Hydrilla *Hydrilla verticillata* (L. f.) Royle

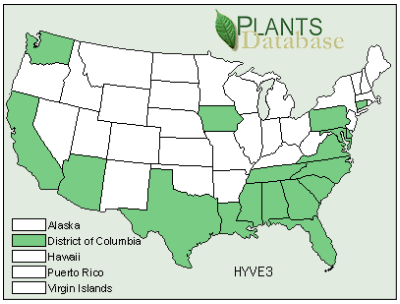
Common Names: Florida elodea, hydrilla, water thyme, Wasserquirl, Indian star-vine

Native Origin: Africa, Asia, and Australia

Description: A submerged aquatic perennial in the tape-grass family (*Hydrocharitaceae*). Leafy stems branch near the water surface. The dioecious variety can extend to 30 feet in length and spread to form dense mats. Leaves are lanceolate, usually toothed, 0.75 inches long and 0.2 inches wide, and arranged in bottlebrush-like whorls of 3-10. Tiny female flowers are white, located in leaf axis and have 6 petals on long threadlike stalks. Male flowers are green with an inverted bell shape. Adventitious roots are usually white, but may take on the reddish brown color of the sediment. When exposed to light, the roots may have a greenish cast caused by the presence of chlorophyll. Reproduction can occur through the production of seeds or vegetatively.

Note: Hydrilla can be confused with *Elodea* sp. (a common native aquatic plant of the central and Northern U.S. and parts of Canada). Hydrilla can be distinguished from *Elodea* by its sharply serrated leaf margins red veins, spinous midrib, scabrous texture, and anthers that open explosively.

Habitat: It is generally rooted to the bottom of 20 feet or more fresh, slow-moving or still water, although sometimes fragments will break loose and survive in a free-floating state. It tolerates a wide rang of growing conditions including low light, high levels of suspended sediments, drawdown periods, and warm temperatures. It is found in lakes, ponds, reservoirs, rivers, and ditches.



Distribution: This species is reported from states shaded on Plants Database map. It is reported invasive in CT, DC, DE, FL, GA, MD, NC, NH, OR, TX, VA, VT, and WA. It is listed as a federal noxious weed.

Ecological Impacts: Hydrilla is one of the most troublesome aquatic plants in the United States. It can form single-species, mat-like stands that cover hundreds of acres. The dense growth intercepts sunlight to the exclusion of other submersed plants. It out-competes native vegetation, acts as a breeding ground for mosquitoes, and destroys fish and wildlife habitats. Water intake and delivery systems can also be severely impacted.

Control and Management: Management methods currently include mechanical removal and drawdowns, herbicides, and biological controls.

- **Manual**- Mechanical removal is costly but can be used in proximity to domestic water supply intakes, in rapid flowing water, or when immediate removal is necessary. Water drawdowns can be effective but are restricted to water bodies with water control structures, and where drawdown will not interfere with primary water uses.

- **Chemical**- It can be effectively controlled using any of several readily available general use herbicides approved for aquatic use such as fluridone, copper sulfate, endothall, or bensulfuron methyl. Follow label and state requirements.

- **Biological control**: Sterile, triploid Chinese grass carp are useful in small ponds or lakes and canal systems where the fish can be retained within the water body and where vegetation removal is permitted. Two weevils, two leaf-mining flies, and one aquatic moth, have also been introduced to control hydrilla.

References: www.forestimages.org, http://plants.usda.gov, www.nps.gov/plants/alien, Czarapata, Elizabeth J. Invasive Plants of the Upper Midwest, An Illustrated Guide to their Identification and Control, 2005 p. 145, http://tncweeds.ucdavis.edu/esadocs/documnts/hydrver.pdf, www.invasivespeciesinfo.gov/aquatics/hydrilla.shtml, www.invasive.org/eastern/biocontrol/7Hydrilla.html

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Invasive Plants website: http://www.na.fs.fed.us/fhp/invasive_plants