



Centre for
Ecology & Hydrology

NATURAL ENVIRONMENT RESEARCH COUNCIL

Centre for Aquatic Plant Management

Information Sheet

Sparganium emersum

Unbranched Bur-Reed

Sparganium emersum is a plant of still or slow-flowing watercourses of moderate to high nutrient status. Although similar in appearance to *S. erectum* (Branched Bur-reed) it has slightly different habitat requirements. It is usually found in water deeper than *S. erectum* and can grow up to 1 m deep. It is common on clay substrates. It has deep rooted rhizomes which are not easily uprooted by fast flowing water, even in spate conditions. It is most common in lowland areas of Britain.

It is characterised by floating strap-like leaves which may become emergent in shallower water. It

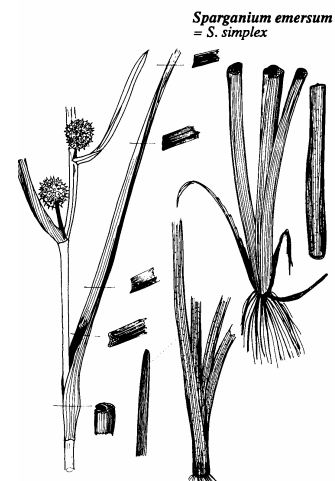
spreads by growth of rhizomes and although seeds are viable, the lack of suitable substrates may hinder recruitment by this method in most British rivers.

Mechanical control

This plant is controlled by cutting and dredging. The depth and persistence of the rhizomes makes mechanical control a short-term measure, with regrowth to original densities occurring in two to three years.

Chemical control

Since the withdrawal of diquat alginate in 2004 there is no appropriate chemical method of control for this species when submerged in flowing water. However, it is susceptible to dichlobenil and terbutryn in still water. Application of glyphosate to emergent growth will give good control when applied from August onwards..



Biological control

In still, enclosed waters, grass carp will eat leaves of *S. emersum* in the absence of anything else, but it is not their first choice. They do not provide long-term control as the rhizome persists and regrowth in subsequent seasons is relatively unaffected. The plant will be weakened by continued loss of its leaves and will die after four to five years of this type of treatment. No other form of biological control is known.

Environmental control

The plant is very susceptible to shading and even a slight increase in the amount of shade will lead to a loss of this species in rivers. Increased turbidity created by bottom-feeding fish or other methods at critical times of the year (April - May) may also lead to reduced biomass of this species.



Best options

1. If there is a dense infestation then either cut and remove the vegetation in early summer
2. Emergent vegetation can be removed mechanically or treated with a herbicide containing glyphosate
3. In still waters treat with dichlobenil in April or terbutryn in late April or early May later in the season.
4. Partial control can be achieved with mechanical cutting, dichlobenil or diquat alginic herbicides.