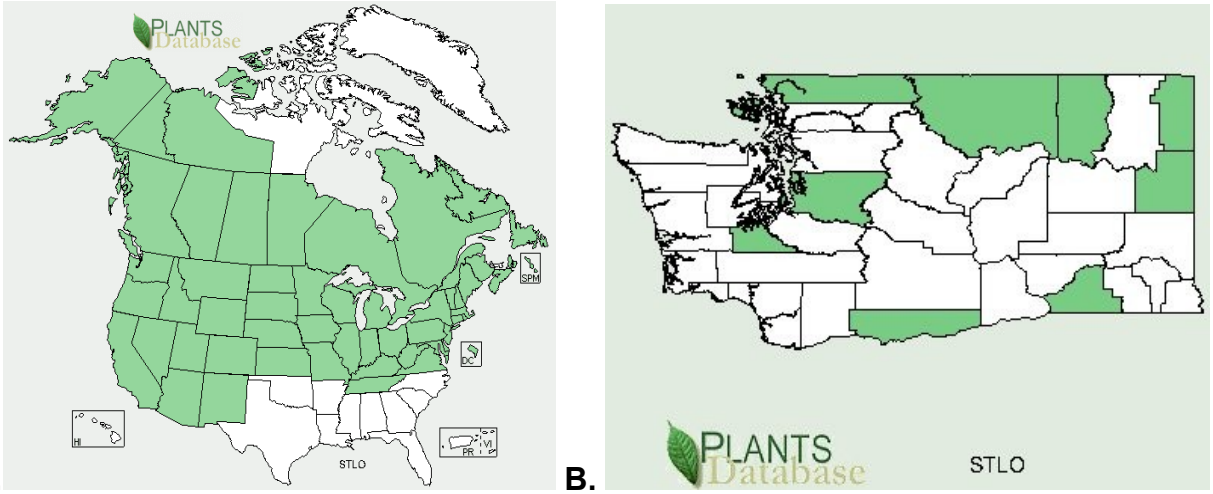
Plant Propagation Protocol for *Stellaria longifolia*

ESRM 412 – Native Plant Production



A. **B.**

FIGURE A. North America Distribution (USDA PLANTS database) **FIGURE B**. Washington State Distribution (USDA PLANTS database)

TAXONOMY	
Family Names	
Family Scientific Name:	Caryophyllaceae
Family Common Name:	Pink, Carnation, or Chickweed
Scientific Names	
Genus:	*Stellaria*
Species:	*longifolia*
Species Authority:	Muhlenberg ex Willdenow
Variety:	*Stellaria longifolia* Muhl. ex Willd. var. *longifolia* *Stellaria longifolia* Muhl. ex Willd. var. *atrata* J.W. Moore
Sub-species:	
Cultivar:	
Authority for Variety/Sub-species:	Muhlenberg Willdenow J.W. Moore
Common Synonyms:	*Alsine longifolia* (Muhl.) Britton *Stellaria atrata* (Muhl.) Boivin *Stellaria friesiana* Ser. (Abrams & Ferris, 1944)
Common Names:	Longleaf starwort (USDA PLANT database), long-leaved starwort (Pojar and MacKinnon, 1994)
Species Code:	STLO
GENERAL INFORMATION	
Geographical range	Alaska to Newfoundland, South to Washington and Kentucky (Piper, 1906 & Abrams & Ferris, 1944)
Ecological distribution:	Humid transition zones, wet meadows, thickets, streambanks,

	glades, open moist forests, clearings and roadsides (Abrams & Ferris, 1994 & Pojar and MacKinnon, 1994)
Climate and elevation range	**Climate:** Wet, humid climates (Abrams & Ferris, 1944) **Elevation Range:** Low to moderately high elevations (Pojar and MacKinnon, 1994)
Local habitat and abundance; may include commonly associated species	**Local Habitat**: Moist meadows **Abundance**: Uncommon species (Pojar & MacKinnon 1994) **Common associated species include**: *Stellaria longipes*, *Stellaria porsildii* and *Stellaria calycantha*
Plant strategy type / successional stage:	Colonizer (Pojar and MacKinnon, 1994)
Plant characteristics (life form (shrub, grass, forb), longevity, key characteristics, etc)	**Life form**: Forb (Pojar and MacKinnon, 1994) **Duration**: Perennial (Pojar and MacKinnon, 1994) **Blooming period**: May-July (Abrams & Ferris, 1944) **Leaves**: Opposite, sessile, linear, hairless, elliptic and narrow 2-3 cm leaves with pointed tips (Piper, 1906; Pojar & MacKinnon, 1994; & Abrams) **Flowers**: White-greenish, petite solitary flowers with varying petal lengths (same length as sepal to absent); flowers often in open terminal groups or in leaf axis with a long branched, open inflorescence; deeply 2-parted petals; small and scarious bracts (Piper, 1906 & Pojar & MacKinnon, 1994) **Stems**: Slender and branched; hairless to somewhat hairy (Abrams & Ferris, 1944 & Pojar & MacKinnon, 1994) **Height**: 5-50 cm (Pojar & MacKinnon, 1994) **Fruits**: Straw-colored to purplish elongated capsules; opening by 6 teeth (Pojar & MacKinnon, 1994) **Seeds**: Smooth 0.5-1 mm long reddish brown seeds (Abram& Ferris, 1944; Piper, 1906; & Pojar and MacKinnon, 1994) **Rhizomes**: Long (Pojar and MacKinnon, 1994)
1. PROPAGATION DETAILS **Seed** (Burbridge, 1877)	
Ecotype (this is meant primarily for experimentally derived protocols, and is a description of where the seed that was tested came from):	

Propagation Goal:	Germinants
Propagation Method (Options: Seed or Vegetative):	Seeds
Product Type:	Container
Stock Type:	
Time to Grow (from seeding until plants are ready to be outplanted):	
Target Specifications (size or characteristics of target plants to be produced):	
Propagule Collection (how, when, etc):	- Collect fully ripe seeds in at the end August - If cultivating seeding plants in wet or cold environment, keep containers in ash or coconut fiber in a cold frame and keep lights drawn off during the day to prevent dampening and molding of seeds. (Burbridge, 1877) - Keep plants indoors if possible with sunlight available when flowers begin to expand (Burbridge, 1877) - Keep seeds in the seed-essel or pericarp in storage until the time of sowing (Burbridge, 1877)
Propagule Processing/Propagule Characteristics (including seed density (# per pound), seed longevity, etc):	
Pre-Planting Propagule Treatments (cleaning, dormancy treatments, etc):	- After first 2-3 flower bloom, remove buds and stems of other flowers - Pollinate/fertilize the initial blooms, which will produce earlier and optimum fruit and seed (Burbridge, 1877)
Growing Area Preparation / Annual Practices for Perennial Crops (growing media, type and size of containers, etc):	- Pans or trays of well drained light, rich, sandy compost (Burbridge, 1877)
Establishment Phase (from seeding to germination):	- Ideal to sow during the first week of May in the subsequent year, however sowing seeds immediately after collection in August is plausible - Apply 65C bottom heat to the trays - Prick one-inch high germinates into larger individual containers (Burbridge, 1877)
Length of Establishment Phase:	
Active Growth Phase (from germination until plants are no longer actively growing):	

Length of Active Growth Phase:	
Hardening Phase (from end of active growth phase to end of growing season; primarily related to the development of cold-hardiness and preparation for winter):	
Length of Hardening Phase:	
Harvesting, Storage and Shipping (of seedlings):	
Length of Storage (of seedlings, between nursery and outplanting):	
Guidelines for Outplanting / Performance on Typical Sites (eg, percent survival, height or diameter growth, elapsed time before flowering):	
Other Comments (including collection restrictions or guidelines, if available):	
PROPAGATION DETAILS **Division** (Hartmann *et al*., 2011)	
Ecotype (this is meant primarily for experimentally derived protocols, and is a description of where the seed that was tested came from):	
Propagation Goal (Options: Plants, Cuttings, Seeds, Bulbs, Somatic Embryos, and/or Other Propagules):	Plants
Propagation Method (Options: Seed or Vegetative):	Vegetative
Product Type	Container
Stock Type:	
Time to Grow (from seeding until plants are ready to be outplanted):	Entire growing season (usually from early spring to late summer) (Hartmann *et al*., 2011)
Target Specifications (size or characteristics of target plants to be produced):	New shoots and adventitious root formation from rhizomes (Hartmann *et al*., 2011)
Propagule Collection:	- Dug up the rhizomes at the beginning of the growing season (Hartmann *et al*., 2011)

Propagule Processing/Propagule Characteristics (including seed density (# per pound), seed longevity, etc):	
Pre-Planting Propagule Treatments (cleaning, dormancy treatments, etc):	
Growing Area Preparation / Annual Practices for Perennial Crops:	- Media with shredded fir or hammer-milled pine bark, peat moss, perlite, and sand with some preplant fetilizers - Use of media with peat-perlite, peat-expanded shale, peat-vermiculite-perlite, bark-haydite, or peat-rockwood combinations also suggested - Ideal if media is moistened 24 hours before transplanting - Use container with room for root growth (Hartmann *et al*., 2011)
Establishment Phase (from seeding to germination):	Prepare rhizomes: - Cut off the culms at the point of attachment to the rhizome and cut back the top - Cut up rhizomes into separate sections with at least one lateral bud or dormant lateral growing point located on each section - Single lateral offshoots from the rhizome could also be separately removed and transplanted (Hartmann *et al*., 2011)
Length of Establishment Phase:	Entire growing season (usually from early spring to late summer) (Hartmann *et al*., 2011)
Active Growth Phase (from germination until plants are no longer actively growing):	
Length of Active Growth Phase:	
Hardening Phase (from end of active growth phase to end of growing season; primarily related to the development of cold-hardiness and preparation for winter):	
Length of Hardening Phase:	
Harvesting, Storage and Shipping (of seedlings):	
Length of Storage (of seedlings, between nursery and outplanting):	
Guidelines for Outplanting / Performance on Typical	

Sites (eg, percent survival, height or diameter growth, elapsed time before flowering):	
Other Comments (including collection restrictions or guidelines, if available):	

INFORMATION SOURCES

References (full citations):	Abrams, L. & Ferris, R.S. (1944). *An illustrated Flora of the Pacific states: polygonaceae to Krameriaceae, buckseats to kramerias*. Stanford, CA: Stanford University Press. Burbridge, F.W. (1877). *Cultivated plants, their propagation and improvement*. Edinburgh, UK: Blackwood and Sons. Piper, C. (1906). *Flora of the state of Washington*. Washington D.C.: Government Printing Office. Hartmann, H.T., Kester, D.E., Davies, F.T., Jr., & Geneve, R.L., (2011). *Hartmann and Kester's plant propagation: principles and practice* (8th ed.). Upper Saddle River, NJ: Pearson Education, Inc. Pojar, J. & MacKinnon, A. (1994). *Plants of the Pacific Northwest coast: Washington, Oregon, British Columbia, and Alaska*. Vancouver, BC: B.C. Ministry of Forests and Lone Pine Publishing.
Other Sources Consulted (but that contained no pertinent information) (full citations):	Burbridge, J. (1989). Wildflowers of the Southern Interior of British Columbia. Manitoba, Canada: Frisen Printers. Chinnappa, C.C., Donald, G.M., Sasidharan, R., & Emery, N.R.J. (2005). The biology of *Stellaria longipes* (Caryophyllaceae). *Canadian Journal of Botany*. 83(11): 1367-1383. Clark, L.J. (1973). *Wildflowers of British Columbia*. Vancouver, B.C.: Evergreen Press Limited. Cullina, W. (2000). *The New England wild flower society guide to growing and propagating wildflowers of the United States and Canada*. New York, NY: Houghton Mifflin Harcourt. Jennings, N.L. (2006). *Uncommon Beauty: wildflowers and flowering shrubs of southern Alberta and southeastern British*

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