

# **YORKSHIRE FEATHER MOSS *Thamnobryum cataractarum* SPECIES ACTION PLAN**

## **DESCRIPTION**

Yorkshire feather moss is essentially an aquatic species, dark green in colour, the leaves often eroded to leave a tangled mass of blackish stems and branches. It is most closely related to *Thamnobryum fernandesii*, a moss endemic to Madeira. Yorkshire feather moss can be found forming a pure zone on rocks 10-25cm below the summer water level in a swiftly flowing stream in a deep ravine on Ingletonian grits and shales, where there is calcareous influence from Carboniferous limestone. It can also occur just below the water surface with other moss species of rivers and streams, and also as isolated shoots just above the surface with the common moss *Thamnobryum alopecurum*.

## **LOCAL BIODIVERSITY IMPORTANCE**

This species is believed to be endemic to England and to Yorkshire. The Yorkshire Dales National Park hosts the only known site in Britain for the species where it is very locally frequent (Hodgetts & Blockeel 1992). It has been suggested that the species may occur in nearby valleys where similar environmental conditions exist, although a very narrow distribution range is typical of other species in this group.

## **NATIONAL & INTERNATIONAL BIODIVERSITY IMPORTANCE**

Yorkshire feather moss is provisionally classified as Endangered in Britain and is listed as Vulnerable in the 2001 British Red Data Books: Mosses And Liverworts. It is a UK BAP Priority Species. The species receives general protection under the Wildlife and Countryside Act 1981.

## **CURRENT ISSUES, OPPORTUNITIES & THREATS**

With a very localised distribution, Yorkshire feather moss is highly susceptible to localised adverse environmental changes. Although there are no known current threats, as an aquatic plant there is concern that the plant could be affected by changes to water quality and water supply both at the site and upstream of it. Land management practices such as quarrying, water abstraction and discharges/run-off in the catchment area could affect the hydrology and water quality of the area to the detriment of the species.

The only known location for the species is a Site of Special Scientific Interest, and a well-known beauty spot popular with visitors to the National Park. Additionally, Local Environment Agency Plans, agri-environment scheme agreements and planning legislation play a major role in protecting the hydrology and water quality within the catchment area.

## **AIMS OF THE SPECIES ACTION PLAN**

- To maintain a viable population of Yorkshire feather moss at the single known site within the Yorkshire Dales National Park.
- To establish *ex-situ* stocks of the species to safeguard the single wild population.

## OBJECTIVES

To achieve these aims we need to:

- Accurately assess the population size of Yorkshire feather moss at the single known site using digital photography and possibly electronic markers by 2003.
- Undertake survey work to establish whether or not the species is present in similar habitat within the surrounding area by 2004.
- Ensure that there is no deterioration in the hydrology or water quality of the Yorkshire feather moss site by 2004.
- Support the ongoing work of the Royal Botanical Gardens, Kew, in developing conservation techniques for establishing *ex situ* stocks of the species by 2005.

## ACTIONS & TARGETS

To achieve these objectives the following actions should be carried out and the targets achieved within the time-scale given:

<b>Actions</b>	<b>Target date</b>	<b>3 year cost £</b>
Using appropriate recording techniques, accurately assess the current population of Yorkshire feather moss at its one known site.	2003	500
Survey all potential sites for Yorkshire feather moss in the Yorkshire Dales National Park.	2004	2,000
Ensure that the conservation requirements of the species are made known to all appropriate organisations and individuals (especially Environment Agency, landowners and land managers) in the catchment area of Yorkshire feather moss. Further specialist advice should be available if required.	2004	1,000
Support the current development of <i>ex situ</i> propagation methods at Kew being funded through English Nature's Species Recovery Project and BAP funds	2005	0

## WHO WILL BE RESPONSIBLE FOR THE ACTION PLAN?

<b>Lead Agency</b>	<b>Key Partners</b>
English Nature	Environment Agency Royal Botanical Gardens, Kew Yorkshire Dales National Park Authority DEFRA/RDS Landowners and managers British Bryological Society