

ENVIRONMENTAL Fact Sheet



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WD-BB-43

2019

Water Chestnut



Water chestnut rosette
(*Trapa natans*)



A water chestnut infestation in the Nashua

In July 1998, the New Hampshire Department of Environmental Services confirmed reports that the exotic aquatic plant water chestnut had infested the Nashua River in Nashua. More recently, in 2015, a new population was confirmed in the Connecticut River, near Hinsdale. Additionally, the seeds are being found more and more on transient recreational gear where they get stuck in the carpeting on trailer bunks, so it is expected that more water chestnut infestations will be found in the future.

Water chestnut can completely cover the surface of a waterbody and cause ecological hardship to native plants and animals. Fishing and boating can become extremely difficult as well. Dense strands can reach thicknesses of a foot or more.

This plant is not the same species as the edible water chestnut used in Asian cooking. Water chestnut is a member of the Trapaceae family and derives its name from the single-seeded horned fruits, the chestnut. Each of the four horns on the nut is sharp and has a spine with several barbs. Each plant has two types of leaves: submerged leaves that are feather-like and oppositely paired along the stem, and waxy floating leaves that are triangular and form a rosette on the water's surface. The petiole (leaf stalk) of the floating leaves has a bladder-like swelling filled with air and spongy tissue, which provides buoyancy. Cord-like plant stems can attain lengths of up to 16 feet, so growth in deeper water is possible.

The water chestnut is an annual plant that exhibits great reproductive capacity. The seeds germinate in early spring. An individual seed can give rise to 10-15 rosettes, each of which can produce 15-20 seeds. Thus, one seed can potentially give rise to 300 new seeds in a single year.

Water chestnuts begin to flower in mid to late July, with their nuts ripening approximately one month later. Flowering and seed production continue into the fall when frost kills the floating rosettes. The mature nuts sink to the bottom when dropped and may be able to produce new plants for up to 12 years. The plant spreads either by the rosettes detaching from their stems and floating to another area, or more often by the nuts being swept by currents or waves to other parts of the lake or river. The plant over-winters entirely by seed.

Water chestnut is a nuisance aquatic plant that limits boating and fishing in infested areas. It has the potential to infest wetlands and critical environmental habitats in other areas of the state.

For more information on water chestnuts or other exotic species, please contact the Exotic Species Coordinator at (603) 271-2248 or visit the NHDES website at www.des.nh.gov.

