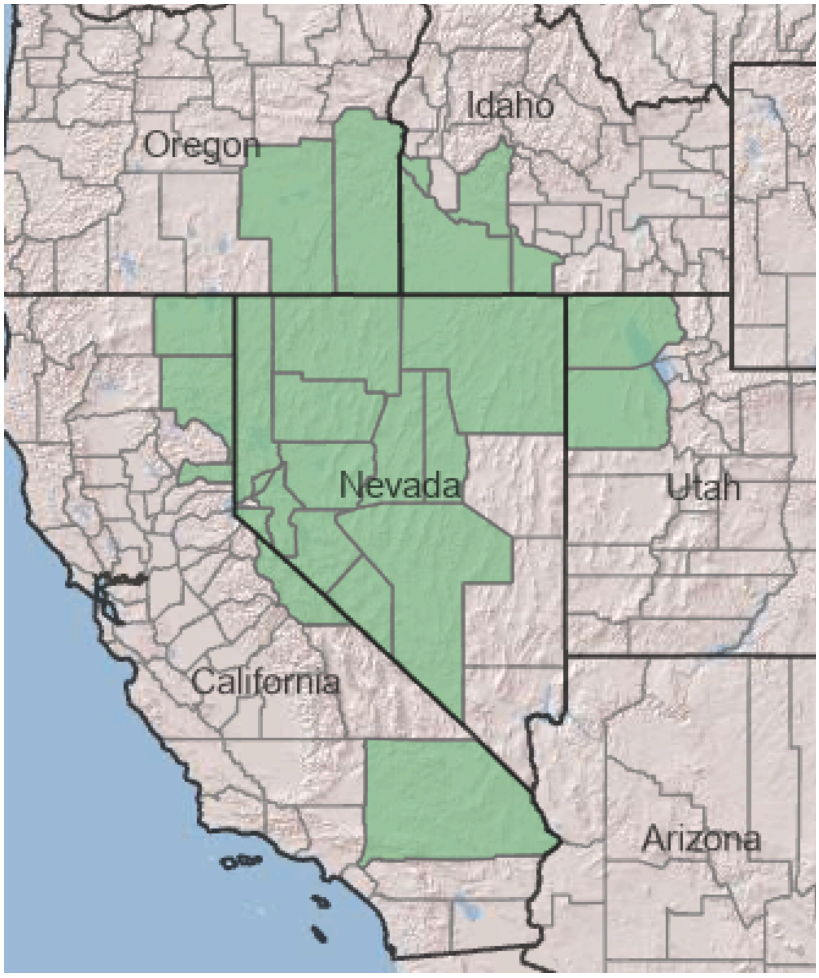
Distribution:



TAXONOMY:	
(Family Names)	
Family scientific name	Fabaceae (^9)
Family common name	legume family
(Scientific Names)	
Genus	Astragalus
Species	Astragalus convallariu
Species authority	George N. Wilcox (^1)
Variety	var. diaphanoides and var. Idoanthus (^2)
Cultivar	No cultivar. Plant usually found in natural habitat

Common synonyms	Humboldt Milkvetch and violet milkvetch
Common names	Humboldt River Milkvetch
Species code	ASIOI
GENERAL INFORMATION:	
Geographical range	Western parts of the united states including California, Idaho, Nevada, Oregon and Utah (^3)
Ecological Distribution	Adapted to open, grassy environments including pastures, prairies and steppes. Grows near streams, rivers and other moist areas. This species is a common inhabitant of sagebrush plant communities and can be found in areas with open canopies. (^8)
Climate and elevation range	Semi-arid climate with cold winters and hot dry summers (adapted to survive in these extreme weather conditions). (^4)
Local habitat and abundance	The plant typically grows in alkaline, clayed soils (these soils are normally poorly drained and have a high pH). (^5)
Plant strategy type/ successional stage	- Adapted to semi-arid, harsh environments, characterized by low water availability, extreme temperatures and poor soil conditions (this makes it a stress tolerator strategy species) - Thrives in disturbed habitats, producing many seeds with high germination rates (^6)
Plant characteristics	- low growing perennial herb - plant typically grows to 4-12 inches - leaflets are elliptical to oblong and are a greenish- gray color - Drought tolerant, alkaline soil tolerant, reduced transpiration due to fine hairs (^7)
PROPAGATION DETAILS: (Propagation details from the plant Astragalus purshii)	
Ecotype	Information not provided by author
Propagation goal	Plants
Propagation method	Seeds
Product type	Container (plug)

Stock type	10 cu. in. container
Time to grow	4 months
Target specifications	Tight root plug in container
Propagule collection instructions	Information not provided by author
Propagule processing/ propagule characteristics	Information not provided by author
Pre-planting propagule treatments	The seed coat restricts water uptake; germination is increased by scarification. Hot water scarification increases germination by 20% and manual when used with sandpaper, increases germination by 35%. Inoculate with the proper Rhizobium species before planting
Growing area preparation/ annual practice for perennial crops	Seed is sown in 10 cu. in. Ray Leach Supercell containers filled with fertilizer mix Sunshine #4
Establishment phase details	The seeds were sown in a greenhouse in January. excess space between soil and top of container to allow deep watering. Apply a thin layer of pea gravel to prevent seeds from floating. Water deeply. Keep medium moist until germination. Some seeds germinate in 7-8 days, most germinate in 2-3 weeks. A few seeds germinate within a month or more after sowing.
Length of establishment phase	3 weeks
Active growth phase	Water plants deeply every other day and fertilize once per week with a complete, water soluble fertilizer containing micro-nutrients.
Length of active growth phase	3 months
Hardening phase	Move plants to a cold frame in April if temperatures are warm enough to support it. Water every other day if the weather is cool, and every day during hot, dry weather.
Length of hardening phase	2 weeks
Harvesting, storage and shipping (of seedlings)	Information not provided by author
Length of storage	Information not provided by author
Guideline for outplanting	Information not provided by author
Other comments	n/a

Information Sources:	
Protocol author:	Miguel Orr
Other	(Propagation methods section heavily drawn upon the plant protocol by miguel Orr)- The species in this protocol were based on a species from the same family with similar drought tolerance)
References	**1. Calflora.** (n.d.). *Astragalus iodanthus var. convallarius - Humboldt river milkvetch*. Calflora. Retrieved May 27, 2025, from https://www.calflora.org/app/taxon?crn=847 **2. Halley Hosting.** (n.d.). *Humboldt River Milk-Vetch - Astragalus iodanthus var. convallarius*. Retrieved May 27, 2025, from http://science.halleyhosting.com/nature/basin/5petal/pea/astragalus/humboldt.htm **3. Northwest Wildflowers.** (n.d.). *Comparison of Astragalus species*. Retrieved May 27, 2025, from https://nwwildflowers.com/compare/?t=Astragalus+hornii,+Astragalus+iodanthus **4. Center for Plant Conservation.** (n.d.). *Humboldt Milkvetch (Astragalus iodanthus var. convallarius)*. Retrieved May 27, 2025, from [https://saveplants.org/plant-profile/?CPCNum=362](https://saveplants.org/plant-profile/?CPCNum=362#:~:text=Where%20is%20Humboldt%20Milkvetch%20(Astragalus,wooded%20areas%20and%20scarified%20ground.) **5. Idaho Department of Fish and Game.** (n.d.). *Idaho Natural Heritage Program - Astragalus iodanthus var. convallarius*. Retrieved May 27, 2025, from https://idfg.idaho.gov/ifwis/idnhp/cdc_pdf/mancm93a.pdf **6. Wildflower Search.** (n.d.). *Astragalus iodanthus - Humboldt River Milk-Vetch*. Retrieved May 27, 2025, from https://wildflowersearch.org/search?name=Astragalus+iodanthus **7. USDA Plants Database.** (n.d.). *Astragalus iodanthus var. convallarius (Humboldt River Milk-Vetch)*. Retrieved May 27, 2025, from https://plants.usda.gov/plant-profile/ASIOI **8. Integrated Taxonomic Information System (ITIS).** (n.d.). *Astragalus iodanthus*. Retrieved May 27, 2025,

from https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=25547&print_version=PRT&source=to_print#null

9. Jepson Flora Project. (n.d.). *Astragalus iodanthus*. Jepson eFlora. Retrieved May 27, 2025, from https://ucjeps.berkeley.edu/eflora/search_eflora.php?name=Astragalus%20iodanthus

10. University of Washington. (2021). *Astragalus iodanthus (Humboldt River Milk-Vetch) Protocol*. Retrieved May 27, 2025, from https://courses.washington.edu/esrm412/protocols/2021/ASPU9.pdf