

INVASIVE SPECIES: WATER HYACINTH

Introduction

Many people in Louisiana are surprised to learn that water hyacinths are not native plants because they are found throughout the state in bayous, lakes and even drainage ditches. This floating, flowering plant from South America was introduced into Florida in the 1890s, and into Louisiana around 1903 at the Cotton Exposition in New Orleans. Today, it is considered an invasive species throughout the South by some, although also valued as one of the top-selling plants for the water garden industry.



This plant forms a dense floating carpet on ponds, lakes and bayous that blocks sunlight. Lack of sunlight often kills submerged plants and results in low oxygen levels in the water. In addition, as leaves drop off and decay, more sediment falls to the waterway's bottom, increasing sedimentation rates in the waterway.

The plant has dark green, waxy, rounded and cupped leaves attached to a bulb-shaped petiole. Seasonally, a spike of lavender flowers at the end of a stem is produced. Each floating plant has dense, fibrous, branching roots that may extend for 2-3 feet beneath each plant, and a rhizome to start a new plant. Plants can vary in size from a few inches to more than 3 feet tall. In Louisiana, they are rarely more than 12 inches.

Valued by Some, Hated by Others

Water gardeners and some pond owners deliberately introduce water hyacinths because they are beautiful when in bloom. Many nurseries sell these plants and encourage their cultivation. Others gather them from ditches and bayous throughout the state.

Eventually, water gardeners learn by experience that this plant can ruin ponds by eventually taking over the entire water surface. By blocking the sunlight to the fish and plants, the water hyacinth effectively starves submerged plants, leading to decay and reduction of food and oxygen for aquatic life. Eventually, nothing lives beneath the surface, and the pond becomes bog-like.

Recreational boaters and anglers consider water hyacinth to be a pest. The dense mats of plants sometimes obstruct navigation for outboard motor-propelled boats, and dense growth degrades living conditions for an angler's quarry – bream, bass and other fresh water fish. Each time a boat cuts through a mat of water hyacinth, it breaks plants away. The broken plant can start a new colony of water hyacinths in the same lake, or it might be accidentally carried by the outboard motor or boat trailer to a new location.

The state of Louisiana annually sprays large infestations of water hyacinth at a cost of about \$11 per acre.

Unique Physical Features

All invasive species have three characteristics that help them to take over or compete successfully in many environments — 1) prolific reproduction, 2) broad ability to adjust to environmental stress and 3) advanced ability to acquire nutrition. In the water hyacinth, these three characteristics are manifested in interesting ways.

The plant's reproduction is enhanced by its ability to reproduce by the seeds that are released by each spike of 20 lavender-purple flowers. They can remain dormant until flooding helps them germinate. They have huge, dense roots to obtain nutrition from the water and the bulbous petiole, which looks like Styrofoam when cut open, helps the heavy plant float in an upright position in order to absorb sunlight needed for photosynthesis. The cupped leaves help a cut plant sail across the water's surface to begin a new colony.

Print Resources

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- Simberloff, D., D. C. Schmitz and T. C. Brown (eds.), 1997. **Strangers in Paradise: Impact and Management of Nonindigenous Species in Florida**, Island Press, Washington, D.C., 467 p.