LANCASHIRE BAP SPECIES ACTION PLAN

FLAT-SEDGE (*Blysmus compressus*)

Summary

Flat-sedge has always been rare in Lancashire, past and present records being almost confined to a few sites in the Lune valley and at Lytham St. Anne's that satisfy its rather exacting habitat requirements. It is now critically endangered in Lancashire, its small remaining populations being threatened by nutrient enrichment and by physical disturbance at its coastal site. It is also vulnerable to drainage and river management works inland. This species has suffered a severe decline throughout its British range.

The purpose of this Action Plan is to safeguard its remaining sites in Lancashire and to increase the number and size of its populations through the provision of additional suitable habitat nearby.

Action Plan Aim-

To sustain viable populations of Flat-sedge at each of its surviving localities in Lancashire

Species Description

This is a small rhizomatous, perennial sedge growing up to 40cm. It has erect stems and grass-like leaves with a terminal, flattened, compact head of 10 – 20 reddish-brown spikelets borne on two opposite sides of the main axis.

Main Habitats

This species grows in open or sparsely vegetated marshes and fens, and in short sedge-rich damp grassland, calcareous flushes, and stream-sides which are subject to flooding.

National Status

Historically, Flat-sedge was widespread in suitable habitats in southern, eastern and northern England, extending to eastern Wales and southern and western Scotland. In the 'New Atlas' (Preston *et al.* 2002) it is noted that it has suffered a severe decline throughout its British range. In the earlier 'Atlas' (Perring and Walters, 1962) more than half the 10 x 10km squares in which it was recorded were lost. The 'New Atlas' shows that this decline has continued with 40% of the post-1930 records now gone.

It belongs to the European Temperate element of the British flora being found in western Europe, but it also occurs in central Asia. Its conservation status is classed as 'vulnerable' with a high risk of extinction (Cheffings and Farrell, 2005).

This species receives only general protection under the Wildlife and Countryside Act 1981.

Regional Status

In north-west England most of the remaining sites are in south east Cumbria, part of its present main area of distribution in the central Pennines. Outlying populations persist elsewhere, including the Sefton coast.

Local Status

In Lancashire Flat-sedge has always been a very rare species, old records being restricted to a few sites on the flood-plain of the River Lune and its tributary the R. Greta (Wheldon and Wilson, 1907), and a site in the Nelson area (Savidge *et al*., 1963).

It is presently known, in small quantity, from two areas in the county. Until recently it occurred at two nearby sites in a dune slack at Lytham St Annes (Fylde District), where it was seen in July 2001. However, it has suffered from being crowded out by tall grasses and shrubs (including nationally rare willow hybrids), and by 2003 it appeared to have disappeared from one site because of erosion and was much diminished at the other (Greenwood, 2004). It also survives – close to its historic localities – in old ox-bows of the River Lune at Melling-with-Wrayton, where it was seen in 2003 (Greenwood, 2004). The species is critically endangered in Lancashire.

Current factors affecting the Species

Nationally the decline of this species (Preston *et al*., 2002) is attributed to:

- Drainage
- Loss of unimproved damp grasslands
- Falling water tables
- Nutrient enrichment
- Inappropriate grazing

In Lancashire both sites are affected by nutrient enrichment. This leads to the replacement of low growing sparse vegetation where Flat-sedge grows with dense tall growing plants that out-compete the sedge. At both localities this nutrient enrichment takes the form of deposition of atmospheric nitrogen, which is particularly heavy in parts of Lancashire (Review Group on Acid Rain, 1997 and NEGTAP 2001, 2001) and for the Lune valley run-off from farmland.

At Lytham St Annes this process is very evident but pedestrians keep open the habitat that the species requires. Ironically one of the species threatening part of the colony is itself nationally rare. This is the fertile hybrid willow *Salix repens* x *S. viminalis* (*S.* x *friesiana*). The habitat also seems to be getting drier and although no active drainage is involved, engineering works at the nearby storm water treatment plant may be implicated.

The Lune valley site is also affected by run-off from pastures and meadows treated with fertilizers and slurry. Here the species is also vulnerable to drainage of oxbow ponds, and works to the river channel and its banks.

Current Action / Mechanisms

- *Policy*
  Flat-sedge colonies are recorded as part of the Threatened Plant Data Base initiated by the Botanical Society of the British Isles (BSBI) but currently unfunded (Lockton, 2002). The aim of the project is to monitor threatened plants nationally but it will be a matter for others to implement conservation policies. There are no other conservation policies affecting this species.

- *Site Safeguard*
  Neither Lancashire site has statutory protection but both fall within existing Biological Heritage Sites.

- *Land Management*
  No positive conservation management is undertaken at present. However, there is a dune management plan proposed for the Lytham Dune System SSSI which could serve to improve the prospects of this species there (Jon Hickling, pers. comm.).

- *Advisory*
  Landowners, tenants and managers of land where the plants grow have not been informed of their existence although the farmer for one of the Lune ox-bow sites was informed of its importance. In the case of the Lune valley sites landowners may not be known.

- *Research and Monitoring*
  The BSBI Vice-county Recorder monitors the Lytham St Anne's colony and confirmed the presence of the Lune valley sites in 2003. Information on these sites is included on the Threatened Plant Data Base.

- *Public Relations*
  Not attempted.

Species Targets

Target	Area	Measure	Timescale
To stabilise or increase existing populations	Lancaster, Fylde	No. of shoots/spikes counted	2012
To restore the species to 2 or more additional sites within its historic range	Lancaster, Fylde	No. of colonisations/ re-introductions; shoots/spikes counted	2015

Proposed Actions

Action (priority: H,M,L)	Area	Measure/ Milestone	Partners	Timescale
Research and monitoring				
Identify and assess all extant populations, esp. in the Lune valley (**H**)	Lancaster, Fylde	No. of populations; size of populations	BSBI, LWT	Ongoing
Monitor all extant populations on a 1-5 yr. basis (**M**)	Lancaster, Fylde	Population size at second count	Local Groups, BSBI, LWT	Ongoing
Site safeguard and management				
Confirm all known extant sites as BHS/ SSSI (**H**)	Lancaster, Fylde	% of known sites included	LWT, LCC, NE	2007
Seek to protect sites from damaging development or change (**H**)	Lancaster, Fylde	No. of sites with new or ongoing damage	LCC, EA, Fylde BC, Lancaster CC, DEFRA, LWT	Ongoing
Achieve beneficial management of existing sites (**H**)	Lancaster, Fylde	No. of sites beneficially managed	DEFRA, NE, EA, LCC	2008
Species protection and management				
Develop new sites in the R. Lune floodplain and on the Fylde dunes into which the species can spread and/or be introduced (**M**)	Lancaster, Fylde	No. of new sites created; no. of new sites with Flat-sedge established	LWT, landowners, EA, NE, LCC, Lancaster CC	2015
Advisory				
Advise owners, farmers, managers and farm advisors on site management and protection (**H**)	Lancaster, Fylde	No. of owners and managers given advice	LCC, LWT, EA, NE, DEFRA	Ongoing
Publicity				
Publicise the plight of this and other marsh and fen species in Lancashire (**M**)	Lancashire	No. of articles/ media appearances	LWT, EA	Ongoing

Related Action Plans

Habitat Action Plans

- Rivers and Streams
- Sand dunes

Species Action Plans

None

In the Lune valley ox-bows there are a number of rare and localised Lancashire aquatic species that favour nutrient poor waters. These include:

Groenlandia densa – Opposite-leaved Pondweed
Myriophyllum alterniflorum – Alternate Water-milfoil
Ranunculus circinatus – Fan-leaved Water-crowfoot
Ranunculus peltatus – Pond Water-crowfoot.

References

Cheffings, C. and Farrell, L., eds (2005). The vascular plant Red Data List for Great Britain. *Species Status*, **7**: 1 – 116. Joint Nature Conservation Committee. Peterborough.

Greenwood, E.F. (2004) *Extinct and Rare Vascular Plants of North Lancashire Draft 3 April 2004.* Botanical Society of the British Isles, E. F. Greenwood and Mrs P.A. Abbott .

Lockton, A. (2002) Co-ordinators corner. Threatened Plants Database. *BSBI News*, **91**: 13 – 14.

Preston, C.D., Pearman, D.A. and Dines, T.D., eds. (2002) *New Atlas of the British & Irish Flora.* Oxford University Press.

Perring, F.H. and Walters, S.M., eds. (1962) *Atlas of the British Flora.* Thomas Nelson Ltd. London.

Review Group on Acid Rain (1997). *Acid deposition in United Kingdom 1992 – 1994. 4th Report.* AEA Technology for Department of the Environment, Transport and the Regions. London.

NEGTAP 2001 (2001). *Transboundary air pollution: acidification, eutrophication and ground-level ozone in the UK.* NEGTAP 2001.

Savidge, J.P., Heywood, V.H. and Gordon, V. (1963). *Travis's Flora of South Lancashire* Liverpool Botanical Society

Date: 8.10.2002 Draft No. 1 Author: E.F. Greenwood
Revised 25. 8. 2004 by Geoff Morries

Revised 7. 2. 2005 by Geoff Morries
Revised 31.7.2006 by BAP Technical Working Group
Revised 17.8.2006 by E.F. Greenwood
Revised 29.9.2007