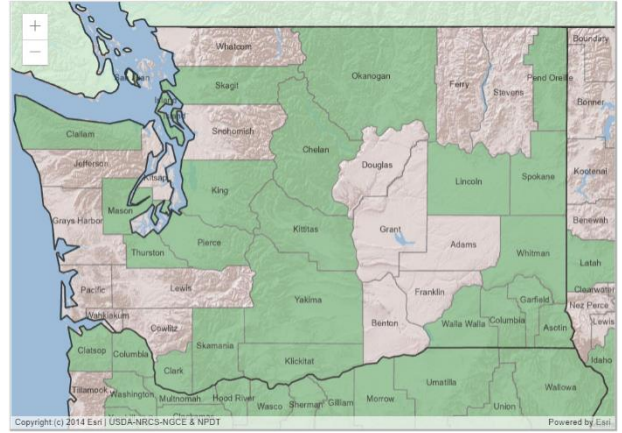
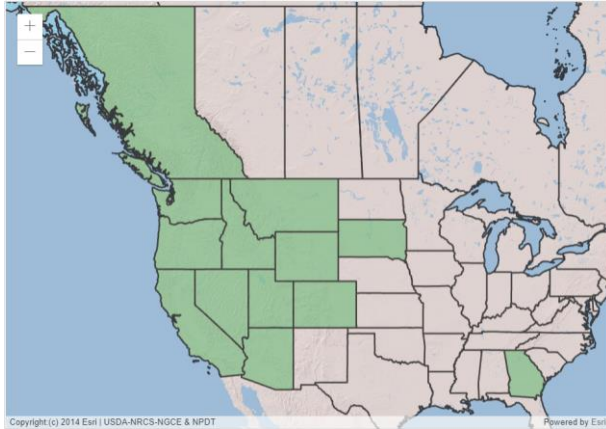


## Plant Propagation Protocol for *Claytonia perfoliata*

ESRM 412 – Native Plant Production

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

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### TAXONOMY

<b>Plant Family</b>	
Scientific Name	<i>Portulacaceae</i>
Common Name	Purslane Family
<b>Species Scientific Name</b>	
Scientific Name	<i>Claytonia perfoliata</i> Donn ex Willd.
Varieties	<i>Claytonia perfoliata</i> Donn ex Willd. ssp. <i>intermontana</i> John M. Mill. & K.L. Chambers <i>Claytonia perfoliata</i> Donn ex Willd. var. <i>intermontana</i> (John M. Mill. & K.L. Chambers) Dorn <i>Claytonia perfoliata</i> Donn ex Willd. ssp. <i>mexicana</i> (Rydb.) John M. Mill. & K.L. Chambers <i>Claytonia perfoliata</i> Donn ex Willd. ssp. <i>perfoliata</i> <i>Claytonia perfoliata</i> Donn ex Willd. var. <i>angustifolia</i> Greene <i>Claytonia perfoliata</i> Donn ex Willd. var. <i>depressa</i> (A. Gray) Poelln.
Sub-species	
Cultivar	
Common Synonym(s)	<i>Montia perfoliata</i>
Common Name(s)	Miner's lettuce, Winter Purslane, Spring Beauty, Indian lettuce
Species Code (as per USDA Plants database)	CLPE
<b>GENERAL INFORMATION</b>	
Geographical range	Miner's-lettuce is distributed from British Columbia south to Guatemala and east to North Dakota, South Dakota, Wyoming, Utah, and Arizona 4

Ecological distribution	Forest openings and margins, shaded rock crevices, and open areas where seasonally moist from the coast to middle elevations in the mountains. <sup>2</sup>
Climate and elevation range	<p>Prefers a moist peaty soil. It is often found growing wild on sandy soils. An easily grown plant, it can succeed on very poor and dry soils. Plants grow well the dappled shade of trees, producing a better quality crop in such a situation. Although only an annual, it usually self-sows when well sited. A very hardy plant, tolerating temperatures down to at least -15°C. Miner's lettuce is occasionally cultivated as a salad plant. It's main value is as a reliable producer of leaves in the winter, though it can provide leaves all year round. It can be grown as a cut and come again crop.<sup>5</sup></p> <p>In California, miner's-lettuce is most common below 6,500 feet (2,000 m); in Arizona it grows at elevations of 2,500 to 7,500 feet (750-2,270 m); in Utah it grows at elevations of 2,600 to 10,890 feet (800-3,300 m).<sup>4</sup></p>
Local habitat and abundance	<p>Density and overall yield of miner's-lettuce is greater in bracken fern communities than in surrounding grasslands. This may be due to increased moisture availability in winter and early spring, when bracken fern is dormant. <sup>4</sup></p> <p>Chaparral, oak, woodlands, forests, and coastal sage scrub, agronomic and vegetable crop fields, orchards, vineyards, gardens, yards, and other disturbed sites.<sup>7</sup></p>
Plant strategy type / successional stage	Weedy/colonizer
Plant characteristics	<p>Forb, Somewhat succulent annual or short-lived perennial herb with a slender taproot. Several flowering stems, ascending to erect, leafy, 5-30 cm tall. Numerous basal leaves, narrowly spoon-shaped to lance- or egg-shaped, long-stalked, 2-10 cm long. Two stem leaves, opposite and usually fused, forming a disk around the stem above mid-length. Flowers white or pinkish, stalked, nodding; two sepals; five petals 3-7 mm long; several to many flower clusters 1-8 cm long above the leaf disc <sup>8</sup></p>
<b>PROPAGATION DETAILS</b>	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container (plug) <sup>9</sup>
Stock Type	Container Seedling <sup>9</sup>
Time to Grow	N/A
Target Specifications	N/A
Propagule Collection Instructions	<p>Seeds are collected between April 4th and July 7th. Mature inflorescences begin to split at maturity. Seeds are disc shaped and shiny black at maturity.<sup>9</sup></p>
Propagule Processing/Propagule Characteristics	<p>Seed Cleaning: Seeds are rubbed on screens to separate from pods and chaff.<sup>9</sup></p> <p>Storage Conditions: Seeds are kept dry and stored at room temperature.</p> <p>Seeds/gram: 886 <sup>9</sup></p>

	Seed can be saved 5 years. <sup>10</sup>
Pre-Planting Propagule Treatments	Seeds of <i>Claytonia perfoliata</i> require two months' cold-moist stratification for germination. <sup>6</sup>
Growing Area Preparation / Annual Practices for Perennial Crops	Fully Controlled Greenhouse. Sowing Method: Direct Seeding. Seeds are sown in containers. <sup>9</sup>
Establishment Phase Details	4 to 6 weeks before last spring frost, direct seed ¼ inch deep, ½ inch apart in rows 8 to 12 inches apart. <sup>10</sup>
Length of Establishment Phase	Germination usually takes place within 2 - 4 weeks at 10°C <sup>11</sup>
Active Growth Phase	Claytonia likes its growing conditions to be cool and moist. ... It's happy in virtually any soil type, although it thrives in moist, humus-rich soil. Plants do best in slightly shaded sites. <sup>12</sup>
Length of Active Growth Phase	Time from germination to flowering varied from 33 to 90 days in a Columbia River Gorge population <sup>4</sup>
Hardening Phase	Plants may overwinter in Zone 6 and warmer. Can be grown as a winter crop in a cold frame in Zones 4 and 5 <sup>10</sup>
Length of Hardening Phase	As an annual by definition <i>Claytonia perfoliata</i> dies every year and while it returns readily through self-seeding it does not experience hardening in harsh winter conditions but can be kept alive all year in warmer climates if it does not have to prepare for a winter season, it is either actively growing or actively dying
Harvesting, Storage and Shipping	N/A
Length of Storage	Because propagation by sowing seeds directly into the ground is so successful, cheap and easy plants are not typically cultivated and out planted but rather planted directly on site
Guidelines for Outplanting / Performance on Typical Sites	N/A
Other Comments	No additional guidelines or restrictions
<b>INFORMATION SOURCES</b>	
References (full citations)	
Other Sources Consulted (but that contained no pertinent information) (full citations)	<p><i>Calflora Taxon Report</i>. Claytonia Perfoliata Calflora. (2022). Retrieved May 2022, from <a href="https://www.calflora.org/app/taxon?crn=2244">https://www.calflora.org/app/taxon?crn=2244</a></p> <p><i>Claytonia perfoliata</i>. Flora of North America @ efloras.org. (n.d.). Retrieved May 2022, from <a href="http://www.efloras.org/florataxon.aspx?flora_id=1&amp;taxon_id=242415745">http://www.efloras.org/florataxon.aspx?flora_id=1&amp;taxon_id=242415745</a></p> <p><i>Claytonia perfoliata: Cuban spinach Annual Biennial/RHS gardening</i>. Claytonia perfoliata   Cuban spinach Annual Biennial/RHS Gardening.</p>

	<p>(n.d.). Retrieved May 2022, from <a href="https://www.rhs.org.uk/plants/3903/claytonia-perfoliata/details">https://www.rhs.org.uk/plants/3903/claytonia-perfoliata/details</a></p> <p>Gfe. (2020, April 6). <i>Native plant fun facts: Edible, elegant Claytonia Perfoliata</i>. Garden for the Environment. Retrieved May 2022, from <a href="https://www.gardenfortheenvironment.org/growing-gardeners-archive/2020/4/6/ihhverch1vxiqueujhwqxhg0p3wrb3i">https://www.gardenfortheenvironment.org/growing-gardeners-archive/2020/4/6/ihhverch1vxiqueujhwqxhg0p3wrb3i</a></p> <p><i>Plant database</i>. Lady Bird Johnson Wildflower Center - The University of Texas at Austin. (2012). Retrieved May 2022, from <a href="https://www.wildflower.org/plants/result.php?id_plant=clpe">https://www.wildflower.org/plants/result.php?id_plant=clpe</a></p> <p>Woodard, S. (2018, February 9). <i>Claytonia perfoliata - miner's lettuce</i>. Phytognosis. Retrieved May 2022, from <a href="http://regenerag.org/blog/2018/2/9/claytonia-perfoliata-miners-lettuce">http://regenerag.org/blog/2018/2/9/claytonia-perfoliata-miners-lettuce</a></p>
Protocol Author	Jackie Snowden
Date Protocol Created or Updated	05/25/22

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