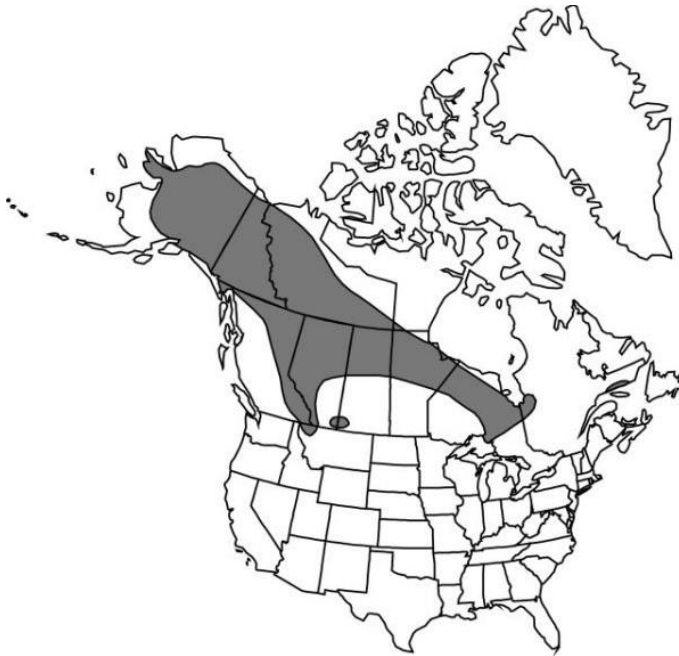


**Plant Propagation Protocol for *Cypripedium passerinum***  
 ESRM 412 – Native Plant Production  
 Protocol URL: <https://courses.washington.edu/esrm412/protocols/CYPA5>



Range map by Flora of North America



Photo by Jason Hollinger

TAXONOMY	
Plant Family	
Scientific Name	<i>Orchidaceae</i>
Common Name	Orchid
Species Scientific Name	
Scientific Name	<i>Cypripedium passerinum</i> Richardson
Varieties	<i>Cypripedium passerinum</i> Richardson var. <i>minganense</i> Vict.
Sub-species	
Cultivar	
Common Synonym(s)	
Common Name(s)	Sparrow's egg lady's slipper, spotted lady's slipper, Franklin's lady's slipper
Species Code (as per USDA Plants database)	CYPA5
GENERAL INFORMATION	
Geographical range	Occurs farther north than any other <i>Cypripedium</i> . Found north through Canada and Alaska and south to Northern Montana <sup>[1]</sup> (see above for range map).
Ecological distribution	Found in boreal and sub-arctic regions <sup>[1]</sup>

Climate and elevation range	Grows in moist and wet spruce forests at low elevations. <sup>[5]</sup>
Local habitat and abundance	Often occurs on calcareous substrates and in bogs, tundra, lakeshores, and streambanks. <sup>[4][5]</sup> Commonly associated with white spruce ( <i>Picea glauca</i> ), Engelmann spruce ( <i>P. engelmannii</i> ), western redcedar ( <i>Thuja plicata</i> ), red-osier dogwood ( <i>Cornus sericea</i> ), willows ( <i>Salix</i> spp.), horsetail ( <i>Equisetum</i> spp.), longtube twinflower ( <i>Linnaea borealis</i> ), sedges ( <i>Carex</i> spp.), one-sided pyrola ( <i>Orthilia secunda</i> ), and moss carpet ( <i>Pleurozium schreberi</i> ). <sup>[5]</sup>
Plant strategy type / successional stage	Obligate initial community species. <sup>[5]</sup> No observed pollinators – suggests that it could be self-pollinating. <sup>[4]</sup> The flower exit hole is only 2.5 to 3.0 mm wide so this restricts pollinator size. <sup>[5]</sup>
Plant characteristics	A perennial monocot that grows 4 to 14 inches (10-35 cm) tall. The leaves are 2.5 to 8 inches (6-20 cm) long. Usually a single flower with green sepals and white petals. <sup>[4][5]</sup> The lower petal is pouch-like with deep reddish-purple spots inside, resembling a sparrow's egg. The capsule is erect and ovoid. The plant has shallow rhizomes and grows in groups of 1 to 137 plants. The rhizomes produce a new aerial leaf shoot each year. <sup>[5]</sup>
<b>PROPAGATION DETAILS</b>	
Ecotype	
Propagation Goal	Plants
Propagation Method	Vegetative
Product Type	Container (plug)
Stock Type	
Time to Grow	N/A
Target Specifications	4 to 14 inches (10-35 cm) tall
Propagule Collection Instructions	Sending up more stems from the rhizome every year <sup>[4][5]</sup> and by rhizome division of mature plants.
Propagule Processing/Propagule Characteristics	N/A
Pre-Planting Propagule Treatments	N/A
Growing Area Preparation / Annual Practices for Perennial Crops	Course, moist soils, like that of terraces and streambanks <sup>[4]</sup>
Establishment Phase Details	N/A
Length of Establishment Phase	N/A
Active Growth Phase	Spring and summer
Length of Active Growth Phase	3 to 4 months from spring to mid-summer
Hardening Phase	Summer to fall
Length of Hardening Phase	3 to 4 months from summer to early fall

Harvesting, Storage and Shipping	N/A
Length of Storage	N/A
Guidelines for Outplanting / Performance on Typical Sites	Best done in later successional sites; early successional sites more suitable for seedlings. <sup>[5]</sup>
Other Comments	N/A
<b>PROPAGATION DETAILS</b>	
Ecotype	
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container(plug)
Stock Type	
Time to Grow	15 years from seedling establishment to flowering <sup>[5]</sup>
Target Specifications	4 to 14 inches (10-35 cm) tall
Propagule Collection Instructions	When the plant is flowering (usually begins mid-June), collect seeds from capsule. Flowers open to pollination about 1 week after budding and wilted 2 to 8 days later. <sup>[5]</sup>
Propagule Processing/Propagule Characteristics	Thousands of seeds per capsule <sup>[5]</sup>
Pre-Planting Propagule Treatments	N/A
Growing Area Preparation / Annual Practices for Perennial Crops	Course, moist soils, like that of terraces and streambanks <sup>[4]</sup>
Establishment Phase Details	
Length of Establishment Phase	Germination within a few weeks but may require a three-month chilling period. <sup>[2]</sup>
Active Growth Phase	Spring and summer
Length of Active Growth Phase	3 to 4 months from late spring to mid-summer
Hardening Phase	Summer to fall
Length of Hardening Phase	3 to 4 months from summer to early fall
Harvesting, Storage and Shipping	N/A
Length of Storage	Up to 3 months chilled
Guidelines for Outplanting / Performance on Typical Sites	Seedlings were found only on early successional sites. As succession progressed, environment became more suitable for mature plants and less so for seedlings. <sup>[5]</sup>
Other Comments	Seedling establishment is much less prevalent than vegetative propagation because of how long it takes seedlings to become mature. <sup>[5]</sup> Little information on seedling establishment.
<b>INFORMATION SOURCES</b>	
References	See below
Other Sources Consulted	
Protocol Author	Kalina Bevelhimer
Date Protocol Created or Updated	05/31/20

## References:

- [1] "Cypripedium passerinum". *Meet The Ladies: The Slipper Orchids. Celebrating Wildflowers*. United States Forest Service (USFS). Retrieved from [https://www.fs.fed.us/wildflowers/beauty/cypripedium/cypripedium\\_passerinum.shtml](https://www.fs.fed.us/wildflowers/beauty/cypripedium/cypripedium_passerinum.shtml).
- [2] "Cypripedium; Propagation and Growing." *Orchid Propagation*, [www.lidaforsgarden.com/orchids/cypripedium\\_eng.htm](http://www.lidaforsgarden.com/orchids/cypripedium_eng.htm).
- [3] "Plants Profile for Cypripedium Passerinum (Sparrowegg Lady's Slipper)." *USDA PLANTS Database*. Retrieved from [plants.usda.gov/core/profile?symbol=CYPAS5](http://plants.usda.gov/core/profile?symbol=CYPAS5).
- [4] Sheviak, Charles J. (2002). "Cypripedium passerinum". In Flora of North America Editorial Committee (ed.). *Flora of North America North of Mexico (FNA)*. **26**. New York and Oxford. Retrieved 2011-11-14 – via [efloras.org](http://efloras.org), Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA. Retrieved from [http://www.efloras.org/florataxon.aspx?flora\\_id=1&taxon\\_id=242101552](http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=242101552).
- [5] Williams, Tara Y. (1990). "Cypripedium passerinum". Fire Effects Information System (FEIS). US Department of Agriculture (USDA), Forest Service (USFS), Rocky Mountain Research Station, Fire Sciences Laboratory. Archived from the original on 2011-02-25. Retrieved from <https://web.archive.org/web/20110225142651/http://www.fs.fed.us/database/feis/plants/forb/cyppas/all.html#DISTRIBUTION%20AND%20OCCURRENCE>.