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Plant Invaders of Mid-Atlantic Natural Areas

Swearingen, J., K. Reshetiloff, B. Slattery, and S. Zwicker. 2002. Plant Invaders of Mid-Atlantic Natural Areas. National Park Service and U.S. Fish & Wildlife Service, 82 pp.



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Hydrilla

Hydrilla verticillata

Origin: Central Africa

Background

Hydrilla first appeared in the Crystal River system of Florida in 1960. Imported by the aquarium trade, its presence on the Delmarva Peninsula was confirmed in 1981. Hydrilla attracted national attention when infestations were found in the Potomac River in Washington, D.C. in the early 1980s.

Distribution and Ecological Threat

Hydrilla is a federal noxious weed that is documented throughout the southern United States from California to Delaware. In the mid-Atlantic, hydrilla now exists in most southern Delaware ponds, in the Delaware portion of the Nanticoke River, in Virginia and Maryland freshwater tributaries of the Chesapeake Bay, and several sites in eastern Pennsylvania. Hydrilla out-competes

native submerged aquatic vegetation and can quickly fill a pond or lake, thus choking off the water body for boating, fishing, swimming and other recreational uses. It does provide good habitat for fish and shellfish as well as water quality benefits.

Description and Biology

- Plant: rooted aquatic plant; a member of the frogbit family (Hydrocharitaceae).
- Leaves: up to 3/4 inch long; usually in whorls of five oblong leaves on the stems; fine teeth visible to the naked eye on leaf edges and mid-ribs.
- Flowers, fruits and seeds: tiny, translucent to white flowers produced on the upper branches in late summer and fall; tubers grow from the roots; winter buds (turions) are produced in the leaf axils.
- Spreads: vegetatively through fragments of stems, stolons, or rhizomes, turions, or tubers which are carried on boat livewells, motors and trailers, bait pails and other items, and by ingestion of tubers and turions by waterfowl.
- Look-alikes: common waterweed (*Elodea canadensis*), Nuttall's waterweed (*E. nuttallii*), Eurasian watermilfoil (*Myriophyllum spicatum*) and other aquatic plants with whorled leaves. Note: Most elodeas and watermilfoil species have smooth leaf margins and leaves in whorls of three.



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Prevention and Control

Physical, chemical and biological controls have all been used on hydrilla. Each control method has advantages and liabilities. Water



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level drawdowns have generally been ineffective in our area. Mechanical aquatic weed harvesters provide temporary relief and open boating lanes, but resulting plant fragments can help spread the vegetation faster. Contact herbicides provide temporary control, but systemic herbicides provide more long-term control. Herbivorous fish such as sterile grass carp have been used for hydrilla control where allowed by law. Other biological controls are still being investigated. Each control method has its drawbacks and liabilities. On the Potomac River and other parts of the Chesapeake Bay system, resource managers who are struggling with hydrilla also recognize the beneficial impacts of submerged aquatic vegetation (including hydrilla) for water quality and fish and shellfish habitat.

Native Alternatives

Some aquatic nurseries carry native and non-invasive alternatives. However, due to the similarity in appearance among aquatic plants to the untrained eye, they are easily confused. Contact your state natural resource agency, native plant society or other resource (see [reference](#) section) for assistance in locating species appropriate to your location and site conditions.

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