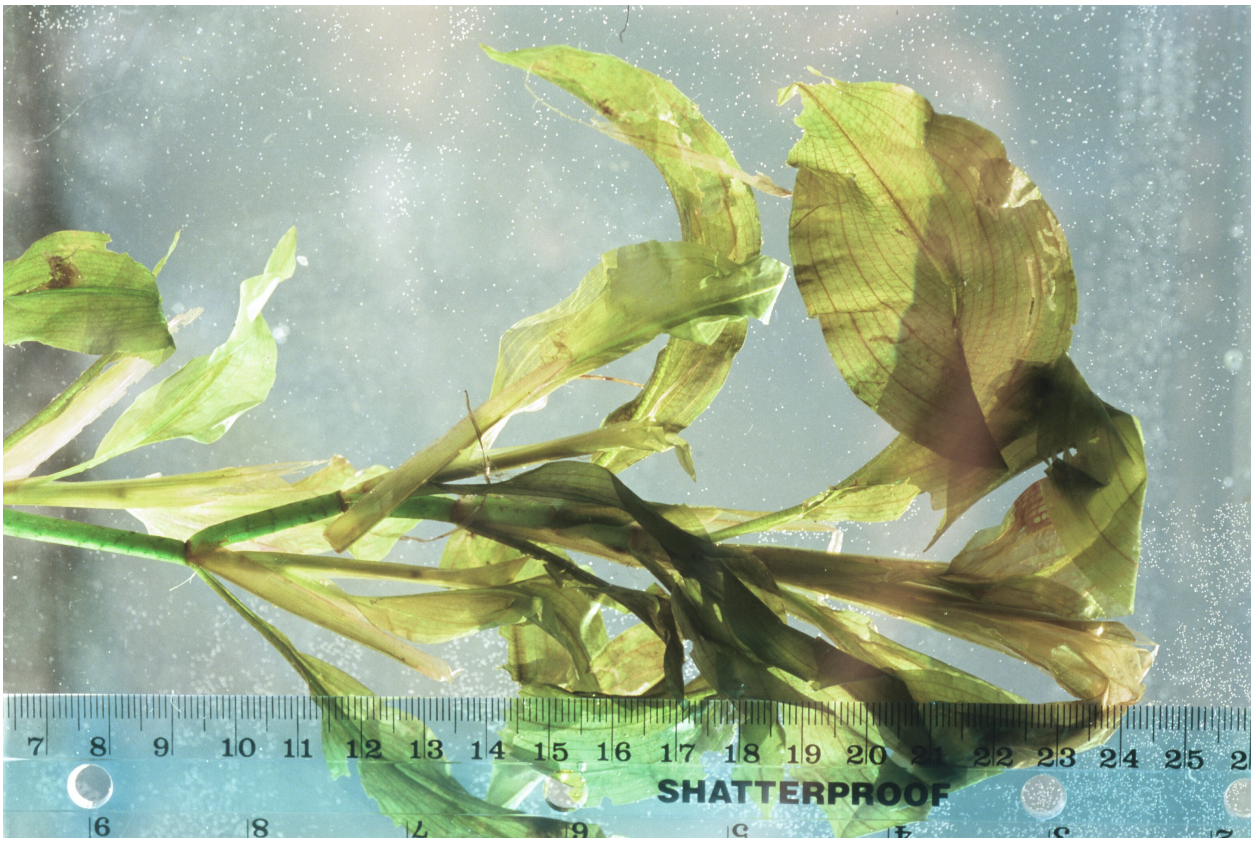
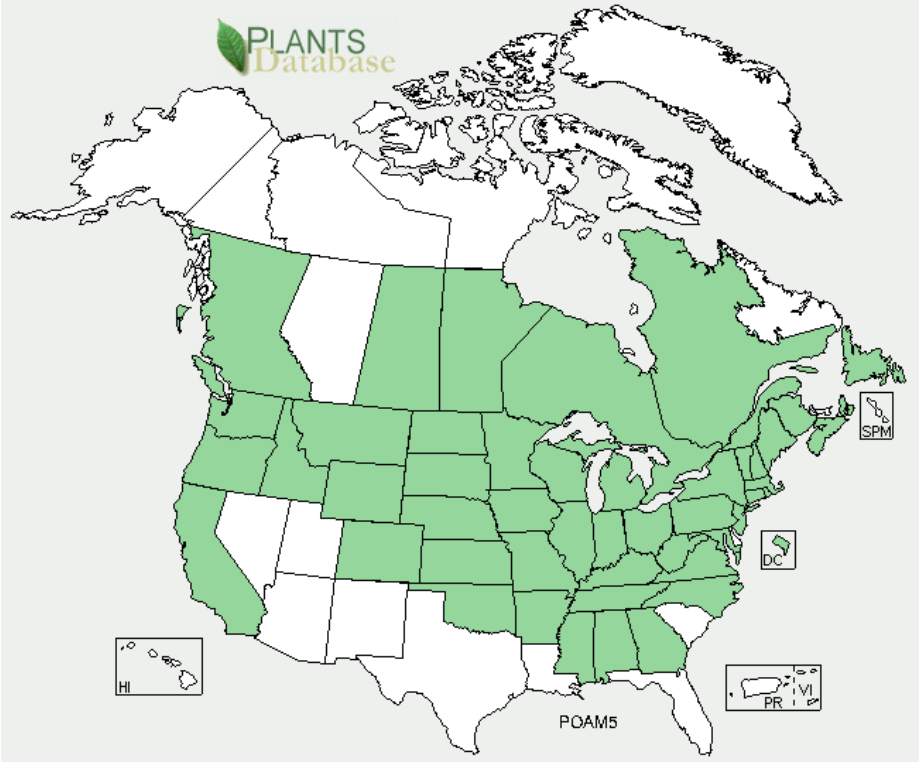
Plant Propagation Protocol for *Potamogeton amplifolius*
ESRM 412 – Native Plant Production

Edward G. Voss. USDA NRCS. 1995. *Northeast wetland flora: Field office guide to plant species*. Northeast National Technical Center, Chester. Courtesy of USDA NRCS Wetland Science Institute.



http://www.vilaslandandwater.org/land_resources_pages/land_resources_native_plants/land_resources_native_plants_aquatic_plant_pics.htm

TAXONOMY	
Family Names	
Family Scientific Name:	Potamogetonaceae
Family Common Name:	Pondweed family
Scientific Names	
Genus:	*Potamogeton*
Species:	*amplifolius*
Species Authority:	Tuckerman
Variety:	N/A
Sub-species:	N/A
Cultivar:	N/A
Authority for Variety/Sub-species:	N/A
Common Synonyms:	None
Common Names:	Large-leaf pondweed, big-leaf pondweed, and broad-leaved pondweed
Species Code:	POAM5
GENERAL INFORMATION	
Geographical range	

	 http://plants.usda.gov/java/nameSearch?keywordquery=potamogeton+amplifoliu s&mode=sciname&submit.x=0&submit.y=0 Commonly found in the majority of continental North America excluding Nevada, Utah, Arizona, New Mexico, Texas, and Alberta, Canada (Green = present, White = absent) [10]
Ecological distribution	Lakes, ponds, rivers, and slow moving streams[1]
Climate and elevation range	Low to subalpine elevations[6]
Local habitat and abundance; may include commonly associated species	Freshwater aquatic habitats and obligate wetlands (plants.usda source). Commonly associated with *P. gramineus*, *P.* Robbinsii, *Heateranthera dubia*, *Ceratophyllum demersum*, and *Elodea Canadensis*. [1, 5] May be confused with *P. illinoensis* (Illinois pondweed) and *P. praelongus* (white-stem pondweed). [7] Hybridized with *P. illinoensis* to form *P. scoliophyllus* Hagstrom[7]
Plant strategy type / successional stage	Can grow to nuisance populations[2]
Plant	Forb/Herb, perennial macrophyte. Leaves are either floating with submersed or

characteristics:	floating absent. Floating oval shaped, opaque, opposite leaves are 2.5 to 5 cm wide, with up to 30 cm long leaf stalks. Submersed, translucent, alternate leaves fold along the midrib and taper to a sharp point, are 3 to 7 cm wide, have more veins than any other pondweed species, with leaf stalks of 1 to 6 cm. Green flowers appear in midsummer on the floating leaves, then oval beaked, sessile, reddish brown fruits mature by late summer. [3,4] High anaerobic tolerance, pH requirement between 5.5 to 7.0, minimum temperature -33°F[10]
PROPAGATION DETAILS	
Ecotype:	N/A
Propagation Goal:	Plant
Propagation Method:	1) Vegetative propagation by rhizomes[10] 2) Seed[10]
Product Type:	1) Bareroot
Stock Type:	N/A
Time to Grow:	N/A
Target Specifications:	N/A
Propagule Collection:	1), 2) Collect in Summer and Fall during growing season[10]
Propagule Processing/ Propagule Characteristics, seed longevity, etc:	N/A
Pre-Planting Propagule Treatments:	N/A
Growing Area Preparation / Annual Practices for Perennial Crops:	N/A
Establishment Phase:	N/A

Length of Establishment Phase:	N/A
Active Growth Phase:	N/A
Length of Active Growth Phase:	N/A
Hardening Phase:	N/A
Length of Hardening Phase:	N/A
Harvesting, Storage and Shipping (of seedlings):	N/A
Length of Storage:	N/A
Guidelines for Outplanting / Performance on Typical Sites:	Chautauqua Lake, New York trial scientists spread fiberglass screen over site 2 months prior to outplanting to eliminate other natural occurring macrophyte growth. Scuba divers used garden trowel to dig 15 cm into soil to crack clay, squeezed rhizome into crack and sealed it shut. Plants with varying heights (30 cm, 60 cm, >100 cm) were planted to mimic natural growth and reduce wave action uprooting. 60 – 68% survival rate after 4 years of monitoring, between 1981 – 1985. Stakes were used to support plants with 30 cm height yet they contributed to stem breakage, therefore it is recommended not to use stakes for support. [9]
Other Comments:	Food source for ducks and provides shade and habitat for fish.[8] Endangered and extirpated listed species in MD, Threatened listed species in TN[10]
INFORMATION SOURCES	
References :	See Below
Other Sources Consulted:	See Below
Protocol Author:	Julie Lefaive
Date Protocol Created or Updated:	05/18/10

References

[1]Guard, B. Jennifer. *Wetland Plants of Oregon & Washington*. Redmond, Wash.: Lone Pine Pub., 1995.

[2]*Identification Manual for Aquatic Plants in Lake Hopatong and Potential Future Invasive Species. Aquatic Plan Identification Manual Lake Hopatcong, New Jersey*. Princeton Hydro, LLC, 23 July 2008. Web. 16 May 2010. <http://www.lakehopatcong.org/Pubs/Reports/Plant%20ID%20Manual23Jul08.pdf>.

[3]Flora of North America Potamogeton Amplifolius Tuckerman. *American Journal of Science.* 2nd ser. 22.6: 225. Web. 8 May 2010. <http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=222000277>

[4]"Large-leaf Pondweed Description." *Maine Volunteer Lake Monitoring Program*. 2009. Web. 16 May 2010. <http://www.mainevolunteerlakemonitors.org/mciap/herbarium/LargeLeafPondweed.php>.

[5]Moore, Emmeline. *The Potamogetons in Relation to Pond Culture*. 1914. Print.

[6]Pojar, J., & MacKinnon, A. (1994). *Plants of the Pacific Northwest Coast-Washington, Oregon, British Columbia and Alaska*. B.C. Ministry of Forests and Lone Pine Publishing: Canada.

[7]"Potamogeton Amplifolius - Big-leaf Pondweed." *Washington State Department of Ecology | Home Page | ECY WA DOE*. Web. 16 May 2010. <http://www.ecy.wa.gov/programs/wq/plants/plantid2/descriptions/potamp.html>.

[8]Stevens, M.L., and R. Vanbianchi. Restoring Wetlands in Washington: A guidebook for wetland restoration, planning, and implementation. April 1993. Publication 93-17. Washington State Department of Ecology.

[9]Storch, Thomas A. , Winter, Jimmy D. andNeff, Constance(1986) 'The Employment of Macrophyte Transplanting Techniques to Establish Potamogeton Amplifolius Beds in Chautauqua Lake, New York', Lake and Reservoir Management, 2: 1, 263 — 266, First published on: 01 January 1986. Retrieved from: http://dx.doi.org/10.1080/07438148609354640 [2010, May 8]

[10]United States Department of Agriculture (USDA). Natural Resources Conservation Service. (n.d.). Plants Database. Plants Profile of: Potamogeton amplifolius. Retrieved from: http://plants.usda.gov/java/nameSearch?keywordquery=potamogeton+amplifolius&mode=sciname&submit.x=0&submit.y=0 [2010, May, 1]

Additional Sources Consulted

Kozloff, E.N. Plants of Western Oregon, Washington, and British Columbia. Timber Press, Portland Oregon.

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