

What Is Water Chestnut

Water chestnut is an annual, rooted aquatic plant that was introduced to the Northeast in the 1800s. Since its introduction, it has spread throughout New York, clogging waterways and lakes. It spread to Lake Champlain in the 1940s, and now covers hundreds of acres of the lake. It can also be found over miles of the Hudson River.

How Did Water Chestnut Get Here

It was first introduced to North America in the 1870s, where it had been growing in a botanical garden at Harvard University. Soon it escaped cultivation and was found growing in the Charles River. It was then introduced into the Hudson River-Mohawk River drainage basin, possibly intentionally as waterfowl food or was a new plant for a water garden.

How Can Water Chestnut Spread

Water chestnut seeds grow directly beneath the parent plant's floating leaves and propagate the parent colony. Seeds can spread downstream through the currents. They can also be dispersed via ducks, geese, and other waterfowl.

Identification

Water chestnut has both submersed and floating leaves. The feather-like submersed leaves are found in whorls around the stem. The floating leaves are triangular with toothed edges, and can range in size from 2-4 cm. They form rosettes around the end of the stem, where a single, white flower with 4 petals sprouts.

Buoyant stems can reach up to 5 m and are anchored to the sediment bed by branched roots.

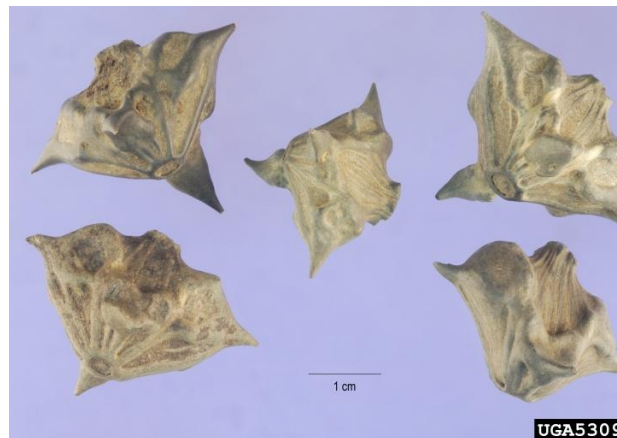


Photo Credit: Steve Hurst, USDA NRCS PLANTS Database, Bugwood.org

The seeds germinate in the spring, each producing 10-15 rosettes. Each of these rosettes is capable of producing 20 seeds. These hard, nut-like seeds can grow to about 2.5-4 cm with four very sharp spines.



Photo Credit: Leslie J. Mehrhoff, University of Connecticut, Bugwood.,org

Ecological and Economic Impacts

Water chestnut can quickly become a nuisance once it spreads into a new body of water. Once established, it can:

- Form dense mats, creating a monoculture, outcompeting natives
- Block light for native species below, displacing native vegetation
- Reduce dissolved oxygen levels, potentially leading to fish kills
- Provide little nutritional and habitat value for fish and waterfowl
- Impede recreational activities including swimming, boating, and fishing
- Harm people who step on the seeds

How Can We Prevent Water Chestnut from Spreading

The most important way to limit the spread of water chestnut and aquatic invasive species in general is through clean boating practices. This includes three main steps:

- **Clean:** remove any mud, plants, fish, animals, or debris from your boat, fishing gear, and any other equipment that came into contact with the water. *Discard items above high water or in provided disposal stations
- **Drain:** drain water from holding compartments including live wells, bait wells, and bilge areas
- **Dry:** dry boats, trailers, and all equipment before entering a new body of water (takes 5-7 days in dry, warm weather)

By following these steps, we reduce the biggest mode of spread – hitchhikers on boats. It is important to follow Clean Boating Practices in order to prevent spreading a new aquatic invasive species into the waterways that you love!



How Can You Help?

Look for local water chestnut pulls in your area! There are always ways to volunteer and help stop the spread of aquatic invasive species. And always remember to properly clean your boat before entering a new body of water.



Photo Credit: Alfred Cofrancesco, US Army Corps of Engineers, Bugwood.org

Where can I find more information?

- www.NYIS.info
- www.LHPRISM.org
- www.seagrass.sunysb.edu



**LOWER
HUDSON
PRISM**

This project was contracted by the Lower Hudson Partnership for Regional Invasive Species Management using funds from the Environmental Protection Fund as administered by the New York State Department of Environmental Conservation.

What You Should Know About Water Chestnut *Trapa natans*

Now **PROHIBITED** in New York, water chestnut is a highly invasive aquatic plant that has spread throughout the state. Inadvertently released into the Northeast in the 1800s, the plant has caused New York numerous ecological and economic hardships, including:

- Hindering recreational activities
- Reducing native vegetation populations
- Lowering water quality
- Altering waterfowl, fish, and invertebrate populations

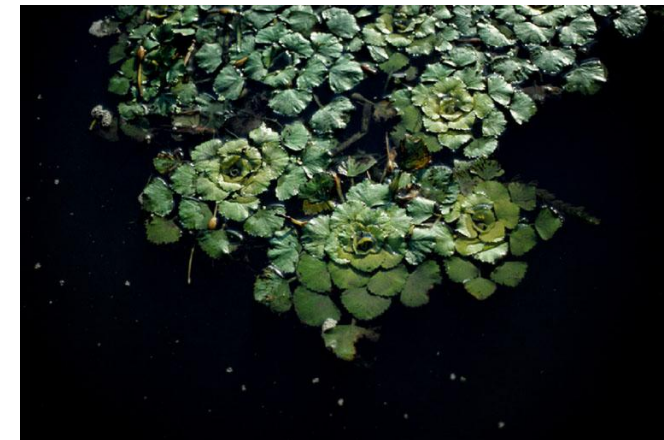


Photo Credit: Leslie J. Mehrhoff, University of Connecticut, Bugwood.,org