Plant Propagation Protocol for *Symphyotrichum chilense*
ESRM 412 – Native Plant Production
Protocol URL:
https://courses.washington.edu/esrm412/protocolsSYCH4.pdf


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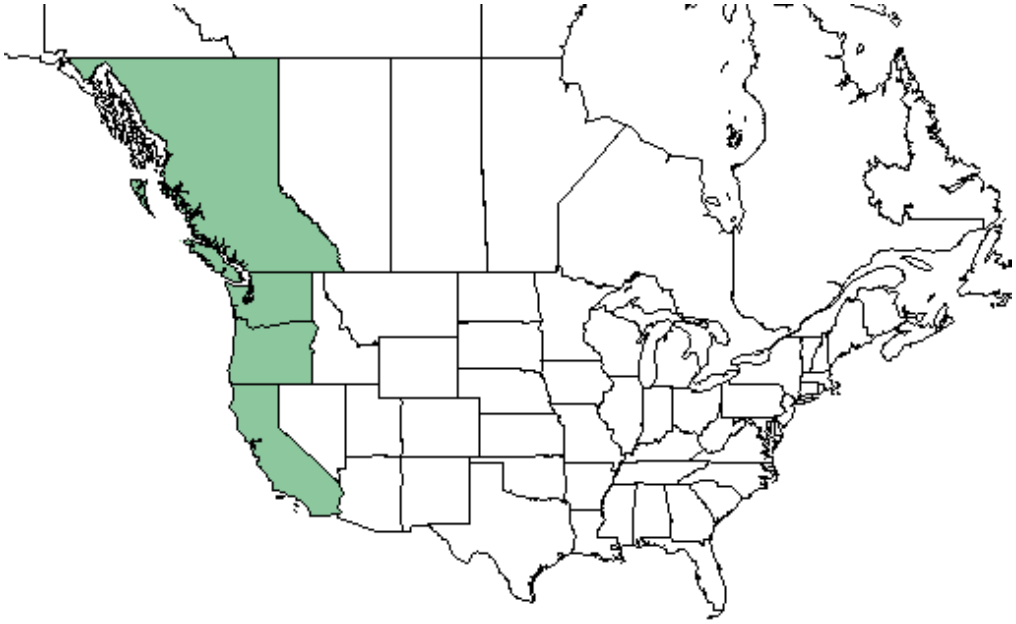
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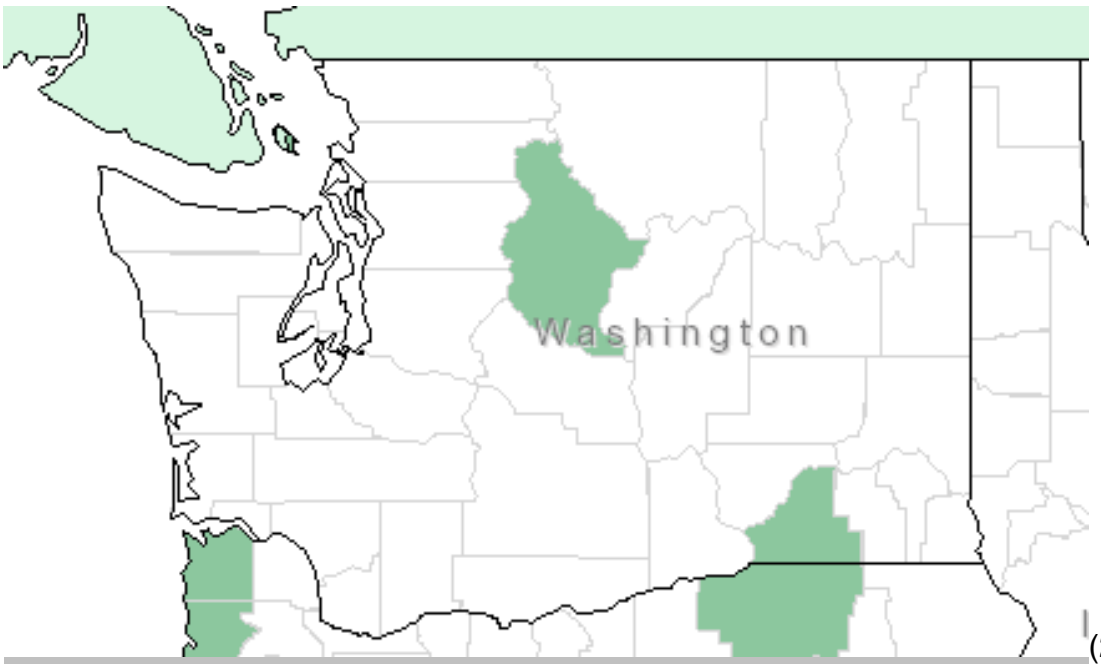

(2)

TAXONOMY	
Plant Family	
Scientific Name	Asteraceae
Common Name	Aster Family
Species Scientific Name	
Scientific Name	*Symphyotrichum chilense* (Nees) G.L. Nesom
Varieties	*Symphyotrichum chilense* (Nees) G.L. Nesom var. *chilense* *Symphyotrichum chilense* (Nees) G.L. Nesom var. *invenustum* (Greene) G.L. Nesom *Symphyotrichum chilense* (Nees) G.L. Nesom var. *medium* (Jeps.) G.L. Nesom
Common Synonym(s)	*Aster chilensis* Nees, Gen. Sp. Aster (Nees) G. L Nesom
Common Name(s)	Pacific Aster, common california aster (1)
Species Code (as per USDA Plants database)	SYCH4

GENERAL INFORMATION	
Geographical range	See maps above
Ecological distribution	*S. chilense* grows in a variety of habitats including grasslands, meadows, salt marshes, coastal dunes and bluffs, coastal scrub, and open or disturbed areas (1)
Climate and elevation range	*S. chilense* is adapted to fine- to medium-textured soils, full sun to partial shade, is relatively drought tolerant, and has a high salinity tolerance. Pacific aster is distributed in coastal regions from southwest British Columbia to Southern California at elevations below 1600 ft (1)
Local habitat and distribution	*S. chilense* is common in coastal regions and meadows. (1) It grows either in clumps or in a spreading fashion (1)
Plant strategy type / successional stage	Stress-tolerator, very hardy plant, can be hard to completely remove from an area, salt tolerant (1)
Plant characteristics	Rhizomatous, herbaceous perennial that grows 1 to 4 ft tall. Plants can be clumped or spreading, with one to many ascending or erect stems that are hairy towards the tips. Basal leaves are usually hairless, stalked, thin (generally 1 to 8 inches long by 0.2 to 1.5 inches wide), and wither by the time the plant flowers. Leaves along the stems are arranged alternately, stalkless, and are 1 to 3.5 inches long by 0.2 to 1.2 inches wide. Flower heads are arranged in open, flat-top or round-top, branched clusters (cymes), with violet to pink or white ray flowers (petal-like outer part of the aster flower) and yellow disk flowers (centers). Bloom time varies by latitude and elevation, but can extend from June to October (1) Provides late-season pollen for bees and checkerspot and crescent butterflies (1)
PROPAGATION DETAILS	
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container
Time to Grow	
Target Specifications	Developed root system before outplanting (3)
Propagule Collection Instructions	Seeds can be collected from beginning of Aug.

	Through end of Nov. Mature inflorescences are brown. Seed is brown at maturity (3)
Propagule Processing/Propagule	800,000-1,300,000 seeds/ pound (1)
Pre-Planting Propagule Treatments	No dormancy or stratification, can sow untreated seeds but won't germinate until soil is moist and temps are at least 60F (1) Seeds must be cleaned, a fine screen works best, seeds should be stored cool (3)
Growing Area Preparation / Annual Practices for Perennial Crops	For greenhouse: 4 grams of seeds are sown per flat containing Sunshine Mix #4 Aggregate Plus (peat moss, perlite, major and minor nutrients, gypsum, and dolomitic lime). Seeds are mixed with media to sow and are lightly covered. Flats are watered in with an automatic irrigation system. Flats are misted periodically until seeds germinate (3). Outplant location should have weeds removed for one to two years before planting and a clean firm bed should be established (1).
Establishment Phase Details	Seeds germinate around 20 days after sowing, seedlings transplanted 14 days after germ. To individual containers in standard potting mix (3)
Length of Establishment Phase	1 month (3)
Active Growth Phase	Seedlings are placed in shade house for continued growth (3)
Guidelines for Outplanting / Performance on Typical	Transplant survival (into containers) is 75% (3)
Other Comments:	Pacific aster can be used in wildlife or pollinator enhancement plantings, native prairie restoration, meadow gardens, and erosion control or critical area plantings. Its deep, extensive, fibrous root system is good for stabilizing slopes.
INFORMATION SOURCES	
References	1) Young-Mathews, A. 2012. Plant fact sheet for Pacific aster (Symphyotrichum chilense). USDA-Natural Resources Conservation Service, Corvallis Plant Materials Center, Corvallis, OR 2) "Plants Profile for Symphyotrichum Chilense (Pacific Aster)." *USDA Plants Database*. USDA Natural Resources Conservation Service, n.d. Web. 18 May 2015.

	<http://plants.usda.gov/core/profile?symbol=SYCH4>. 3) Young, Betty 2001. Propagation protocol for production of container *Symphyotrichum chilense* (Nees.) Nesom *chilense* plants (Deepot 16); , San Francisco, California. In: Native Plant Network. URL: http://www.nativeplantnetwork.org (accessed 19 May 2015). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery. 4) In Klinkenberg, Brian. (Editor) 2014. *E-Flora BC: Electronic Atlas of the Plants of British Columbia* (eflora.bc.ca).Labfor Advanced Spatial Analysis, Department of Geography. University of British Columbia 5) Calflora: Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria. [web application]. 2015. Berkeley, California: The Calflora Database [a non-profit organization]. Available: http://www.calflora.org/ (Accessed: May 20, 2015).
Protocol Author	Melissa Rienstra
Date Protocol Created or Updated	5/19/2015

* one note about the distribution map, in WA P. aster does not appear to colonize the costal zone like it does in OR & CA as described but it does live in meadows and other lowands in the interior of WA.