Invasive Plants in Pennsylvania

Hydrilla

Hydrilla verticillata

Photo: USDA APHIS PPQ, www.invasive.org

Background:

Hydrilla is believed to be native to Asia or Africa, although it is now widely spread across the globe. It was first introduced to North American as an aquarium plant in the 1950s.

Range:

Hydrilla is more commonly found in southern states on both the east and west coasts, but it is showing up more frequently in the Mid Atlantic and New England states as time goes by.

Description:

This is a submerged aquatic plant that can grow in water as deep as 20 to 40 feet. Leaves are whorled in bunches of three to eight, but most often with five. The midribs of the small leaves are reddish in color with the undersides having small, raised teeth. Fruits are cylindrical and contain up to five seeds.

Habitat:

This species tolerates a variety of pollutants and a range of water chemistry. It will grow in lakes, ponds, stream and rivers.

Photo: Leslie Mehrhoff, U. of Connecticut, www.invasive.org

Biology and Spread:

The primary means of spread is vegetatively. Living stem sections can break off and root elsewhere. Late in the season herbicide-resistant tubers (*see photo below*) form at the end of the stolons, allowing for rapid recolonization of a treated site. Seed production appears to be minimal in the north.

Photo: Tim Murphy, U. of Georgia, www.invasive.org

Ecological Threat:

Hydrilla forms dense floating mats that can restrict native vegetation, impact recreation and slow water flow. Annual control efforts in Florida alone cost millions of dollars. It was identified as a federal noxious weed in 1979, meaning it is illegal to sell, plant and transport this species.

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How to Control this Species:

Prevention

Monitoring and prevention are the most important steps to keep hydrilla under control, since it can be difficult to treat once it's present.

Check all equipment and boats for plant fragments before leaving the area. Remove all debris, bag and dispose of.

Limiting disturbance to lake bottoms and the native vegetation growing there will help minimize the chances of hydrilla colonizing the area.

Manual or Mechanical

Removal of the plant can temporarily open up water-ways but the resulting plant fragments can help spread the vegetation even faster. Repeated monitoring is necessary to deter regrowth.

Hydrilla may be able to be controlled with seasonal water drawdowns. This is most effective when the tubers are developing in the fall and before regrowth occurs in the spring. However, tubers may remain dormant even after the pond has been drained.

Chemical

Systemic herbicides can provide for more long-term control. Fluridone is one such herbicide. It is intended for large-scale infestations and has minimal long-term effects on native plants. It can reduce but not altogether eliminate a population of hydrilla.

Photo: David Moorhead, U. of Georgia, www.invasive.org

Look-A-Likes:

Hydrilla can be confused with the exotic Brazilian egeria (*Ergeria densa* Planch.) and the native waterweeds: Canadian or common waterweed (*Elodea Canadensis* Michx.) and Nutali's or western waterweed (*E. nattallii*). The difference lies in the number of leaves and the presence of tubers on hydrilla.

Photo: Robert Videki, www.invasive.org

References:

Center for Invasive Species and Ecosystem Health: http://www.invasive.org/browse/subinfo.cfm?sub=3028

Invasive Exotic Plant Pest Tutorial for Natural Lands Managers: http://www.dcnr.state.pa.us/forestry/invasivetutorial/hydrilla.htm

For More Information:

To learn more about invasive plants in Pennsylvania and the northeast, here are some useful resources:

A Field Guide to Common Aquatic Plants of Pennsylvania: http://pubs.cas.psu.edu/FreePubs/pdfs/agrs110.pdf

Pennsylvania SeaGrant: http://seagrant.psu.edu/publications/ais.htm