

# Brazilian Elodea

*Egeria densa*

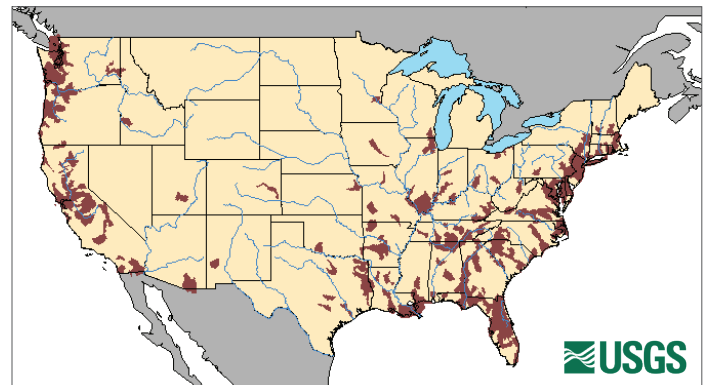


Photo courtesy of Ann Murray, University of Florida, Bugwood.org

Brazilian Elodea, also known as Brazilian Waterweed, is a leafy, submerged aquatic perennial plant. It is widely used as an aquarium plant because of its showy flowers and oxygen generating capabilities.

## Species Description

Brazilian Elodea can reach lengths 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 the 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 and northwest regions.

## Biology & Spread

In the early 1900's, Brazilian Elodea was promoted as an 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.

To date, all introductions in the United States appear to be male plants. Because of this, it can only reproduce by plant fragments, which can attach to recreational boats, trailers, and equipment and spread to new water bodies. **Once established, Brazilian Elodea can cover 100 acres of water per year.**

## Habitat

In its native range, Brazilian Elodea appears 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 grows rapidly, up to 30 cm (11.8 in) in length per day in ideal conditions, and forms dense mats at the water's surface. These mats crowd out native species, impede aquatic recreational activities such as boating and fishing, degrade water quality, and impact habitat quality for native fish.

### *Economic Costs*

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

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



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



## Prevention & Control

Once established, Brazilian Elodea can be very difficult and expensive to eradicate. Possible control mechanisms include physical removal, herbicide use, biological control, and water draw downs. However, mechanical harvesting and hand removal can help spread the plant through fragmentation and should be done with caution.

Preventing the introduction and spread of the Brazilian Elodea is the best way to protect natural habitats from harm.

- Know how to identify and report Brazilian Elodea.
- Always check for and remove plants, mud, and debris from boats, trailers, clothing, and equipment before entering a water body and before leaving a water body.
- Drain all water from bait buckets, bilges, and live wells before transporting to new areas.
- Clean all gear and equipment with hot water (140°F or 40°C) or salt water, OR let boats and equipment dry thoroughly for at least five days before entering a new water body.
- When choosing plants for a pond or water garden, purchase from a licensed nursery and choose regionally native or non-invasive plants. Check with your state natural resource agency to confirm which plants to avoid for your region.

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### *References:*

Walsh, G.C. Magjali Dalto, Y. Mattioli, F.M., Carruthers, R. I., Anderson, L.W. 2013. Biology and ecology of Brazilian elodea (*Egeria densa*) and its specific herbivore, *Hydrellia* sp., in Argentina. *BioControl*. 58: 133-147

Yarrow, M., Marin, V.H., Finlayson, M., Tironi, A., Delgado, L.E., and Fischer, F. 2009. The ecology of *Egeria densa* Planchon (Liliopsidea: alismatales): A wetland ecosystem engineer. *Review Article. Revista Chilena de Historia Natural*. 82: 299-313.

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