

Plant Propagation Protocol for *Galium porrigens*

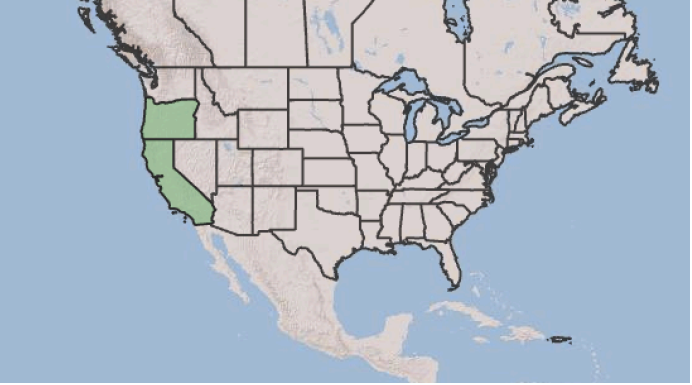
ESRM 412 – Native Plant Production

URL: [https://courses.washington.edu/esrm412/protocols/\[2025\]/\[GAPO.pdf\]](https://courses.washington.edu/esrm412/protocols/[2025]/[GAPO.pdf])



(Corelli, 2004)

TAXONOMY	
Plant Family	
Scientific Name	Rubiaceae
Common Name	Madder family
Species Scientific Name	
Scientific Name	<i>Galium porrigens</i> Dempster
Varieties	<i>Galium porrigens</i> var. <i>Porrigenes</i> <i>Galium porrigens</i> var. <i>Tenua</i> (4)
Sub-species	
Cultivar	

Common Synonym(s)	
Common Name(s)	Graceful bedstraw, climbing bedstraw, Nuttall's bedstraw (4)
Species Code (as per USDA Plants database)	GAPO
GENERAL INFORMATION	
Geographical range	 <p style="text-align: center;">USDA Plant Database</p> <p>In North America, <i>G. porrigens</i> is found across the state of California and Oregon. It is also found in Mexico</p>
Ecological distribution	Occurs in chaparrals, shrublands, west-side forests, and shaded woodlands (2)
Climate and elevation range	Semi arid, coastal and temperate climates Low to mid elevations (2) Elevation of up to 7,000 ft (3)
Local habitat and abundance	In California, local habitat includes San Joaquin hills, Santa Ana mountains, Sierra Nevada foothills, High Sierra Nevada, San Gabriel mountains, San Jacinto mountains (6) (12)
Plant strategy type / successional stage	Tolerant of cold climates and freezing temperatures, frost, temperature fluctuations, moderate drought, and disturbances (5)

	(Info above was taken from <i>G. triflorum</i> species, a similar species of the genus Galium)
Plant characteristics	<p><i>Galium porrigens</i> is a perennial herb that can climb up to 5 ft high. Their lower stem is woody and their upper stem, green in coloration, creates a tangled mass. They have tiny bristly leaves that are oval-shaped, green, with red or purple pointed tips. Their leaves appear in whorls of 4 and have a sticky texture.</p> <p><i>G. porrigens</i> also has tiny 4 petaled yellow-green flowers in axillary clusters. The male and female flowers are found on separate plants, with the male flowers occurring in clusters and the female flowers occurring solitary.</p> <p>The fruit produced by <i>G. porrigens</i> is a round white berry that turns black when it ages.</p> <p>(2) (3)</p>

PROPAGATION DETAILS: FROM SEED

(Skinner, 2007) (Rankel, 2025)

Protocol derived for *Galium boreale* L, with same family and genus as *Galium porrigens*

Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container (plug)
Stock Type	10 cu.
Time to Grow	4 months
Target Specifications	12-24 inches tall, 12-18 inches wide (8)

Propagule Collection Instructions	Seeds collected late summer when fruit is dry and brown. Strip fruits off the plant by hand. Store seeds in paper bag at room temperature in dry ventilated area until time to clean (7)
Propagule Processing/Propagule Characteristics	Rub small amounts to break the fruit and free the seeds. Clean with air column separator. Thresh larger amounts of seeds with a hammermill and clean with air screen equipment. (7) Store seeds in controlled conditions at 40°F and 40% relative humidity
Pre-Planting Propagule Treatments	No cold stratification needed, germination without pretreatment high (7)
Growing Area Preparation / Annual Practices for Perennial Crops	Sow seeds in early spring or fall (8) in the greenhouse in 10 cu. in. Ray Leach Super Cell containers filled with sunshine #4 mix. Cover seeds lightly with soil and add a thin layer of coarse grit on top for seed stabilization in soil. Water containers deeply (7)
Establishment Phase Details	Maintain soil moisture until germination occurs
Length of Establishment Phase	2-4 weeks under optimum conditions (8)
Active Growth Phase	Plants are watered deeply every other day. Water soluble fertilizer applied once a week (7) <i>G. porrigens</i> are slow growing plants
Length of Active Growth Phase	Reaches maturity in 1-2 years (8)
Hardening Phase	In late March to early April, plants are moved to cold frames and watered every other day if the weather is cool, and everyday during dry conditions (7)

Length of Hardening Phase	2-4 weeks
Harvesting, Storage and Shipping	N/A
Length of Storage	N/A
Guidelines for Outplanting / Performance on Typical Sites	<p>Choose a moist, shady area or a well drained spot with partial sun. Soil bed should contain rich well-drained soil that contains some components of organic matter. Soil should be slightly acidic to neutral, with pH ranging between 6.0 and 7.0</p> <p>Space plants 12 to 18 inches apart when transplanting (8)</p>
Other Comments	Limited seed propagation information for <i>Galium porrigens</i> . Referenced Skinner's propagation protocol for <i>Galium boreale</i> L plant as they both share similar taxa, along with information from Rankel.
PROPAGATION DETAILS: VEGETATIVE	
Propagation Goal	Plants
Propagation Method	Vegetative
Product Type	Field grown
Time to Grow	Plant is already mature
Target Specifications	12-24 inches tall, 12-18 inches wide (8)
Propagule Collection Instructions	<p>Collect propagules during early spring or late fall. Dig up fully established plants, making sure roots are still intact with soil around the roots.</p> <p>Divide the crown into sections by hand or with a knife, ensuring that the rhizome segment is connected to healthy roots and stem parts. (8) (9)</p>

Pre-Planting Propagule Treatments	No treatments required
Growing Area Preparation / Annual Practices for Perennial Crops	Choose a moist, shady area or a spot with partial sun. Soil bed should contain rich well-drained soil that contains some components of organic matter. Soil should be slightly acidic to neutral, with pH ranging between 6.0 and 7.0 Space plants 12 to 18 inches apart when transplanting (8). Replant divisions at the same depth as they were originally. Water thoroughly
Active Growth Phase	Plants are watered deeply every other day. Water soluble fertilizer applied once a week (7) Monitor for waterlogged conditions, disease and pests
Length of Active Growth Phase	Plant should be mature at time of division and transplanting, at 1-2 years
Hardening Phase	Plants are watered every other day if the weather is cool, and everyday during hot dry conditions (7) Leave plants undisturbed
Length of Hardening Phase	2-4 weeks
Harvesting, Storage and Shipping	N/A
Length of Storage	N/A
Other Comments	Limited info available on vegetative propagation of <i>G. porrigens</i> . Had to refer to outside sources for most of it
INFORMATION SOURCES	
References	See below
Other Sources Consulted	See below
Protocol Author	Vivian H. Nguyen

Date Protocol Created or Updated	05/10/25
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References:

- (1) United States Department of Agriculture. *Galium porrigens* Dempster graceful bedstraw. USDA Plants Database, <https://plants.usda.gov/plant-profile/GAPO> Accessed 8 May 2025.
- (2) Turner, M. (n.d.). *Galium porrigens Climbing Bedstraw*. Turner Photographics. Retrieved May 6, 2025, from pnwflowers.com/flower/galium-porrigens
- (3) (n.d.). *Climbing Bedstraw*. Friends of Edgewood. Retrieved May 6, 2025, from <https://friendsofedgewood.org/climbing-bedstraw>
- (4) Calflora: Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals. [web application]. 2025. The Calflora Database [a non-profit organization]. Available: <https://www.calflora.org/> (Accessed: 05/26/2025).
- (5) Gucker, Corey L. 2005. *Galium boreale*, *G. triflorum*. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <https://www.fs.usda.gov/database/feis/plants/forb/galspp/all.html> [2025, May 26].
- (6) Bryant, P. (n.d.). *Climbing Bedstraw (Graceful Bedstraw)*. Natural History of Orange County. Retrieved May 8, 2025, from <https://nathistoc.bio.uci.edu/plants/Rubiaceae/Galium%20porrigens.htm>
- (7) Skinner, David M., 2007. Propagation protocol for production of Container (plug) *Galium boreale* L plants 10 cu.; USDA NRCS - Pullman Plant Materials Center Pullman, Washington. In: Native Plant Network. URL: <https://NativePlantNetwork.org> (accessed 2025/05/10). US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources.
- (8) Rankel, K. (2025, January 24). *Introduction to Graceful Bedstraw*. Greg. Retrieved May 8, 2025, from <https://greg.app/graceful-bedstraw-overview/>
- (9) Geneve, R., Wilson, S., & Davies, F. (n.d.). *Division Propagation*. PropG. Retrieved May 8, 2025, from <https://propg.ifas.ufl.edu/08-layering/04-layering-division.html>

(10) Kruckeberg, Arthur R. 1996. Gardening with Native Plants of the Pacific Northwest. 2nd ed. University of Washington Press. Seattle, WA. 282 pp.

(11) Butler, Jennifer; Frieswyk, Christin. 2001. Propagation protocol for production of Propagules (seeds, cuttings, poles, etc.) *Galium* seeds USDI NPS - Rocky Mountain National Park Estes Park, Colorado. In: Native Plant Network. URL: <https://NativePlantNetwork.org> (accessed 2025/05/10). US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources.

(12) Jepson Flora Project (eds.) 2025, *Jepson eFlora*, <https://ucjeps.berkeley.edu/eflora/>, accessed on May 12, 2025.

(13) Corelli, T. 2004. *Flowering Plants of Edgewood Natural Preserve* (2nd. ed.). Monocot Press, Half Moon Bay, California.