Tier 4 - Prohibited

European Water Chestnut

(*Trapa natans*)

INVASIVE SPECIES MANAGEMENT CATSKILLS

Photo by: Leslie J. Mehrhof
University of Connecticut
Bugwood.org

Description

European water chestnut is a distinct floating plant that can be recognized by its triangular leaves with saw-tooth-like margins. Water chestnut grows from a central point in a rosette and has long, trailing roots resembling milfoil species. The adventitious roots are loosely rooted in the substrate, but water chestnut can survive free of the substrate for long periods of time. Typically, water chestnut is associated with its distinct emergent leaves but also produces small, linear submerged leaves above the root system. Each emergent leaf has an inflated sac along the stem that provides flotation.

Water chestnut produces small white flowers but is more known for the large, spiked nutlets each plant produces. When young, the nutlets are soft and green, but once free of the plant they quickly harden and become dark brown/black. Typically, nutlets have four sharp spikes extending from the nutlets, but three spiked nutlets have also been observed and are likely the result of confounding species or biotypes.

Native Range and Original Use

European water chestnut is indeed native to Europe but can also be found natively in Africa and Asia. Water chestnut was initially introduced to the U.S. in the early 1870s as part of the Asa Gray's Botanical Gardens at Harvard University and was intentionally released into surrounding ponds. It has since spread to many water bodies in the Northeast.

Habitat and Dispersion

Like many floating plants, water chestnut prefers slow-moving waters and thrives in high-nutrient, eutrophic water bodies. It is primarily spread by the nutlets, either by waterfowl or attached to boats and trailers. Nutlets can persist in the seed bank for up to 5 years.

Photo by: Leslie J. Mehrhof
University of Connecticut
Bugwood.org
5453837

Photo by: Shaun Winterton
Aquarium and Pond Plants of the World, Edition 3, USDA APHIS PPQ
Bugwood.org
5564119

Best Management Practice

The best way to deal with water chestnut is by hand pulling all visible plants, making sure to include the roots as well. This is best done before June when the plants begin flowering and producing nutlets. For large infestations, mechanical harvest is best. Nutlets can persist in the substrate for up to 5 years and can be transported by waterfowl and geese, so continued monitoring and periodic removals are necessary.

Source: https://nas.er.usgs.gov/

If you find water chestnut, please contact
Sarah Coney at sconey@catskillcenter.org and report on iMap

CLEAN, DRAIN, DRY!