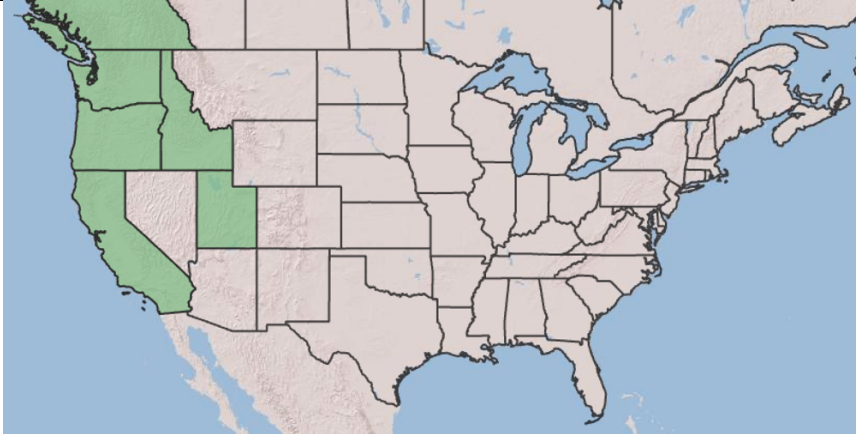


**Plant Propagation Protocol for *Collinsia grandiflora* (Giant Blue Eyed Mary)**

ESRM 412 – Native Plant Production

URL: <https://courses.washington.edu/esrm412/protocols/2026/COGR2.pdf>

<b>TAXONOMY</b>	
<b>Plant Family</b>	
Scientific Name	Scrophulariaceae Juss. <sup>7</sup>
Common Name	Figwort family <sup>7</sup>
<b>Species Scientific Name</b>	
Scientific Name	Genus: <i>Collinsia</i> Epithet: <i>grandiflora</i> Authority: Lindl. (abbreviation for John Lindley)  <i>Collinsia grandiflora</i> Lindl. <sup>7</sup>
Varieties	N/A
Sub-species	N/A
Cultivar	N/A
Common Synonym(s)	<i>Collinsia parviflora</i> Lindl. var. <i>grandiflora</i> (Lindl.) Ganders & G.R. Krause <sup>8</sup>
Common Name(s)	Giant Blue Eyed Mary <sup>7</sup>
Species Code (as per USDA Plants database)	COGR2
<b>GENERAL INFORMATION</b>	
Geographical range	 <p align="center">Illustration 1: COGR2 distribution across USA<sup>7</sup></p>

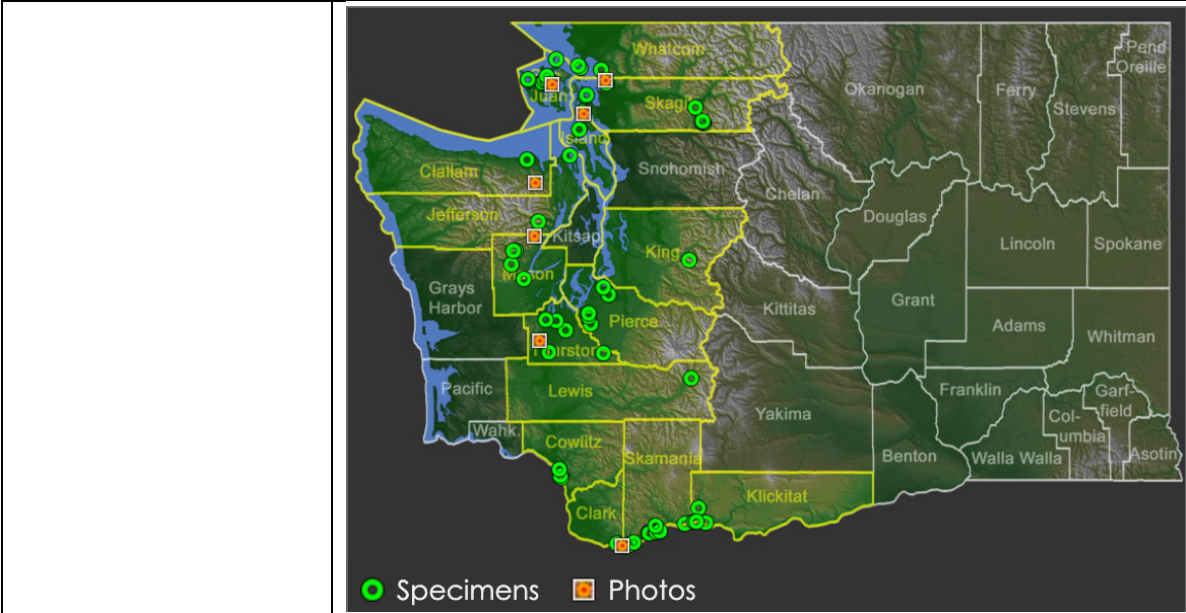




Illustration 2: COGR2 distribution across Washington State<sup>2</sup>

Ecological distribution	Occurs west of the Cascade Mountain range in Washington; British Columbia to California, with populations stretching into Idaho and Utah. Typically found on southwest-facing slopes, which tend to support warmer and drier microsites with more sun exposure. Most commonly in dry to somewhat dry soils, but can grow in moderately moist soil conditions. <sup>3</sup>
Climate and elevation range	Grows in cool mesothermal climates. This includes areas that have mild to cool growing seasons with relatively moderate winters, especially low- to mid-elevation (less than or equal to 1000 meters elevation), moist, temperate regions like the coastal forests West of the Cascade Range. <sup>3</sup>
Local habitat and abundance	Relatively abundant. Grows on vernal moist to dry grassy slopes, mossy rock outcrops and forest edges in the lowland and montane zones. <sup>3</sup>
Plant strategy type / successional stage	Early-seral plant, grows in open habitats, tolerates relatively dry conditions, moderate stress tolerance. <sup>3</sup>

Plant characteristics	  <p>Image © 2007 Gerald D. Carr</p> <p>Image © 2004 Ben Legler</p> <p>Illustrations 3 and 4: Plant and flower of Collinsia<sup>2</sup></p> <p>Herbaceous annual wildflower. Has oval, opposite, nearly smooth leaves and flowers occurring individually or in small clusters whorled around the stem. Stems are erect, ranging from approximately 2 to 15 inches tall. Flowers are approximately ¾ of an inch and have a purple or white upper lip and a blue or violet lower lip. Fruits are very small and capsule-like. There are typically four seeds in each flower, which are round to oblong, smooth, and reddish-brown in color.<sup>3,4</sup></p>
<b>PROPAGATION DETAILS: FROM SEED</b>	
Ecotype	Paradise Creek drainage, Pullman, WA <sup>5</sup>
Propagation Goal	Seeds
Propagation Method	Seed
Product Type	Propagules (seeds)
Stock Type	
Time to Grow	7 months <sup>5</sup>
Target Specifications	N/A
Propagule Collection Instructions	Plants should be cut or pulled from the ground when the capsules toward the middle of the plant are drying but not splitting. Plants should be dried at room temperature in paper bags until seeds are ready to be cleaned. <sup>5</sup>
Propagule Processing/Propagule Characteristics	<p>Plants flower and ripen seed indeterminately, but usually around late May. Seeds shatter easily; capsules are very small and collection/processing by hand is time consuming. Approximately 350,000 seeds/lb.<sup>5</sup></p> <p>Plant is a winter annual and must be seeded in the fall. It is possible for spring germination to occur in exceptional circumstances but plants are typically less vigorous and do not produce as much seed.<sup>5</sup></p> <p>Collect seeds from already shattered pods in paper bag and crush any capsules that did not shatter. Separate waste from seed using a hand screen and clean seeds with an air column separator.<sup>5</sup></p>

	Seeds can be stored in controlled conditions at 40 degrees Fahrenheit and 40% relative humidity. <sup>5</sup>
Pre-Planting Propagule Treatments	N/A
Growing Area Preparation / Annual Practices for Perennial Crops	Weed seed bed. Seed bed should be firm to hold the moisture near the surface of the soil. <sup>5</sup>
Establishment Phase Details	Seedlings will emerge when fall rains begin (typically in October on west side of the Cascade Range) and may develop 2 to 4 true leaves before winter. <sup>5</sup>
Length of Establishment Phase	Approximately 2 months until 2 to 4 true leaves are developed. <sup>5</sup>
Active Growth Phase	Plants resume their growth in late winter (January to February) or early spring, and may flower as soon as late March, depending on weather conditions. <sup>5</sup>
Length of Active Growth Phase	2 months <sup>5</sup>
Hardening Phase	N/A; winter annual
Length of Hardening Phase	N/A; winter annual
Harvesting, Storage and Shipping	N/A
Length of Storage	N/A
Guidelines for Outplanting / Performance on Typical Sites	<p>Sow seeds in the fall at approximately 30-40 seeds/ft, just barely on top of the soil. Spring sown seeds are smaller, flower later, and produce less seed than those planted in the fall. <sup>5</sup></p> <p>Exact survival percentages are not well documented for this species. However, as an annual early-seral forb, <i>Collinsia grandiflora</i> is generally adapted to establishment from seed in open or disturbed habitats. Germination and survival are likely highest in sites with exposed mineral soil, moderate spring moisture, and reduced competition from dense vegetation.</p>
Other Comments	<p>One study found that flower size and chromosome number vary too much and overlap too heavily for small-flowered and large-flowered <i>Collinsia</i> plants to be cleanly separated into two distinct species; <i>Collinsia parviflora</i> (small flowers) and <i>grandiflora</i> (large flowers) are very similar and propagation strategy is nearly identical, which is why Skinner's 2005 protocol for <i>Collinsia parviflora</i> was used as a guide.<sup>6</sup></p> <p>Pollinated by bumblebees, bees, flies, beetles, and wasps. <sup>2</sup></p> <p>No pests or diseases to note.<sup>5</sup></p>

## INFORMATION SOURCES

References	<p>1. Barnes K. 2019 May 6. Plant Propagation Protocol for <i>Collinsia parviflora</i>: ESRM 412 – Native Plant Production. [accessed 2026 May 18].  <a href="https://courses.washington.edu/esrm412/protocols/2019/COPA3.pdf">https://courses.washington.edu/esrm412/protocols/2019/COPA3.pdf</a>.</p> <p>2. <i>Collinsia grandiflora</i> – Burke Herbarium Image Collection. 2024. [accessed 2026 May 19]. <a href="https://tinyurl.com/bdpwbyeh">https://tinyurl.com/bdpwbyeh</a></p> <p>3. Klinkenberg, Brian. (Editor) 2020. E-Flora BC: Electronic Atlas of the Plants of British Columbia [eflora.bc.ca]. Lab for Advanced Spatial Analysis, Department of Geography, University of British Columbia, Vancouver. (Accessed 2026/05/18).  <a href="https://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Collinsia+grandiflora">https://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Collinsia+grandiflora</a></p> <p>4. Lady Bird Johnson Wildflower Center - The University of Texas at Austin. 2019.  <a href="https://www.wildflower.org/plants/result.php?id_plant=cogr2">https://www.wildflower.org/plants/result.php?id_plant=cogr2</a>.</p> <p>5. Skinner, David M., 2005. Propagation protocol for production of Propagules (seeds, cuttings, poles, etc.) <i>Collinsia parviflora</i> Lindl. seeds USDA NRCS - Pullman Plant Materials Center Pullman, Washington. In: Native Plant Network. URL: <a href="https://nnp.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=scrophulariaceae+collinsia-2187">https://nnp.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=scrophulariaceae+collinsia-2187</a> (accessed 2026/05/18). US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources.</p> <p>6. Tunbridge ND, Sears C, Elle E. 2011. Variation in floral morphology and ploidy among populations of <i>Collinsia parviflora</i> and <i>Collinsia grandiflora</i>. <i>Botany</i>. 89(1):19–33. doi:<a href="https://doi.org/10.1139/b10-076">https://doi.org/10.1139/b10-076</a>. [accessed 2026 May 19].  <a href="https://cdnsiencepub.com/doi/abs/10.1139/b10-076">https://cdnsiencepub.com/doi/abs/10.1139/b10-076</a>.</p> <p>7. USDA Plants Database. 2026. [accessed 2026 May 19].  <a href="https://plants.sc.egov.usda.gov/plant-profile/COGR2">https://plants.sc.egov.usda.gov/plant-profile/COGR2</a>.</p> <p>8. USDA Plants Database: <i>Collinsia Grandiflora</i> Synonyms. 2026. [accessed 2026 May 19]. <a href="https://plants.sc.egov.usda.gov/plant-profile/COGR2/synonyms">https://plants.sc.egov.usda.gov/plant-profile/COGR2/synonyms</a>.</p>
Other Sources Consulted	<p><i>Collinsia grandiflora</i> - Calflora. 2019. [accessed 2026 May 19].  <a href="https://www.calflora.org/app/taxon?crn=2278">https://www.calflora.org/app/taxon?crn=2278</a>.</p>
Protocol Author	Emily Sanders

Date Protocol Created or Updated	05/19/26
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