

Water Chestnut *(Trapa natans)*



Water chestnut is an annual plant with showy, floating leaves attached to a long, tough stem that roots in the sediment. The plant produces a black, edible nut that is hard and spiny, and can remain viable for several years. It prefers slow-moving water up to 5m deep, and once established, forms dense, impenetrable mats of vegetation.

Water chestnut was introduced to North America in the late 19th century by a well-meaning botanist who thought the plant was beautiful and potentially useful as wildlife food. The chestnut quickly escaped the lakes where it was introduced, becoming a nuisance in the Hudson in the 1950s. The main concern with water chestnut is that it has displaced native aquatic plants, specifically water celery. Water chestnut's surface leaves block sunlight, preventing underwater plants from photosynthesizing. Further, since water chestnut's leaves photosynthesize above water, they do not release oxygen to the water. Consequently, the water becomes anoxic (oxygen-free) during low tide, becoming replenished with oxygen only when incoming tides bring fresh water in.



Physical Characteristics:

- Floating leaves and a tough stem
- Black, prickly nut
- Leaf upper surface is waxy and shiny; the underside is coated with fine hairs
- Air bladder at base of leaves

Location:

- Slow-moving water up to 5m deep
- Grows in marsh mud
- Can withstand pH range of 6.7-8.2

Benefits

- Provides habitat for juvenile fish
- Provides habitat for invertebrates
- Wading birds like eating the insects that live in the plants

Concerns

- Reduces oxygen in the water underneath
- Can stress fish that need a lot of oxygen
- Is an invasive plant with seeds that can be painful
- A nuisance for boaters and fishermen