

Plant Propagation Protocol for *Alisma triviale*

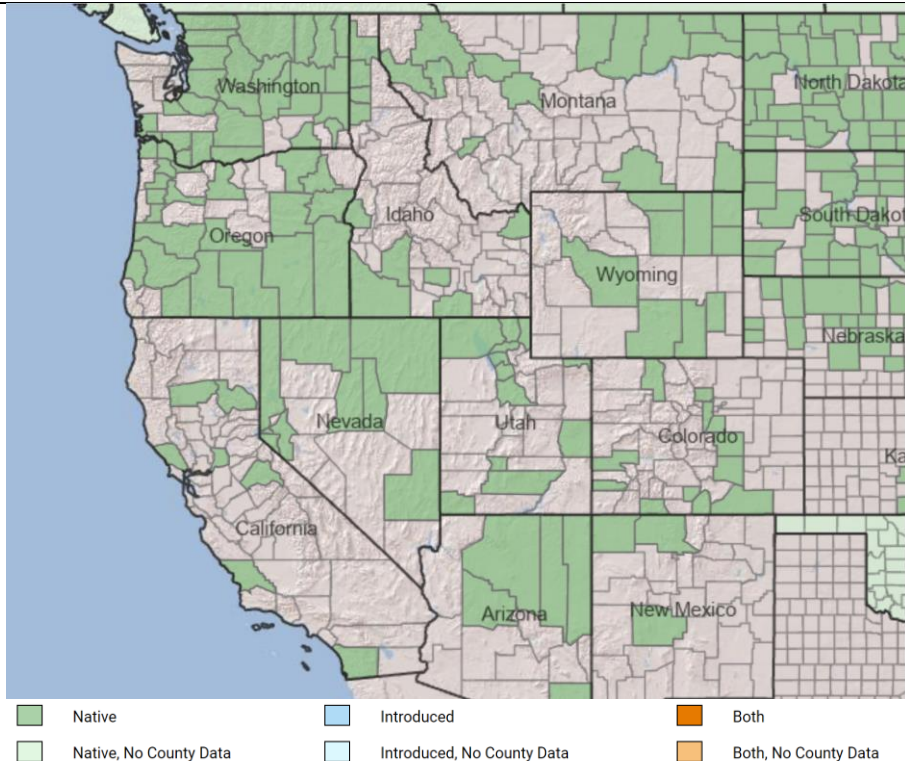
ESRM 412 – Native Plant Production

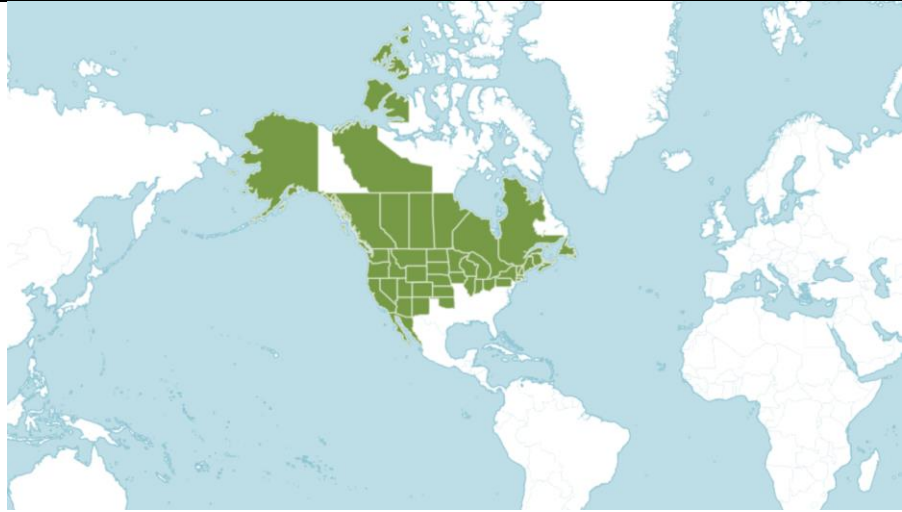
URL: <https://courses.washington.edu/esrm412/protocols/2024/ALTR7.pdf>




Taken by Peter M. Dziuk (2003)

TAXONOMY	
Plant Family	
Scientific Name	Alismataceae
Common Name	Water-plantain family
Species Scientific Name	
Scientific Name	<i>Alisma triviale</i> Pursh
Varieties	No known varieties.
Sub-species	No known sub-species.
Cultivar	No known cultivars.
Common Synonym(s)	Homotypic Synonyms: <ul style="list-style-type: none">• <i>Alisma plantago-aquatica</i> var. <i>triviale</i> (Pursh) Heterotypic Synonyms: <ul style="list-style-type: none">• <i>Alisma brevipes</i> (Greene)• <i>Alisma odoratum</i> Raf.• <i>Alisma plantago-aquatica</i> var. <i>americanum</i> (Schult. & Schult F.)

	<ul style="list-style-type: none"> • <i>Alisma plantago-aquatica</i> subsp. <i>brevipes</i> (Greene) Sam. • <i>Alisma plantago-aquatica</i> var. <i>brevipes</i> (Greene) Vict. • <i>Alisma roseum</i> Raf. • <i>Alisma subcordatum</i> var. <i>superbum</i> (Lunell) • <i>Alisma superbum</i> (Lunell) • <i>Alisma superbum</i> var. <i>angustissimum</i> (Lunell) • <i>Alisma superbum</i> var. <i>lanceolatum</i> (Lunell) <p>[1].</p>
Common Name(s)	Northern water-plantain, American waterplantain, large-flowered water plantain, mad-dog weed, water plantain
Species Code (as per USDA Plants database)	ATLR7
GENERAL INFORMATION	
Geographical range	 <p>[2].</p>

	 <p>[1].</p>
Ecological distribution	<p>Northern water-plantain grows in anthropogenic disturbed habitats as well as lacustrine and riverine habitats, marshes, shores of rivers or lakes, and along margins of wetlands [3]. It also occurs in standing water, swamps, on muddy banks, or occasionally in wet sand [4]. It has been noted that northern water-plantain can tolerate disturbance and drought conditions better than most aquatic plants [3]. Plant communities it's associated with include mixed evergreen forests, sagebrush scrubs, valley grasslands, and riparian-wetlands [5].</p>
Climate and elevation range	<p>The only noted climatic requirement is a site that has wet soil for most of the year [5]. The elevation range has been noted as sea level to up to 6,500 ft [6].</p>
Local habitat and abundance	<p>Population scattered in pockets across the western states [6]. Noted to grow alone but also in association with cattails (<i>Typha</i> spp.) and rushes (<i>Juncus</i> spp.) [7].</p>
Plant strategy type / successional stage	<p>Stress-tolerator [3].</p>
Plant characteristics	<p>Perennial forb that has oblong, oval, somewhat heart or lance shaped (3-15 cm wide) leaves that grow from a corm. Flowers blooms from July through August on whorled branches far above the leaves on a flower stalk (see picture below and on page 1).</p>

			
PROPAGATION DETAILS: FROM SEED			
Ecotype	Not listed.		
Propagation Goal	Plant [8]		
Propagation Method	Seed [8]		
Product Type	Container (plug) [8]		
Stock Type	Not listed.		
Time to Grow	Not listed.		
Target Specifications	Not listed.		
Propagule Collection Instructions	Not listed.		
Propagule Processing/Propagule Characteristics	Physiological dormancy [8]		
Pre-Planting Propagule Treatments	Seeds should be cold stratified for 30 days. Seeds germinate at 20°C. Germination can be done in light or dark conditions [8].		
Growing Area Preparation / Annual Practices for Perennial Crops	Seeds can be sown directly into shallow water [7] or into potting soil in containers [7].		
Establishment Phase Details	Seeds planted in shallow water in the fall [7].		
Length of Establishment Phase	Not listed.		
Active Growth Phase	Not listed.		
Length of Active Growth Phase	Not listed.		
Hardening Phase	Not listed.		

Length of Hardening Phase	Not listed.
Harvesting, Storage and Shipping	Not listed.
Length of Storage	Not listed.
Guidelines for Outplanting / Performance on Typical Sites	Not listed.
Other Comments	None.
PROPAGATION DETAILS: VEGETATIVE	
Ecotype	Not found.
Propagation Goal	Not found.
Propagation Method	Not found.
Product Type	Not found.
Stock Type	Not found.
Time to Grow	Not found.
Target Specifications	Not found.
Propagule Collection Instructions	Not found.
Propagule Processing/Propagule Characteristics	Not found.
Pre-Planting Propagule Treatments	Not found.
Growing Area Preparation / Annual Practices for Perennial Crops	Not found.
Establishment Phase Details	Not found.
Length of Establishment Phase	Not found.
Active Growth Phase	Not found.
Length of Active Growth Phase	Not found.
Hardening Phase	Not found.
Length of Hardening Phase	Not found.
Harvesting, Storage and Shipping	Not found.
Length of Storage	Not found.

Guidelines for Outplanting / Performance on Typical Sites	Not found.
Other Comments	None.
INFORMATION SOURCES	
References	<p>[1] Royal Botanic Gardens, Kew. (2023). <i>Alisma Triviale Pursh</i>. Plants of the World Online. https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:8516-2#synonyms</p> <p>[2] United States Department of Agriculture (USDA). (2024, April 4). <i>Alisma triviale Pursh</i>. Plants database. https://plants.usda.gov/home/plantProfile?symbol=ALTR7</p> <p>[3] <i>Alisma triviale - northern water-plantain</i>. Native Plant Trust: Go Botany. (2024). https://gobotany.nativeplanttrust.org/species/alisma/triviale/</p> <p>[4] <i>Plant database</i>. Lady Bird Johnson Wildflower Center - The University of Texas at Austin. (2022, November 2). https://www.wildflower.org/plants/result.php?id_plant=ALTR7</p> <p>[5] California Native Plant Society. (2024). <i>Alisma triviale - water plantain</i>. Calscape - Water Plantain. https://calscape.org/Alisma-triviale-(Water-Plantain)?srchcr=sc565836c91fd91</p> <p>[6] Wildflowers of Southwest USA. (n.d.). <i>Northern Water-Plantain, Alisma triviale</i>. The American Southwest. https://www.americansouthwest.net/plants/wildflowers/alisma-triviale.html</p> <p>[7] Guard, B. J., Christy, J. A., & Steen, T. (2010). <i>Wetland plants of Oregon & Washington</i>. Lone Pine Pub.</p> <p>[8] Baskin, C. & Baskin, J. (2003). <i>Propagation protocol for production of Container (plug) Alisma plantago-aquatica L. plants</i>. Native Plant Network. https://nnp.rngr.net/renderNPNProtocolDetails?selectedProtocolId=alismataceae-alisma-2500</p>

Other Sources Consulted	<p>Bartow, A. (2015). <i>Native Seed Production Manual for the Pacific Northwest</i>. USDA-NRCS Corvallis Plant Materials Center.</p> <p>Bebeau, G. D. (2014). <i>Northern Water-Plantain, Alisma triviale Pursh</i>. Plants of the Eloise Butler Wildflower Garden. https://www.friendsofeloisebutler.org/pages/plants/northwaterplantain.html</p> <p>Cooke, S. S. (1997). <i>A field guide to the common wetland plants of western washington & northwestern Oregon</i>. Seattle Audubon Society.</p> <p>Encyclopædia Britannica, inc. (2017, December 28). <i>Water plantain</i>. Encyclopædia Britannica. https://www.britannica.com/plant/water-plantain</p> <p>Hartmann, H. T., Kester, D. E., Davies, F. T., & Geneve, R. L. (2002). <i>Plant Propagation: Principles and Practices</i> (7th ed.). Prentice Hall.</p> <p>Hilty, J. (2019, November 5). <i>Large-Flowered Water Plantain</i>. Wetland Wildflowers of Illinois. https://www.illinoiswildflowers.info/wetland/plants/water_plantain.htm</p> <p>Loewer, H. P. (2005). <i>Seeds: The definitive guide to growing, history, and lore</i>. Timber Press.</p> <p>National Museum of Natural History. (n.d.). <i>Northern water plantain</i>. EOL. https://eol.org/pages/1084202</p> <p><i>Northern water-plantain</i>. Government of Yukon. (2019, April 24). https://yukon.ca/en/northern-water-plantain</p> <p>Perron, M. (2024). <i>Common water-plantain</i>. Flore du Québec. http://floreduquebec.ca/english/alisma-triviale</p> <p>Robson, K. A., Richter, A., & Filbert, M. (2008). <i>Encyclopedia of northwest native plants for gardens and landscapes</i>. Timber Press.</p> <p>Rose, R., Chachulski, C. E., & Haase, D. L. (1998). <i>Propagation of Pacific Northwest Native plants</i>. Oregon State University Press.</p>
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