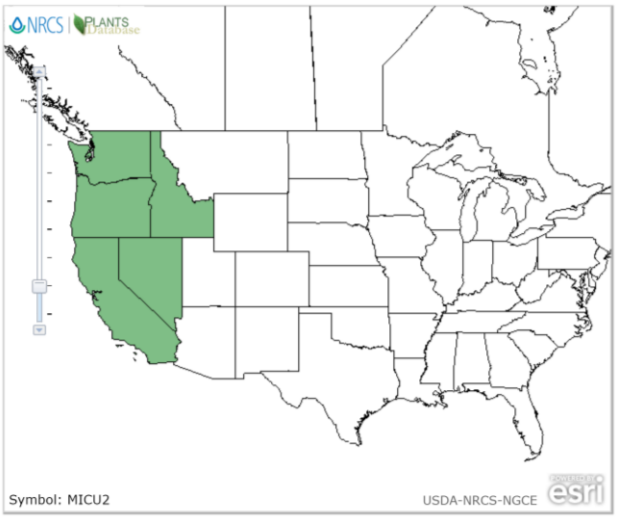
Plant Propagation Protocol for *Mimulus Cusickii* (Greene) Rattan
ESRM 412 – Native Plant Production
Protocol URL: https://courses.washington.edu/esrm412/protocols/*MICU2.pdf*



TAXONOMY	
Plant Family	
Scientific Name	Scrophulariaceae
Common Name	Figwort Family
Species Scientific Name	
Scientific Name	*Mimulus cusickii* (Greene) Rattan
Varieties	No varieties recognized
Sub-species	No sub-species recognized
Cultivar	Information not available
Common Synonym(s)	*Eunanus cusickii* Greene
Common Name(s)	Cusick's monkeyflower
Species Code (as per USDA Plants database)	MICU2
GENERAL INFORMATION	

Geographical range	Populations present in southern Washington (Klickitat county only), central Oregon, western Idaho, and northern California (Modoc county only).
Ecological distribution	Species grow in steep, unstable canyon slopes, scree. They also grow in mountainous areas[2] and in sandy or rocky (pumice) soil[3]
Climate and elevation range	600-1600m[2]
Local habitat and abundance	Habitats with rocky or sandy soil, typically mountains or canyos. *Mimulus nanus* Hook. & Arn.
Plant strategy type / successional stage	Late successional[2] Annual[2]
Plant characteristics	Forb/herb[1] Seeds are less than 1mm wide, have an ovoid shape and are yellow to dark brown.[2] Flowers are magenta with gold/yellow pistil[2]
PROPAGATION DETAILS	
Ecotype	Information not available
Propagation Goal	Seeds
Propagation Method	Seed
Product Type	Six inch pots and seeds
Stock Type	Container
Time to Grow	Three to four months[3]
Target Specifications	30-40cm in height
Propagule Collection Instructions	Collect seeds from host plants before dehiscence of fruit (May-July)[4]
Propagule Processing/Propagule Characteristics	Viable seed about 82.7% [3]
Pre-Planting Propagule Treatments	Chill seedlings for 60 days at 6°C Score seeds[3]
Growing Area Preparation / Annual Practices for Perennial Crops	Plant seeds in temperatures 20-25°C or lower. Use media that is sandy or rocky[3]
Establishment Phase Details	Information not available

Length of Establishment Phase	Four to five months[4]
Active Growth Phase	Information not available
Length of Active Growth Phase	Two to three months[4]
Hardening Phase	Information not available
Length of Hardening Phase	Information not available
Harvesting, Storage and Shipping	Harvest seeds before dehiscence of fruit (around 16-21 days after pollination, during Spring)[3] Store seeds in dry and cool conditions[5]
Length of Storage	Information not available
Guidelines for Outplanting / Performance on Typical Sites	60% germination[3]
Other Comments	None
INFORMATION SOURCES	
References	(1) "Mimulus Cusickii (Greene) Rattan - Cusick's Monkeyflower." *Plants Profile for Mimulus Cusickii (Cusick's Monkeyflower)*, plants.usda.gov/core/profile?symbol=MICU2. (2) Baldwin, Bruce G., and Staci Markos. *Treatment From the Jepson Manual*. Regents of the University of California, 1993. (3) Ezell, Wayland Lee. *Biosystematics of the Mimulus Nanus Complex in Oregon*. Proquest Dissertations Publishing, 1970. (4) Meinke, Robert James. *Systematic and Reproductive Studies of Mimulus (Scrophulariaceae) in the Pacific Northwest: Implications for Conservation Biology*. Oregon State University , 1992. (5) Sobel, James, and Schemske, Douglas W. *Speciation in the Western North American Wildflower Genus Mimulus* (2010): ProQuest Dissertations and Theses. Web.
Other Sources Consulted	(6) *CCH1: Featuring California Vascular Plant Data from the Consortium of California Herbaria and Other Sources*, 11 Jan. 2019, ucjeps.berkeley.edu/cgi-

	bin/get_consort.pl?taxon_name=Mimulus%20cusickii. (7) "Jepson Interchange: Mimulus Cusickii (Greene) Rattan." *UCJEPS*, ucjeps.berkeley.edu/cgi-bin/get_cpn.pl?MICU2. (8) "Mimulus Cusickii (Greene) Rattan." *ITIS Standard Report Page: Mimulus Cusickii*, 2019, www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=33305#null. (9) Ogutcen, Ezgi, et al. "Diversification in Monkeyflowers: An Investigation of the Effects of Elevation and Floral Color in the Genus Mimulus." *International Journal of Evolutionary Biology*, Hindawi, 5 Jan. 2014, www.hindawi.com/journals/ijeb/2014/382453/. (10) Mansfield, Donald H. "Vascular Flora of the Owyhee River Watershed in Oregon." *Journal of the Idaho Academy of Science*, vol. 46, no. 1, Dec. 2010, pp. 127–129.
Protocol Author	Rheanalyn Sta. Maria
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