



## Aquatic Plant Identification and Management Workbook, Series 2

The *Aquatic Plant Identification and Management Workbook Series* is designed to acquaint pond owners in Maryland with naturally-growing aquatic plants and the general means for managing their growth. Aquatic plants play an important role in the natural ecology of ponds: they provide food and shelter for many fish, aquatic animals and other wildlife, and they provide oxygen, which can benefit fish production.

Sometimes, however, growth gets out of hand and the plants become so numerous they interfere with the intended use of the

pond, for example, fishing, swimming, boating — they are then called aquatic weeds. When this occurs, control measures often become necessary.

The suggested chemical controls in this workbook are intended as guidelines and must not replace directions on chemical labels. A list of fact sheets describing a variety of aquatic plants and their management is available from the Maryland Sea Grant Extension Program or your local Cooperative Extension Office.

### EMERGENT VEGETATION

# Creeping Waterprimrose

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#### INTRODUCTION

Vascular flowering aquatic plants are seed-bearing and are characterized by a system of conductive and supportive tissue. They can be classified into several broad categories of vegetation: floating, submersed, emergent and terrestrial. This workbook series focuses on waterprimrose, an emergent plant.

As a group, emergent plants are usually found rooted in shallow waters and all or part of the plant extends above the water line or hydrated soil. Some plants are not truly aquatic, and may be found in dry fields completely removed from a water source. The plants are usually rooted to the bottom of a pond, have a rigid cell structure, and are not dependent on the water column for support.

#### CREEPING WATERPRIMROSE (*Jussiaea repens*)

Creeping waterprimrose looks similar to alligator-weed (*Alter-*



Betty Mack Wilson

Emergent Vegetation: Creeping Waterprimrose

*nanthera philoxeroides*) in that both have ovate or lance-shaped leaves. Like alligator-weed, which is found along wet habitats including ponds and hydrated soils, it can be prolific. Common near ditch banks, lakes and ponds, waterprimrose sometimes grows so rapidly it can overtake most of a shallow pond. Unlike alligator-weed, water-

**CHEMICAL CONTROL.** The following is a table of chemicals labeled to treat waterprimrose. The table was compiled from information gathered from the aquatic chemical industry. Inclusion in the table does not imply endorsement by the University of Maryland nor by the authors. Omission of chemicals is a result of oversight on the authors part or of new label registration. The table is for comparison purposes only and is not intended to replace the chemical label. Do not use the table for treating aquatic plant problems.

Creeping Waterprimrose				
Chemical Name	Chemical Type	Application	Restriction	Comments
Weed RHAP LV-6D	Isooctyl Ester 2,4-D	1 2/3 - 3 pt/acre in 50-100 gal water	do not use water for irrigation or domestic purposes	at temperatures above 95°F, vapors may harm nearby crops
Weed RHAP VL-4D	Isooctyl Ester 2,4-D	2.5 - 4.5 pt/acre in 50-100 gal water	do not use water for irrigation or domestic purposes	at temperatures above 95°F, vapors may damage nearby crops

primrose is a native to North America.

The plant belongs to the evening primrose family, which is a common weed in pastures and along roadsides throughout the east coast. Most often found in aquatic habitats, it has some potential as a food source for freshwater crawfish. Other wildlife value comes from the seeds, which are sometimes eaten by waterfowl, and the bushy forms of the species, which are used as protective cover by small song birds.

### IDENTIFICATION

Creeping Waterprimrose is a perennial aquatic herb that often has reddish colored stems. These stems, which creep along the water's surface, are smooth or sparsely covered with hairs and can either float or root. Rooting can occur wherever a node comes into contact with mud. Leaves are simple, smooth, alternate, lance, or spatulate in shape; dark green in color; and 1.5 to 3 inches long. They narrow toward the short slender petiole.

The flowers, which bloom from

June through October, are solitary, bright yellow, and quite showy. They grow on long stalks in the upper leaf axils. The petals are 1/2 to 3/4 inches long. The fruit is cylindrical in shape, blunt on the ends, and about an 1/8 inch long. Reproduction can be by seeds and rooted stem sections.

The plant often grows on or near the banks of ponds or ditches. The creeping stems can extend as much as ten feet away from shore. If the water is shallow enough, the plant can form dense mats which restrict water flow and access to boating and fishing.

### CONTROL

When chemicals are used to control aquatic vegetation, certain precautions must be followed. Always read the label and follow the directions. It is best to spot treat areas where the creeping waterprimrose is first sighted instead of waiting until it takes over a pond completely. Determine the water uses and any use restrictions associated with the chemical control. Obtain all of the necessary permits. Make sure that you have properly identified the aquatic plant

and have chosen the correct chemical control. Mix and apply the chemical according to the label directions. Keep the necessary records — they are required by law. Finally, monitor the water for dissolved oxygen and pH shifts after treatment to determine the effectiveness of the treatment and whether any fish kills occur. Heavy plant die-off can cause oxygen depletion while heavy growth can cause pH shifts on a daily cycle.

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## REFERENCES AND FURTHER READING

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**NOTE:** Because of the ecological role and sensitivity of aquatic vegetation, as well as Baywide efforts to restore this important resource, the state does not permit the use of chemical control in tidal waters, and greatly restricts their use in nontidal, flowing waters. Acquaint yourself with all regulations governing plant control activities, and obtain all necessary permits. Non-chemical means should be utilized where practicable.



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