


Plant Propagation Protocol for *Alisma subcordatum*
 ESRM 412 – Native Plant Production
 URL: <https://courses.washington.edu/esrm412/protocols/2024/ALSU>

TAXONOMY	
Plant Family	
Scientific Name	<i>Alismataceae</i> (1)
Common Name	Water Plantain (1)
Species Scientific Name	
Scientific Name	<i>Alisma subcordatum</i>
Varieties	N/A
Sub-species	N/A
Cultivar	N/A
Common Synonym(s)	<i>Alisma plantago-aquatica</i> L. var. <i>parviflorum</i> (Pursh) Torr. <i>Alisma plantago-aquatica</i> L. ssp. <i>subcordatum</i> (Raf.) Hultén (1)
Common Name(s)	American water plantain (1), common water plantain, southern water plantain (4) mud plantain (5)
Species Code (as per USDA Plants database)	ALSU (1)
GENERAL INFORMATION	
Geographical range	 (1) Found in most of the continental United States and some of Canada.
Ecological distribution	Areas with flooded/high water content that are constant or slow moving.
Climate and elevation range	requires organic or silty soils, with seasonally or permanently inundated freshwater (6)
Local habitat and abundance	can be found growing in shallow, quiet to slow moving water, and in mud of marshes, ponds, lakes, streams, ditches, and seeps (6)
Plant strategy type / successional stage	Weedy/colonizer. Spread vegetatively and through seed dispersal.
Plant characteristics	Light to yellow green, erect perennial forb/herb. Can reach heights of about 3 feet. White to pinkish 3 petaled flowers bloom from June to September.(6)
PROPAGATION DETAILS	

Ecotype	Oregon
Propagation Goal	Plants (2)
Propagation Method	Seed (2)
Product Type	Bareroot (4)
Stock Type	N/A
Time to Grow	6 Months (3)
Target Specifications	.5 ft (1)
Propagule Collection Instructions	collect seeds when fully mature and before any significant shattering occurs generally during late August through early October. (3)
Propagule Processing/Propagule Characteristics	Seed dormancy is physiological dormancy. (2) Seeds require only hand-sieving through screens (3)
Pre-Planting Propagule Treatments	Seeds were cold stratified for 30 days. Seeds germinate at 20 C. Germination was equal in light and dark. (2)
Growing Area Preparation / Annual Practices for Perennial Crops	3:1 (v:v) sphagnum peat moss:sand growing medium amended with commercially recommended quantities of pelletized slow-release fertilizer (3)
Establishment Phase Details	Keep medium moist and saturated. (6)
Length of Establishment Phase	<30 days (6)
Active Growth Phase	Water depths must be kept moist to flooded for the growing season. (6)
Length of Active Growth Phase	3 months
Hardening Phase	None necessary dormancy is sufficient.
Length of Hardening Phase	N/A
Harvesting, Storage and Shipping	dig plants when they are dormant from outdoor beds and ship in April-May and October (4) can be stored in a refrigerator (34-38° F) or in a cool, shady spot for a short time. (5)
Length of Storage	No more than 3-6 months.
Guidelines for Outplanting / Performance on Typical Sites	These should be planted at the same depth as they were grown in the nursery. The soil level is usually indicated on the stem where the color changes from a lighter brown to a darker brown. (5) In early spring, water depths must recede, exposing dropped seeds to bare soil to germinate. This species responds well to low to moderate levels of fertilizer amendments. (6)
Other Comments	Propagation details sourced from <i>Sagittaria australis</i> propagation methods, where <i>Alisma subcordatum</i> information was lacking. Similar water plants that are both in the <i>Alismataceae</i> family.
INFORMATION SOURCES	
References	1. USDA. (n.d.). <i>Alisma subcordatum</i> Raf. USDA plants database.

	<p>https://plants.usda.gov/home/plantProfile?symbol=ALSU</p> <ol style="list-style-type: none"> 2. RNGR. (n.d.). <i>Alisma (plantago-aquatica)</i>. Native Plant Network — reforestation, nurseries and genetics resources. https://npn.rngr.net/ 3. RNGR. (n.d.). <i>Native Plant Network — reforestation, nurseries and genetics resources</i>. Sagittaria (australis). https://npn.rngr.net/ 4. Prairiemoonnrsy. (n.d.). <i>Alisma subcordatum</i>. Prairie Moon Nursery. https://www.prairiemoon.com/alisma-subcordatum-mud-plantain 5. Prairie Moon Nursery. (n.d.). <i>Bare root plants</i>. Installing Bare Root Plants. https://www.prairiemoon.com/PDF/Prairie.Moon.Bare.Root.Installation.Brochure.pdf 6. USDA. (n.d.). <i>American water plantain</i>. USDA NRCS Plant Materials Program . https://plants.usda.gov/DocumentLibrary/factsheet/pdf/fs_alsu.pdf
Other Sources Consulted	<ol style="list-style-type: none"> 7. Raven, Sarah. “How to Plant, Grow & Care for Alliums.” <i>How to Plant, Grow, and Care for Alliums</i>, Sarah Raven, 8 Jan. 2021, www.sarahraven.com/articles/how-to-plant-and-grow-alliums. 8. Hartmann, Hudson, et al. <i>Plant Propagation: Principles and Practices</i>. Prentice Hall, 2002. 9. Young, James A., and Cheryl G. Young. <i>Collecting, Processing, and Germinating Seeds of Wildland Plants</i>. Timber Press, 1999. 10. Kruckeberg, Arthur R. <i>Gardening with Native Plants of the Pacific Northwest: An Illustrated Guide</i>. Douglas & McIntyre, 1996.
Protocol Author	Eli Kitterman
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