Scientific Name	*Montia diffusa* (Nutt.) Greene
Varieties	
Sub-species	
Cultivar	
Common Synonym(s)	*Claytonia diffusa* Nutt., with the species code CLDI6. *Limnalsine diffusa* (Nutt.) Rydb., with the species code LIDI7.

Common Name(s)	Spreading minerslettuce, spreading miner's lettuce, branching montia
Species Code (as per USDA Plants database)	MODI3[12]
GENERAL INFORMATION	
Geographical range	West of Cascades, from British Columbia to California[8]; See maps above for North American and Washington State distribution[12]
Ecological distribution	Prefers moist forests and open woodlands in low elevation areas, but can be found in xeric soil. It can occur in sites disturbed by actions like fire and logging although it is uncommon[4, 8].
Climate and elevation range	260-880m[8]
Local habitat and abundance	Found with *Pseudotsuga menziesii, Tusga mertensiana, Sequoia sempervirens*, and other species of similar characteristics. As it is fairly sensitive, this species is threatened by even light to moderate disturbance and common invasives like Canada thistle[8, 10].
Plant strategy type / successional stage	Post-fire early successional ability recognized, although close relative *C. perfoliata* is a stronger colonizer of post-fire sites[6, 10].
Plant characteristics	Low-growing, vascular annual forb distinguished by small alternate spatula-shaped leaves[9], and white to pink or purple axillary 5-parted flowers. Flowering occurs May to July. Fruits are small green capsules with black seeds[8, 10]. While the leaves are edible, one should be careful to keep from accumulating soluble oxalates that can be toxic[7]
PROPAGATION DETAILS	
Ecotype	
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Propagules
Stock Type	
Time to Grow	1-2 months[2]
Target Specifications	Erect stems at least 2 inches tall, and wider than is tall is the best indicator of maturity[6, 7]
Propagule Collection Instructions	
Propagule Processing/Propagule Characteristics	
Pre-Planting Propagule Treatments	
Growing Area Preparation / Annual Practices for Perennial Crops	Compost or other rich root media will do well. Plant seeds in late winter or 4-6 weeks before the last spring frost[2, 5]
Establishment Phase Details	Keep seeds well watered an in a well-lit area[5]

Length of Establishment Phase	2-4 weeks[5]
Active Growth Phase	
Length of Active Growth Phase	
Hardening Phase	
Length of Hardening Phase	
Harvesting, Storage and Shipping	
Length of Storage	
Guidelines for Outplanting / Performance on Typical Sites	Flowering occurs in May to July[8, 10]. Preferred growth measurements for mature plants is for the plant's width to be twice as much as the height[6, 7]
Other Comments	Listed as sensitive in Washington State[8, 12], and considered rare in many areas[1, 3]. While the leaves are edible, one should be careful to keep from accumulating soluble oxalates that can be toxic[7].
INFORMATION SOURCES	
References	[1]Forest Service. *North Fork of the Middle Fork Willamette River, Watershed Analysis*. N.p.: n.p., 1983. Forest Service. United States Department of Agriculture. Web. 14 May 2015. [2]"Growing Guide." *Home Gardening*. Cornell University, 2006. Web. 14 May 2015. [3]Herrera Environmental Consultants, Inc. "Critical Areas and Vegetation Assessment Reconnaissance Memorandum." *Sunset Fish Passage and Energy Project* (2012): 23-25. Snohomish County. Web. 14 May 2015. [4]Kayes, Lori J., Paul D. Anderson, and Klaus J. Puettmann. "Vegetation succession among and within structural layers following wildfire in managed forests." *Journal of Vegetation Science* 21.2 (2010): 233-247. [5]Lewis, Melissa. "How to Grow Miner's Lettuce." *Home Guides*. San Francisco Bay Area, n.d. Web. 14 May 2015. [6]Matthews, Robin F. "Montia diffusa. In: Fire Effects Information System." *U.S. Department of Agriculture, Forest Service*. Rocky Mountain Research Station, Fire Sciences Laboratory, 1993. Web. 13 May 2015. [7]"Miner's Lettuce (Claytonia perfoliata)." *Statewide Integrated Pest Management Program*. University of

	California Agriculture and Natural Resources, n.d. Web. 14 May 2015. [8]"Montia diffusa (Nutt.) Greene." *Field Guide to the Rare Plants of Washington* (2011): n. pag. University of Washington Press. Web. 14 May 2015. [9]Potash, Laura L. *Sensitive Plants and Noxious Weeds of the Mt. Baker-Snoqualmie National Forest*. US Department of Agriculture, Forest Service, Pacific Northwest Region, 1991. [10]Shohet, Cecile, Shawna Bautista, and Diana Perez. "Gifford Pinchot National Forest Columbia River Gorge National Scenic Area, Washington Side Invasive Plant Treatment FEIS." *Appendix C, Brief History Narratives for Botanical, Wildlife, and Fish* (2008): n. pag. United States Forest Service, Mar. 2008. Web. 14 May 2015. [11]Smith, Doreen L., and Vernon Smith. "Montia diffusa." *CalPhotos*. University of California, Berkeley, 2014. Web. 14 May 2015. [12] "Montia diffusa (spreading minerslettuce)." *Plants Database*. United States Department of Agriculture, n.d. Web. 14 May 2015.
Other Sources Consulted	O'Quinn, Robin Lea. *Phylogeny, Biogeography and Evolution of Perennation Structures in Montieae (Portulacaceae)*. Diss. Washington State U, 2005. N.p.: n.p., 2005. Print.
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