

Classification of Aquatic Plants

Teacher Guide
Middle School



In Florida, **native plants** are defined as plants that existed here before European colonization (1513). Native plants provide food and shelter to animals of all sorts, stability to shorelines and fields, and visual pleasure to those of us lucky enough to live here. Because a native plant species usually does not take over an area, there is biodiversity – a great number of species growing in balance and living together in harmony. Florida is famous for its biodiversity.

Diversity is possible because each native species is constrained in its growth by a number of natural factors, including: 1) competition with other native species, 2) native diseases, 3) predation by feeding native insects and other animals, 4) climate, 5) water level fluctuation, and so on.

Non – native plants are from someplace else: non-natives are also known as “exotic.” Botanists define non-native plants as those that have become part of our flora following the occupation of Europeans in North America -- plants that have made their way here (i.e., to Florida) since 1513. Of the more than 4,000 plants found in Florida, more than 1,300 are non-native and out of those, about 130 have been deemed “invasive.”

The term **invasive** is used to describe a non-native plant that has escaped cultivation and is spreading into natural wild lands and waters. Invasive plants are also described as “nuisances, pests, or noxious” meaning they negatively affect our native plants and animals, or hinder humans' uses of our waters and lands.

Emersed plants are aquatic plants rooted in sediments with leaves and/or stems protruding above the water's surface. Cattail, maidencane, and bulrush are examples of emersed plants. Emersed plants grow in water-saturated soils and submersed soils near the edge of a waterbody. They generally grow out to a maximum depth of from 1 to 3 meters (about 3 to 10 feet).

Emersed (emergent) plants perform many functions in waterbodies. They provide food and habitat for animals and reduce shoreline erosion. They can also increase transpirational water losses from a waterbody, sometimes to the point where water levels are lowered.

Submersed plants are large plants that grow primarily below the water's surface. Eelgrass, hydrilla (an invasive plant), and coontail are examples of submersed plants. Some of these plants are rooted to the waterbody's sediments (e.g., eelgrass and hydrilla) while some, like coontail, are not.

Submersed plants provides food and habitat for wildlife populations (fish, waterfowl, invertebrates) and affect nutrient cycles and other chemical cycles in complex ways. They also help stabilize shorelines and sediments. Submersed plants can increase water clarity and increase or decrease dissolved oxygen concentrations, depending on plant abundance and other factors.

Floating-leaved plants are plants that are primarily rooted to sediments and also have leaves that float on the water's surface. Waterlilies, spatterdock, and lotus are examples of floating-leaved plants. Floating-leaved plants are generally found growing along the shoreline, lake-ward of the emergent plants.



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Free-floating plants are plants that are not anchored in the sediment; they get their nutrients directly from the water. Free-floating plants include the duckweeds, bladderwort, coontail, and the invasive water Free-floating plants are plants that are not anchored in the sediment; lettuce and water hyacinth.

Floating plants provides food and habitat for wildlife populations (fish, waterfowl, invertebrates) and affect nutrient cycles and other chemical cycles in complex ways. They also help stabilize shorelines and sediments. Floating plants can increase water clarity and increase or decrease dissolved oxygen concentrations, depending on their abundance.



A collaboration of the UF/IFAS Center for Aquatic and Invasive Plants
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