

Plant Propagation Protocol for *Antennaria argentea*

ESRM 412 – Native Plant Production

Spring 2024

URL: <https://courses.washington.edu/esrm412/protocols/2024/ANAR5.pdf>

TAXONOMY



Antennaria argentea. Image from <https://www.calflora.org/app/taxon?crn=375>, copyright
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Plant Family

Scientific Name	Asteraceae
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Common Name	Aster, Daisy, Composite, Sunflower
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Species Scientific Name

Scientific Name	<i>Antennaria argentea</i> Benth.
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Varieties	
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Sub-species	
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Cultivar	
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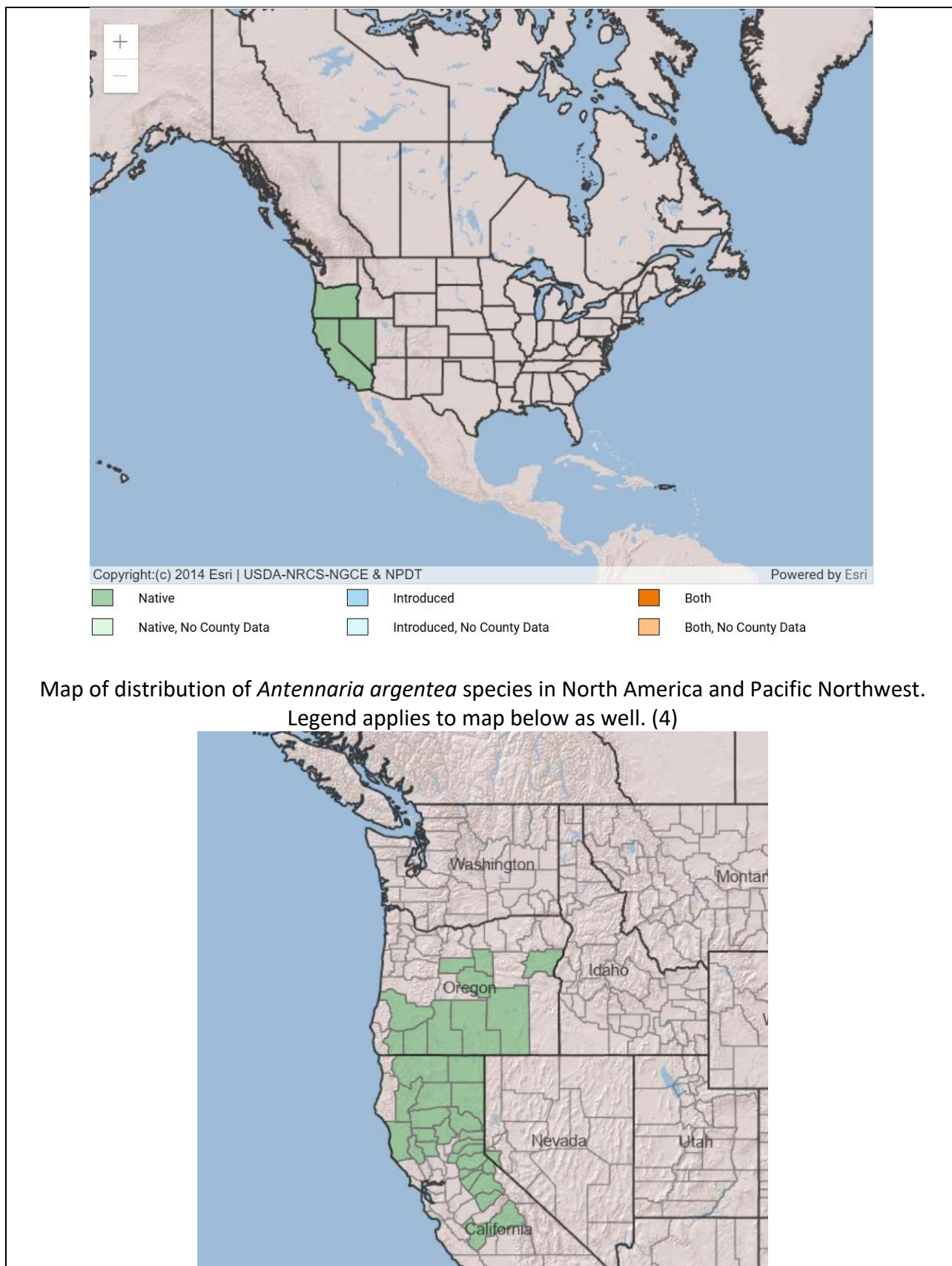
Common Synonym(s)	<i>Antennaria luzuloides</i> var. <i>argentea</i> (2)
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	<i>Antennaria argentea</i> abberans subsp. (9)
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Common Name(s)	Silver pussytoes, silvery everlasting
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Species Code (as per USDA Plants database)	ANAR5
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GENERAL INFORMATION



Geographical range	Washington to Nevada, (1) but most common from central Oregon to Northern and Central California. (4)
Ecological distribution	Dry coniferous forests (3) Rocky slopes, forest openings (6) Grassland (10)
Climate and elevation range	1000 – 6500 ft (300 – 2000 m) (3) (6)
Local habitat and abundance	Oak-scrub forest, pine forest, mixed hardwood-coniferous forest. Exposed, barren, or rocky slopes and meadows. Disturbed sites. Associated species include <i>Pseudotsuga menziesii</i> , <i>Pinus ponderosa</i> , <i>Eriogonum</i> spp., <i>Achnatherum lemmonii</i> . Common along roadsides. (7)
Plant strategy type / successional stage	No information could be found for plant strategy type.
Plant characteristics	Perennial herb/forb variously described as rhizomatous or stoloniferous. See (8) and records 1 and 9 of (7). Grows 18—40 cm tall. Basal leaves tomentose. (1) Flowers are silvery white, occurring in paniculiform heads of 10-75. Flowers from May to July (8).
PROPAGATION DETAILS: Seed propagation method from Rock Garden Plants (10)	
Ecotype	
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container
Stock Type	No information could be found for stock type
Time to Grow	No information could be found for time to grow
Target Specifications	18 – 40 cm
Propagule Collection Instructions	No information could be found for propagule collection instructions
Propagule Processing/Propagule Characteristics	No information could be found for propagule processing
Pre-Planting Propagule Treatments	No information could be found for pre-planting treatments
Growing Area Preparation / Annual	Grown in an alpine house with sunny conditions. Needs rich, well-draining, slightly moist growing media. Temperature is kept between 13-20 C, and seeds should be barely covered with soil for germination.

Practices for Perennial Crops	
Establishment Phase Details	Seed in the spring
Length of Establishment Phase	Germination time is about 1 month.
Active Growth Phase	
Length of Active Growth Phase	If planted in the spring, active growth phase ends mid to late summer, when plants flower and go to seed.
Hardening Phase	No information could be found for hardening phase
Length of Hardening Phase	
Harvesting, Storage and Shipping	No information could be found for harvesting, storage and shipping
Length of Storage	
Guidelines for Outplanting / Performance on Typical Sites	No information could be found for guidelines for outplanting
Other Comments	
PROPAGATION DETAILS: Seed propagation method for <i>Antennaria</i> genus from Lindsey Springer's protocol (11)	
Ecotype	Colorado, Sprague Lake, Hollowell Park, Twin Sisters
Propagation Goal	Seeds
Propagation Method	Seed
Product Type	Propagules (seeds, cuttings, poles, etc.)
Stock Type	No information could be found for stock type
Time to Grow	No information could be found for time to grow
Target Specifications	No information could be found for target specifications
Propagule Collection Instructions	Collect seeds after flowering – August to September
Propagule Processing/Propagule Characteristics	No information could be found for propagule processing
Pre-Planting Propagule Treatments	Separate fuzz from seed head.
Growing Area Preparation / Annual Practices for Perennial Crops	Fafard Germination Mix (superfine) was used for germination, and Fafard Growing Media 2 was used for growth media. When germinating, keep seeds at 65-70 F during the day and 55 F at night in the greenhouse. Seeds should be germinated on a 70F heating pad, and kept under a tent with misters spraying for 10 seconds every 15 minutes. Seeds should be misted for 12 hours a day in this manner.

	A week after seedlings germinate, they can be moved out from the tent, but still misted.
Establishment Phase Details	Seeds should be sown by hand into a 4x8 flat. Seeds require lots of light for germination and should be sown on the surface of the soil and gently pressed in.
Length of Establishment Phase	Germination will take 7 days or more, and is fairly uneven. Seeds germinate at different times over the course of days or weeks.
Active Growth Phase	
Length of Active Growth Phase	After seeds have germinated, they can be potted one month after. Unclear about how long active growth phase is.
Hardening Phase	No information could be found for hardening phase
Length of Hardening Phase	
Harvesting, Storage and Shipping	Seeds can be stored in the greenhouse
Length of Storage	No information could be found for length of storage
Guidelines for Outplanting / Performance on Typical Sites	No information could be found for guidelines for outplanting
Other Comments	
INFORMATION SOURCES	
References	See below.
Other Sources Consulted	<ol style="list-style-type: none"> 1. "Bibliography for 'Antennaria argentea'." Biodiversity Heritage Library. Bibliography for "Antennaria argentea"- Biodiversity Heritage Library (biodiversitylibrary.org). Accessed April 27, 2024. 2. "Antennaria corymbosa E. E. Nelson." <i>Plants</i>, USDA. USDA Plants Database. Accessed April 27, 2024. 3. "Antennaria in Flora of North America." <i>efloras.org</i>, Flora of North America. Antennaria in Flora of North America @ efloras.org. Accessed April 27, 2024. 4. "Antennaria argentea Benth." <i>Plants of the World Online</i>, Kew Royal Botanic Gardens. Antennaria argentea Benth. Plants of the World Online Kew Science. Accessed April 27, 2024. 5. "Antennaria argentea." <i>Calflora Database</i>, Berkeley, California. Antennaria argentea Calflora. Accessed April 27, 2024.
Protocol Author	Jillian Rogers
Date Protocol Created or Updated	May 1, 2024

References

1. Randall J. Bayer 2017, *Antennaria argentea*, in Jepson Flora Project (eds.) *Jepson eFlora*, Revision 5, https://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=884. Accessed on April 27, 2024.
2. "Antennaria argentea (Silver pussytoes)." *Native Plants of North America*, University of Texas at Austin. https://www.wildflower.org/plants/result.php?id_plant=ANAR5. Accessed April 27, 2024.
3. "Silver Pussytoes, Antennaria argentea." *CalScape*, California Native Plant Society. <https://calscape.org/search/?plant=Antennaria-argentea>. Accessed April 27, 2024.
4. "Antennaria argentea Benth." *Plants*, USDA. <https://plants.sc.egov.usda.gov/home/plantProfile?symbol=ANAR5>. Accessed April 27, 2024.
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7. Bayer, Randall J. "Antennaria argentea." *Flora of North America*, November 5, 2020. http://floranorthamerica.org/Antennaria_argentea. Accessed April 27, 2024.
8. "Notes on Certain Species of Antennaria." *Botanical Gazette*, University of Chicago: pg 124, August 1902. <https://www.journals.uchicago.edu/doi/pdf/10.1086/328271>. Accessed April 27, 2024.
9. "Antennaria argentea." Rock Garden Plants. <https://flora.kadel.cz/cf/kvCard2813.html>. Accessed April 27, 2024.
10. Springer, Lindsay. "Antennaria." *Propagation Protocol Database*, Native Plant Network, USDA, Forest Service, National Center for Restoration, Nurseries, and Genetic Resources, 1998. <https://nnp.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=asteraceae-antennaria-808>. Accessed April 26, 2024.