



BRAZILIAN ELODEA

Egeria densa

Photo courtesy of Richard Old,
XID Services, Inc., Bugwood.org



Map courtesy of
United States
Geological Survey.



SPECIES AT A GLANCE

Brazilian elodea, also known as Brazilian waterweed, is a leafy, submerged aquatic perennial with populations of only male plants in the United States. Because of its showy flowers and oxygen generating capabilities, it is widely used as an aquarium plant and is still sold today under its alias Anacharis.

SPECIES DESCRIPTION

Brazilian elodea can reach lengths of greater than 3 m (10 ft) and survive either rooted or free-floating in up to 6 m (20 ft) of water. The leaves are bright to dark green, blade-shaped, with very fine teeth on the leaf margins that are only visible with magnification. Leaves are densely arranged in whorls of 4-6, although occasionally they can be found in whorls of three. Flowers are large and showy with three white petals, a yellow center, and three green sepals. They emerge above or at the water's surface on slender stalks projecting from leaf axils near the stem tips.

NATIVE & INTRODUCED RANGES

Native to Brazil and coastal regions of Argentina and Uruguay, Brazilian elodea is found to be invasive throughout the United States and at least 27 other countries. The earliest record in the United States was in 1893 when the plant was collected on Long Island, New York. In Pennsylvania, it can be found in the southeast region in Berks, Bucks, Montgomery, Delaware, and Philadelphia counties as well as in Allegheny and Bedford counties.

BIOLOGY & SPREAD

In the early 1900s, Brazilian elodea was promoted as a good oxygenator of fresh water and was frequently used in aquaculture. It is also an attractive and robust plant that has been sold around the world as an aquarium plant, so initial introduction of Brazilian elodea was most

likely through intentional or unintentional release due to its popularity in the aquarium and water garden trades. Since all plants in the United States are male, it can only reproduce by plant fragments, which can attach to recreational boats, trailers, and equipment and spread to new water bodies. Once established, it has the ability to cover 100 acres of water per year.



Photo courtesy of Leslie J. Mehrhoff,
University of Connecticut, Bugwood.org.



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HABITAT

In its native range, Brazilian elodea lives in slow-moving and shallow waters. In its invasive range, it can be found in lakes, ponds, sluggish rivers, and streams. It grows best in enriched, somewhat acidic lakes, and prefers substrates of sand, mud, or stone.

IMPACTS

Threat to biodiversity

Brazilian elodea is often referred to as an “ecosystem engineer” as it grows rapidly (up to 30 cm [11.8 in] in length per day in ideal conditions) and is capable of modifying or regulating important ecosystem processes. The dense mats formed at the water’s surface can cover extensive areas and crowd out native species, decrease water quality, and make poor habitat for fish.



Photo courtesy of Richard Old, XID Services, Inc., Bugwood.org.

Economic Costs

Large mats of Brazilian elodea can negatively impact navigation, delivery of irrigation systems, power and hydroelectric generation infrastructure, and can clog water intake pipes. The dense canopies formed can also impede recreational activities such as boating and fishing.

PREVENTION & CONTROL

Once established in an area, Brazilian elodea can be very difficult and expensive to eradicate because of its rapid vegetative reproduction. Possible control mechanisms can include physical removal, herbicide use, biological control, and water draw-downs, however mechanical harvesting and hand removal can actually help spread the plant through fragmentation and should be done with caution.



Photo courtesy of William T. Haller, University of Florida, Bugwood.org.

Preventing the introduction and spread of Brazilian elodea is the best way to protect natural habitats from harm. Always remove any visible mud, plants and debris from boats, trailers, and equipment before leaving a water body. Eliminate water from all equipment before transporting. Clean gear and equipment with the hottest water possible (140°F or 60°C is ideal), or salt water, OR let dry thoroughly for five days before entering a new water body.



Photo courtesy of Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

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