HYDRILLA AND OTHER INVASIVE AQUATIC PLANTS. William T. Haller, Professor and Acting Center Director, Center for Aquatic and Invasive Plants, Department of Agronomy, University of Florida, Gainesville, FL 32653.

Dioecious hydrilla was introduced into Florida as an aquarium plant in the 1950s and was widely planted in natural waterbodies for subsequent collection and sale. Naturalized populations of monoecious hydrilla, a distinct biotype of the species, were first discovered in the Virginia/Maryland area in the early 1980s, but the date of introduction of monoecious hydrilla is unknown. Both biotypes of hydrilla have spread rapidly throughout the United States since their introductions, with invasions reported from Maine to Washington State and from Florida north to Indiana and Wisconsin.

The biotypes of hydrilla are physiologically very different from one another. For example, monoecious hydrilla in the northern part of the US sprouts from tubers and turions during May, June and July; plants produce vegetative propagules during late summer and fall and senesce in late fall and winter, resulting in growth patterns similar to annual species. In contrast, dioecious hydrilla produces hundreds of tubers and turions between September and May when short-day conditions predominate and is considered a perennial in the southern part of its range. Despite these differences, both biotypes of hydrilla respond to herbicides in a similar manner.

Hydrilla is uniquely adapted to low light conditions and grows in Florida lakes at water depths that native submersed plants are unable to survive. This often results in expansion of the vegetated littoral zone from 10 to 20% in shallow Florida lakes to coverage that exceeds 80% of the lake's area. Florida state agencies have spent $210 million during the last decade to control 400,000 acres of hydrilla ($525 per acre) to maintain recreational and ecological functions of Florida lakes.

Hydrilla should be a concern to authorities in mid-America; however, this region is threatened by other invasive aquatic weeds as well. Parrotsfeather, waterchestnut, egeria and flowering rush have been present in the eastern US for decades and are migrating west. In addition, more recent introductions of species such as watersoldier (*Stratiotes aloides*) and European frog's-bit (*Hydrocharis morsus-ranae*) into the Great Lakes area (New York State/Ontario) pose additional threats to this part of the country.

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