

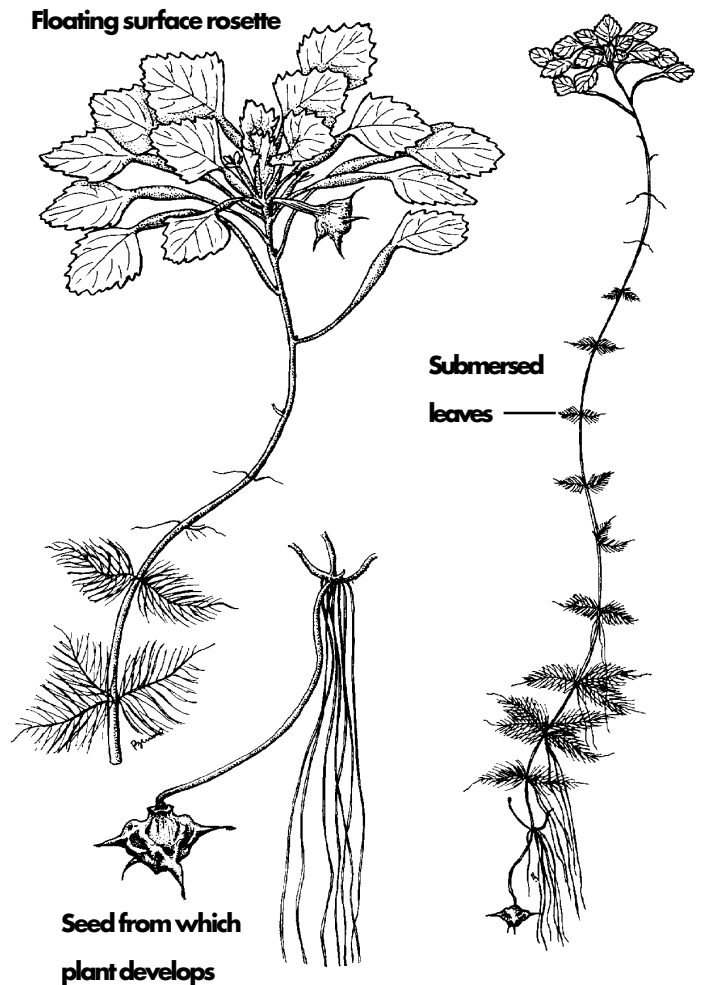
# Vermont Invasive Exotic Plant Fact Sheet

## Water Chestnut *Trapa natans* L. Water-nut Family

**Description:** Water chestnut is a rooted, annual aquatic plant with both floating and submersed leaves. Floating leaves are triangular with toothed margins and have an inflated spongy leaf stem. Floating leaves form a rosette on the water's surface that may grow to a foot in diameter. Submersed leaves are feather-like; each leaf is divided into segments that are whorled around the leaf stem. Plant stems are long and cord-like, attaining lengths of up to 16 feet. Flowers are small, inconspicuous, and white and form in the axils of the surfacing leaves in July. The fruit of the water chestnut is a woody, nutlike seed with four sharp, barbed spines. Mature rosettes may produce as many as 10 to 15 seeds. Once mature, these seeds drop from the plant and fall to the sediment. Seeds may remain viable in the sediment for one to five or more years; viability of up to 12 years has been reported. A true annual, water chestnut overwinters entirely by seed.

**Habitat:** Water chestnut grows in freshwater lakes and ponds, and slow-moving streams and rivers. It prefers calm, shallow, nutrient-rich waters.

**Threats:** Dense water chestnut growth can be impenetrable and can easily choke out the water bodies in which it invades, outcompeting native vegetation, reducing oxygen levels which may increase the potential for fish kills, and providing little value to waterfowl. Dense infestations of



(*Aquatic Plants of New England Series: Trapa natans*, Crow and Hellquist 1983. Illustration by Pam Bruns.)

**Threats continued:** water chestnut make swimming, boating, and other recreational activities nearly impossible. Its sharp spiny fruits wash ashore and can be hazardous, inflicting painful wounds to those who step on them.

## Water Chestnut

Water-nut Family (*Trapa*)

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**Distribution:** Water chestnut's native range is Europe, Asia, and Africa. First introduced into the northeastern United States in the late 1800s, water chestnut currently infests waterbodies in Vermont, New York, and Massachusetts. Maryland and Virginia used to have populations of water chestnut but management activities were successful in eradicating the plant. In Vermont, water chestnut was first reported in southern Lake Champlain in the 1940s. More than 300 acres of southern Lake Champlain are infested; the northernmost population in the lake is found in McNeil Cove in Charlotte. Populations have also been found in five additional Vermont waterbodies in the Lake Champlain Basin.

**Control:** Because water chestnut is an annual plant, effective control can be achieved if seed formation is prevented. Herbicides and mechanical removal methods have been used. Mechanical harvesting and cutting, and handpulling are the methods currently being used in Vermont to manage this species.

### References:

- Florida Prohibited Aquatic Plants.* Florida Department of Natural Resources. February, 1990.  
*Nuisance Aquatic Plants in Lake Champlain.* W.D. Countryman. Aquatec, Inc. August, 1978.  
*Waterchestnut (Trapa natans L.) Research in Watervliet Reservoir - 1989 Report.* John D. Madsen. Rensselaer Fresh Water Institute. FWI Report #90-8. April, 1990.



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For more information about Vermont's invasive exotic plant species or if you would like to know how you can help, please contact:

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