



Centre for
Ecology & Hydrology

NATURAL ENVIRONMENT RESEARCH COUNCIL

Centre for Aquatic Plant Management

Information Sheet 6 : Fringed Waterlily

Fringed Waterlily (*Nymphaoides peltata*) was regarded until recently as a relatively rare plant and was generally conserved. In recent years, it has spread and is now causing problems in waters which are

usually static or very slow flowing. It produces floating leaves similar to, but smaller and rounder in shape, than the common Yellow or White Waterlily (see diagram). The flowers are yellow with distinctive fringed petals. It can grow in water up to 1.5 m deep. The leaves and flower stems grow from rhizomes buried in the mud and the plant can form a dense floating cover over the water surface, interfering with angling, swimming and boat traffic. The surface cover of leaves tends to shade out submerged plants and algae and this can be an advantage in shallow water where these weeds may be troublesome, but in deeper water bodies deoxygenation can be a problem.

MECHANICAL CONTROL

The leaf petioles are easily cut by hand scythe (in shallow water) or by weed cutting buckets or boats. However, the plant will form new leaves and one or two cuts may be necessary each spring and summer to maintain the water adequately for recreation or boat traffic. It is necessary to remove cut material otherwise the floating masses will continue to cause problems and may deoxygenate the water when they rot. Cutting will not eradicate the plant but may be the best option in water bodies where cutting of other weeds is regularly practised.

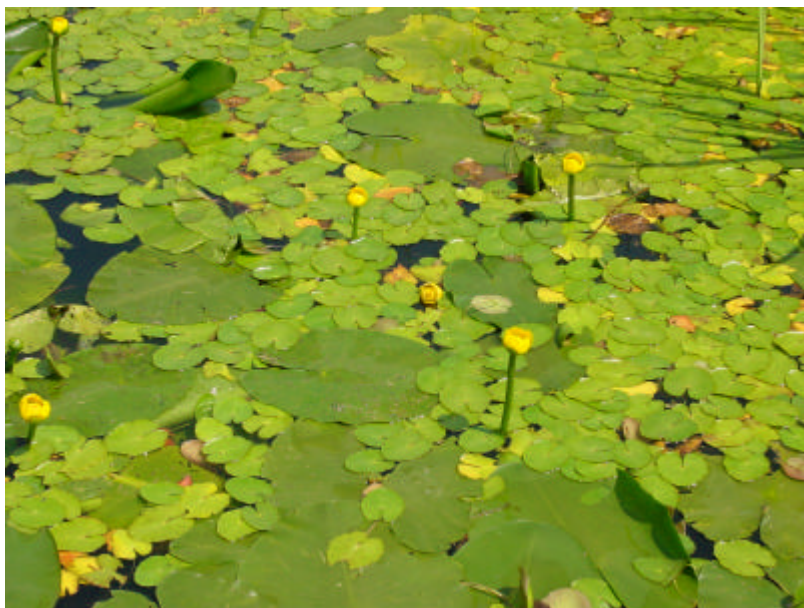
Mechanical eradication can only be achieved by dredging or raking out the rhizomes buried in the bottom silt. This is seldom 100% effective and is too expensive to be considered solely as a method of weed control but will produce useful results when dredging is required for other purposes. Hand raking, using a rope and grapnel, can be effective where the bottom silt is sufficiently soft and in very localised areas for creating fishing swims.

CHEMICAL CONTROL

Dichlobenil (Midstream GSR, Casoron G, Luxan dichlobenil) has been found to be effective against this plant. This is a granular formulation which is applied in the spring when growth is just starting but well before the leaves reach the surface. The granules sink into the bottom sediment and the herbicide is absorbed by the roots of the plant. Because the granules hold the herbicide and release it locally into the sediment, it is necessary to ensure that they are spread evenly within the treated area and appropriate motorised or hand



operated granule applicators are recommended for this treatment. It is possible to treat small localised areas within a waterbody and the manufacturers recommend that not more than 20% of the waterbody is treated at any one time in densely infested waters. Where complete eradication is required, a second application in the following season may be necessary.



Cutting surface floating leaves in mid-summer and applying Midstream GSR has also worked, and can be used in crisis situations where control is required later in the season. Again, a second application will be required.

There are flow restrictions for all dichlobenil formulations and they are not recommended for use in water which flows at more than 90m/hour.

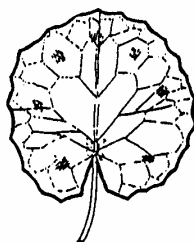
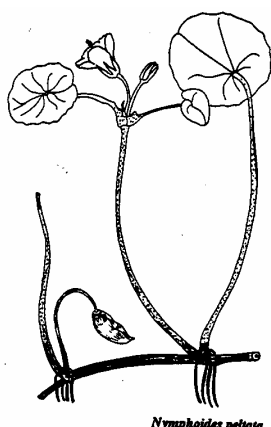
The herbicide glyphosate has also been used to control *Nymphaoides peltata* although it is less effective than Casoron G. In a number of trials, the floating leaves have been sprayed with glyphosate at times between July and early September. In some instances, control was estimated to be around 40-50%, lasting for only one season, while in others, recovery started towards the end of the season and there was no long-term control. The reasons for this variation in results have not been established, and glyphosate does not give reliable control.

BIOLOGICAL CONTROL

None known.

ENVIRONMENTAL CONTROL

Fringed Waterlily does not normally grow in water more than 1.5 m deep or in fast flowing waters. In some instances, it may be possible to alter water depth or flow characteristics in channels to make them unsuitable for this plant. Small areas can be eliminated by shading the plant with a floating opaque material.



BEST OPTION

Treat infested areas with dichlobenil in early spring when growth is just starting. If necessary re-treat surviving plants in the following season.