

Plant Propagation Protocol for *Stachys chamissonis*

ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols/STCHC.pdf>



Image from USDA Plants Database ^[1]



Image from Burke Museum of Natural History & Culture ^[2]

TAXONOMY

Plant Family	
Scientific Name	Lamiaceae
Common Name	The mint family
Species Scientific Name	
Scientific Name	<i>Stachys chamissonis</i> Benth.
Varieties	<i>cooleyae</i> (A. Heller) G. Mulligan & D. Munro
Sub-species	N/A
Cultivar	N/A
Common Synonym(s)	<i>Stachys ciliata</i> Epling, <i>Stachys cooleyae</i> A. Heller
Common Name(s)	Coastal hedge nettle, Cooley's hedge nettle, great betony ^[3] .
Species Code (as per USDA Plants database)	STCHC

GENERAL INFORMATION

Geographical range	USA (AK, CA, OR, WA), CAN (BC). *See Distribution Maps
Ecological distribution	This plant is distributed throughout riparian ecosystems along the Pacific coast ^[3] .
Climate and elevation range	Coastal hedge nettle is common at lower elevations ^[4] , but does occur at 1,300 meters in the Cascade Mountains ^[4] .
Local habitat and abundance	<i>S. chamissonis</i> can be found along streams, lakes, marshes, meadows, forest edges, open forests, roadsides, and disturbed sites ^[5] . It prefers a moist habitat with nutrient rich, mucky, or peaty soils.

Plant strategy type / successional stage	<i>S. chamissonis</i> is a perennial native forb that is both hearty and stress tolerant ^[6] .
Plant characteristics	<p>This perennial forb spreads easily from rhizomes and grows 70-150 cm tall. The leaves are opposite, ovate shaped, with pubescence on both sides and coarse rounded teeth along the edges. It has prominent deep red-purple corolla 15-25 mm that bloom from June to August ^[7]. It develops fruits nutlets of four^[5].</p> <p><i>S. chamissonis</i> has a strong unpleasant odor which can be helpful in distinguishing it between stinging nettle (<i>Urtica dioica</i>) ^[8].</p> <p>The blossoms of this plant contain a nectar that was commonly consumed by the Quinault, while the Green River and Puyallup people used hedge nettle to cure boils ^[9].</p>

PROPAGATION DETAILS

Propagation method for <i>S. bullata</i> as explained by Betty Young^[10]	
Ecotype	Muir woods, CA.
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container (plug).
Stock Type	Deepot 16
Time to Grow	No specific information available.
Target Specifications	Firmly rooted in container.
Propagule Collection Instructions	After mature inflorescences turn brown. Seeds were collected in August.
Propagule Processing/Propagule Characteristics	No seed cleaning required. Seeds should be kept dry and stored in a refrigerator or freezer.
Pre-Planting Propagule Treatments	No specific information available.
Growing Area Preparation / Annual Practices for Perennial Crops	Greenhouse, temp and humidity controlled. Seeds are surface sown in flats with Sunshine Mix #4 Aggregate Plus (peat, perlite, nutrients, gypsum, dolomite lime) and watered in with a soft spray mist.
Establishment Phase Details	<p>Seeds germinated within 30 days of sowing. Seedlings were transplanted after germination to individual 2" x 7" Deepot 16 tubes.</p> <p>Growing medium was a mixture of peat, fir bark, perlite, and sand.</p> <p>Transplant survival rate was 90%</p>
Length of Establishment Phase	2 months
Active Growth Phase	Seeds can be planted in September and overwinter or alternatively stored and planted in early spring.
Length of Active Growth Phase	Spring- September.

Hardening Phase	Diebacks occur September-October.
Length of Hardening Phase	N/A
Harvesting, Storage and Shipping	Flexible.
Length of Storage	Flexible.
Guidelines for Outplanting / Performance on Typical Sites	Does well if given ample space, water, and nutrient rich soil.
Other Comments	
PROPAGATION DETAILS	
Propagation of <i>S. chamissonis</i> by division as explained by Roseann Barnhill^[6]	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Division
Product Type	Rhizome
Stock Type	N/A
Time to Grow	No specific information available.
Target Specifications	Rhizome develops new shoots and leaves.
Propagule Collection Instructions	Dig up and divide yellow rhizomes in November.
Propagule Processing/Propagule Characteristics	Rebury rhizomes (not too deeply) in a gallon pot, let rest overwinter and re-emerge in early spring.
Pre-Planting Propagule Treatments	N/A
Growing Area Preparation / Annual Practices for Perennial Crops	Outdoors, part sun/shade. Water frequently, this plant prefers wet feet. Medium: compost, sand, and peat.
Establishment Phase Details	Like most mints, it is fast growing, aggressive and spreads quickly via underground rhizomes.
Length of Establishment Phase	No specific information available.
Active Growth Phase	Early spring-August.
Length of Active Growth Phase	Spring- September.
Hardening Phase	Diebacks occur September-October.
Length of Hardening Phase	Dormant over winter, new growth in early spring.
Harvesting, Storage and Shipping	Hardy plant, tolerates abuse and neglect.
Length of Storage	Rhizome may rot if stored for too long.
Guidelines for Outplanting / Performance on Typical Sites	This plant will do well if given ample space, water, and nutrient rich soil.
Other Comments	
INFORMATION SOURCES	
References	*See below for full list.
Other Sources Consulted	
Protocol Author	Holly Elling Jessup
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References

¹USDA PLANTS Database. *Stachys chamissonis* Benth. var. *cooleyae* (A. Heller) G. Mulligan & D. Munro. United States Department of Agriculture. [Internet]. [Cited 4 May 2016]. Available from: <http://plants.usda.gov/core/profile?symbol=STCHC3>

² WTU Herbarium Database. *Stachys cooleyae*. Burke Museum of Natural History. [Internet]. [Cited 4 May 2016]. Available from: <http://biology.burke.washington.edu/herbarium/imagecollection.php?SciName=Stachys%20cooleyae>

³*Field Guide to the Common Wetland Plants of Western Washington & Northwestern Oregon*. 1997. The trailside series. Seattle Audubon Society. Page 197.

⁴Lyons, C., W. Merilees. *Trees and Shrubs to Know in Washington and British Columbia*. Lone Pine Publishing. Page 301.

⁵Pojar, J. & MacKinnon, A. *Plants of the Pacific Northwest Coast*. Lone Pine Publishing. Page 247.

⁶Barnhill, R. Nursery manager at MsK nursery, Shoreline WA. (12 May 2016). Personal interview.

⁷Hitchcock, C.L., A. Cronquist. 1976. *Flora of the Pacific Northwest*. University of Washington Press. Seattle and London. Page 408.

⁸Guard, B.J. 1995. *Wetland Plants of Oregon & Washington*. Lone Pine Publishing. Page 200-201.

⁹Gunther, E. 1973. *Ethnobotany of Western Washington* (2nd ed.). University of Washington Press. Page 45.

¹⁰Young, Betty. 2001. Propagation protocol for production of Container (plug) *Stachys bullata* Benth. plants Deepot 16; San Francisco, California. In: Native Plant Network. URL: <http://NativePlantNetwork.org> (accessed 2016/05/19). US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources.

Cooley's Hedge Nettle

Stachys cooleyae



Range: Southern BC to Northern California

Climate, elevation: Low elevation in wetter areas

Local occurrence: Common in Pacific North West

Habitat preferences: Very common in and near stream channels and also found in open woods, clearings and roadsides.

Plant strategy type/successional stage: Common under story species in open forests. Often found of gravel bars near rivers and streams in low elevations.

Associated species: Very closely related to Mexican hedge nettle.

May be collected as: Seed, or as division.

Collection restrictions or guidelines: Collect seeds from July- August, cuttings from mature plant

Seed germination: No seed dormancy. Germinates 15 days after sowing, with 40% success (Young, 2001).

Recommended seed storage conditions: Seeds should be stored in cool dry place (Young, 2001)

Propagation recommendations: Place flat on heated bench, and let establish for at least a month

Soil or medium requirements: Peat based mix, with coarse materials and plenty of water, to simulate streamside conditions.

Care requirements after installed: If installed in properly moist area, watering is not necessary

Sources cited

Young, Betty. 2001. Propagation protocol for production of container *Stachys ajugoides* Benth. var. *ajugoides* plants (4 inch pot); Golden Gate National Parks, San Francisco, California. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 25 May 2006). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.

Pojar, Jim and Markinon, Andy. 1994. Plants of The Pacific Northwest Coast Washington, Oregon, British Columbia & Alaska. B.C Forest Service, Research Program

Data compiled by: Joshua Hegarty, 25 May 2006