



TREND IN THE PEAK DISTRICT:

Stable.

ESTIMATED POPULATION IN THE PEAK DISTRICT:

One population in the White Peak.

NATIONAL BAP STATUS:

Priority species

ASSOCIATED PEAK DISTRICT ACTION PLANS:

Habitats: River Corridor Habitats.

INTRODUCTION

The only known site in the world for Derbyshire feather-moss (*Thamnobryum angustifolium*) is in the White Peak. It is one of a small group of essentially aquatic *Thamnobryum* species which have very restricted distributions, such as *T. cataractarum* of Yorkshire and *T. fernandesii* of Madeira. Since its discovery, Derbyshire feather-moss has had a confused taxonomic history and research is on-going into its relations with other species of the genus including the widespread *T. alopecurum*.

Bryologists have suggested that the species is a clone that has arisen *in situ* and that its slow growth rate and dependence on vegetative regeneration accounts for its extremely limited distribution. We can therefore conclude that it is 'naturally rare' and has not suffered any long-term decline.

The species is protected under Schedule 8 of the Wildlife and Countryside Act 1981 and is a national Biodiversity Action Plan priority species.

ADVERSE IMPACTS	Historic	Current
Unintentional recreational damage.	✓	✓
Pollution events.	?	?
Unlicensed collection by bryologists.	?	?
Lack of reproduction (spores never observed).	✓	✓

An impact ✓ Impact unknown ?

CURRENT ACTION

Site Designation and Ownership

- The site is protected by SSSI status and in the ownership of a conservation body.

Survey and Research

- The adjacent locality and other likely Peak District sites have been surveyed (with negative results) for the presence of other populations.
- The site is wardened and monitored and the extent/condition of the species is reported to JNCC.
- Water quality is monitored annually using biological and chemical methods.
- 2 *ex-situ* populations are maintained.

Awareness Raising

- Liaison with recreation interests is on-going to minimize impact on the species.
- The species' importance and vulnerability has been emphasised in appropriate media both locally and nationally, whilst not disclosing the location.

ACTION PLAN OBJECTIVES AND TARGETS

National Targets

- Safeguard at only known site and at any other sites if found.
- Promote ecological research to aid management.

A Vision for the Peak District

The Peak District holds the sole world responsibility for Derbyshire feather-moss. The hope is that we can implement and support the relevant actions to safeguard the species for now and for future generations.

OBJECTIVES AND TARGETS

Objective

Safeguard the existing population.

Target

Ensure that the known site is in favourable conservation management by 2003.

Initiate ecological research to aid conservation management by 2005.

Continue maintenance of favourable condition and amend management in the light of research.

Main Factors Likely to Affect the Achievement of Targets

Lack of resources for research into the species' ecology.

Climate change.

Change in recreational patterns.

Limited knowledge with regard to detail of the water catchment of the site.

Recent demise of the owner of one ex-situ population.

ACTIONS

Key to the achievement of the proposed targets are actions relating to:

- site monitoring (Actions DF7 - 11);
- the proposed research into the species ecology (DF3);
- safeguard of water quality and quantity (DF4, DF14, DF17 and DF18), and
- liaison with recreation groups to prevent damage (DF6).

ACTIONS		TIMESCALE	LEAD AGENCY & Partners
RESEARCH			
DF1	Continue support for research into the effects of Asulox on bryophytes	2001 onwards	EN/Manchester Metropolitan University
DF2	Continue support for research into the <i>Thamnobryum</i> taxa.	2001 onwards	EN
DF3	Seek funding for and commission a study of the ecology of the species using the wild and/or <i>ex-situ</i> populations, including information about its habitat requirements, susceptibility to probable pollutants and reproduction.	2002/2003	EA/EN/JNCC
DF4	Research the catchment for details of water passage and identify possible threats to the water quality and quantity	2002/2003	EA
DF5	Ensure that results of research are incorporated into future management of the site.	2001 onwards	EA/EN/JNCC
RECREATION			
DF6	Continue liaison with recreation interests to ensure damage to the site is minimised.	2001 onwards	EN/Recreation groups
MONITORING			
DF7	Carry out 10 year surveys to accurately map extent of population.	Initially 2002/2003	EN/JNCC

DF8	Ensure EN staff and volunteers warden the site regularly and forward information to JNCC.	2001 onwards	EN
DF9	Carry out annual water quality monitoring at the site and compare the results with previous data sets.	2001 onwards	EA
DF10	Carry out annual bio-sampling at the site and compare the results with previous data sets.	2001 onwards	EA
DF11	Log the flow conditions using a standardised technique at each visit to build up a data set.	2001/2002	EA

AWARENESS RAISING

DF12	Produce occasional non site-specific publicity items to ensure that the public are aware of the species' vulnerability and importance.	2006/2007	EN/EA
DF13	Discourage collectors and other unauthorised visitors by ensuring no direct publicity of location in this or any other public documents.	2001 onwards	EN/EA

CONSERVATION ACTION AND INCENTIVES

Direct Action

DF14	Following monitoring, take actions to adjust water quality/quantity if necessary.	2001 onwards	EA
DF15	Investigate whether the species is or could be stored live or cryogenically by Kew.	2001	EN/JNCC
DF16	Clarify status of <i>ex-situ</i> populations and ensure their continuing safe-keeping.	2001	EN/JNCC

REGULATION

Other Regulatory Mechanisms

DF17	Ensure that discharge authorisations in the catchment take due regard of species' presence.	2001 onwards	EA
DF18	Ensure that abstraction authorisations in the catchment take due regard of species' presence.	2001 onwards	EA

RESOURCES

It is envisaged that the majority of the actions proposed will be carried out by the relevant organisations using current resources.

Additional resources will be needed for:

- the research essential for an understanding of the species ecology (2002/2003).