Know Your Species

WATERHYACINTH

(Eichhornia crassipes)

Waterhyacinth, a flowering, tropical aquatic weed, reproduces by vegetative offshoots from parent plants and by seed. This free-floating weed is found throughout the Gulf Coast region of southern United States where it spreads so rapidly that it clogs inland waterways and prevents navigation for commerce and recreation.

Waterhyacinth was introduced into the United States from South America sometime before 1884. First official account of waterhyacinth was at the New Orleans Cotton Exposition in that year. It bears the nickname of "Million Dollar Weed" in Florida, though cost of its control has long since passed that mark. It is also a pest in areas of California.

A somewhat oval leaf-blade with parallel veins is borne on the end of an inflated bladderlike petiole. It is this bladder which bouys up the plants. Many petioles grow outward in a rosette pattern from a central axis.

Six-petaled flowers are showy and vary in color from white to bluish hues. Many flowers are borne on a single flower stalk which emerges from the central axis. Many tiny seeds are produced, but only about 5% germinate. Enough seedlings may become established in shallow water, decaying vegetation, or on mud along shorelines to reinfest bodies of water from which all waterhyacinth plants have been eliminated.

Waterhyacinth has a densely fibrous root system which dangles in the water but may become attached to mud for a time during periods of low water.

Underwater rhizomes, submerged stemlike structures, are the major means of this weed's spread. After a lateral growth of about six inches away from a parent plant, the rhizome sprouts a new plant. Ten individual plants can cover an acre of water after ten months growth. It is the rhizomes which bind mats of parent plants and offshoots together and restrict movement of watercraft through infested streams.

When a mat of waterhyacinth covers a stream, it so shades out sun that no other plants grow, and in shallow areas the oxygen may be so low under the mat that no fish survive. Mats block water flow and have been known to cause sewage backup in Florida. Matted plants, at times, float downstream and jam against bridges. Many mechanical and chemical controls have been tried; 2,4-D has been the most successful chemical used to date. However Amitrol-T and Diquat have recently been shown to be effective. Chemicals are applied as foliage sprays in a continuing program to eliminate this pest at its source.

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Fertilizer Co., Homestead; William Colburn, Superintendent of The Bay Hill Club, Orlando; and J. Leroy Fortner, Superior Fertilizer Company, Sarasota.

During the annual banquet on August 28, Cary Clark, turf management major at the University of Florida received the second FT-GA $500 scholarship.

Numerous awards were made at the banquet to Floridians who have played a prominent role in turf over the years. Foremost of the awards was the presentation to James E. Ousley, Sr., of Pompano Beach, an FT-GA Director and 1962 Trade Show Chairman, of the first FT-GA Award of Honor, in recognition of his meritorious service to the Florida turf industry.

Aquatic Weed Control

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single midrib vein on each leaf from which small lateral veins are given off. Overall venation may be obscured by the smooth fleshiness of leaves. *Nyphaea* or white waterlily, on the other hand, has veins which radiate evenly from the petiole point of attachment. Identification of leaves can be used when plants are not flowering.

Nuphar's sparsely petaled flower will be yellow; *Nymphaea's* many-petaled flower will be white, rarely yellow, pink, or blue. After petals have dried and fallen, the globular seed receptacles will look alike on both species, so leaf venation identification again should be used.

Although Nymphaea is considered a true floating-leaf aquatic, some species of *Nuphar* are more erect. Stout petioles lift the arrow-shaped leaves out of the water.

The aquatic plants previously discussed do not constitute all pest species encountered. At one time or another, any number of species may become sufficiently plentiful to be bothersome. This listing is intended to offer a brief cross section of the more troublesome species at present.

Chemicals for control of these plants will be dealt with in the second installment of this series, which appears next month; equipment for application will appear in the final segment of this three-part article.