



Centre for  
Ecology & Hydrology

NATURAL ENVIRONMENT RESEARCH COUNCIL

Centre for Aquatic Plant Management

## Information Sheet 28: Fools Watercress (*Apium nodiflorum*)

*Apium nodiflorum* is a common marginal species of England and Ireland. It is much less frequent in Scotland. It grows in shallow water at the edges of rivers, lakes, ponds, canals, ditches, in marshy areas and around springs. It can form submerged patches in slow flowing deep water. It is characteristic of nutrient rich areas and where the growth of other, taller species, are restricted by erosion or disturbance of the margin (by management or flooding). It is very abundant in fast flowing chalk streams.

It is a perennial with shoots which die back in winter and regrow in spring from about mid-April. It flowers and fruits freely, the seeds germinating from spring to autumn on damp substrates, or in shallow slow-flowing water. It reproduces vegetatively by regrowth of detached shoots which form roots very quickly.

It has round stems and pairs of opposite leaves which are pointed and irregularly toothed. It is easily confused with *Rorippa nasturtium-aquaticum* (which has rounded leaves which are not opposite) and *Berula erecta* (which has similar shaped leaves but characteristic dark bands on stems and, is restricted to calcareous sites and is often found in deeper water).

### MECHANICAL CONTROL

This species is easily controlled by mechanical cutting and removal of the cut material onto the bank. It is an important habitat for marginal invertebrates and so should be left on the bank for a short period to allow some of the invertebrates to return to the water. It often attains very high biomass in small streams and mechanical control can be difficult in these situations. Cutting will provide temporary relief of less than one season because of seedling recruitment and rapid regrowth from fragments.

Seedlings are usually out-competed by mature plants in existing stands and do not present problems except at the edges of existing stands where spread is possible.

### Chemical control

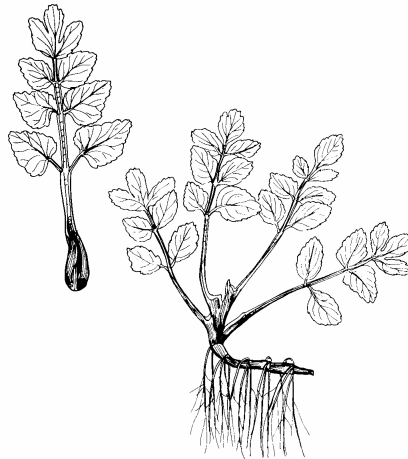
This species is susceptible to most of the herbicides approved for use in aquatic situations. If control is necessary in spring an application of dichlobenil will give good control for up to three years. Later in the season an application of glyphosate will give good control for up to two seasons. The species is also susceptible to 2,4-D amine which should be applied before flowering.

## **Biological control**

This species is very palatable and will be eaten by livestock if they are allowed access to the stands in preference to most other marginal species. Sustained grazing pressure will lead to elimination of the species over a period of two to three years.

## **Environmental control**

This species is susceptible to dense shade and will be eliminated by prolonged shading. It is characteristic of fertile, disturbed habitats and will therefore not be as competitive if erosion processes can be restricted by flow control or other bank management techniques.



## **Best option**

- ? For long-term early control treat in April with dichlobenil.
- ? For control later in the season either remove mechanically or treat with glyphosate.

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*Dr Jonathan Newman*