

LANCASHIRE BAP SPECIES ACTION PLAN

DWARF CORNEL (*Cornus suecica*)

Summary

Always rare in Lancashire, Dwarf Cornel has been recorded from only 3, closely proximal, sites in the West Pennine Moors, the most southerly for this species in Britain. It is now believed to be extinct as a result of moorland fires and heavy grazing.

The purpose of this Action Plan is to re-introduce and maintain the species within the area in which it formerly occurred. Sympathetic moorland management will be crucial to the success of this re-introduction.

Action Plan Aim-

To re-establish populations of Dwarf Cornel at former localities in the West Pennine Moors

Species Description

Dwarf Cornel is an attractive herbaceous perennial growing from a horizontal below-ground rhizome. Its upright annual stems, normally around 10 cm tall, carry opposite pairs of 3-5 veined unstalked oval leaves 1-3cm long. The flowers are tiny, dark purple and in a terminal umbel surrounded by four white leaf-like bracts. The fruit is bright red, non-poisonous and described as tasteless.

An account of the species is published in *Journal of Ecology* (Taylor, 1999). It would appear that there is low genetic diversity in the species throughout Britain (Taylor K. pers. com.).

Main Habitats

Dwarf Cornel occurs principally in dwarf shrub communities in upland moor habitats including upland heath and blanket bog, although it also occurs in upland acidic grassland. However, the artificially low tree line in much of the British Isles masks its occurrence in such habitats as upland birch woodland and oak woodland.

National Status

The species occurs in 151 ten-km sq. in the British Isles (Preston *et al.* 2002) principally in northern and western Scotland. It is one of the very few members of the Arctic-Subarctic element of the British flora to occur in Lancashire, having a circumpolar distribution and is found in western Europe through Scandinavia, North Germany as far south as the Netherlands. It has no legal protection in Britain other than that afforded all wild plants in the Wildlife and Countryside Act 1981.

Regional Status

The species is rare and very local in England. The Lancashire sites were, until 2005, the only ones known in north-west England, and the most southerly recorded in the British Isles. In 2005 a population of Dwarf Cornel was found in the Lake District. It is otherwise recorded in England from North Yorkshire and Northumberland. Whilst several populations surveyed are apparently flourishing in the north-east England, the population in Lancashire is believed to have become extinct some years ago.

Local Status

In Lancashire, Dwarf Cornel was known only from three localities, each in close proximity, on Turton Moor and Darwen Moors in the West Pennine Moors. The species is included as “endangered” in the *Provisional Lancashire Red Data List of Vascular Plants* (LCC 1998), and sites for this species would qualify for some protection through the Biological Heritage Sites system.

Dwarf Cornel was first found by W.H. Western in 1900 (Western 1910; Savidge 1963) at two localities on Turton Moor, the first at 340m and a second larger at 370m. A further colony was found in 1953 about a mile away by A. Hazlewood, although the location of this third locality never became generally known. In 1961 well over 100 plants were seen on Turton Moor (Savidge 1963). It appears that the population was formerly sizeable as anecdotal information (J. Ainsworth pers.com. former Hon. Sec. Blackburn Naturalists' Field Club) told that children from local farms were in the habit of collecting the fruits to eat. Herbarium specimens from Turton Moor are housed at The Manchester Museum (8 specimens), Bolton Museum (one specimen) and Fleetwood Museum (one specimen).

Around the late 1960s part of the population at the second locality was fenced against grazing; however, the vegetation within the enclosure became overgrown by Wavy Hair-grass (*Deschampsia flexuosa*) by 1970 (P.Jepson, unpublished). Also in 1970 a devastating fire swept across Turton Moor and burnt deep into the peat. The first locality was completely destroyed whilst the second was significantly affected. The following year (1971) the population at the second locality was monitored (P.Jepson, unpublished) and found to comprise 32 non-flowering shoots. From 1972 to 1976 no flowers were produced and the number of shoots recorded were 22,11,9,3, and 2 respectively. In 1977 no shoots were found and none have been observed during periodic inspections since. These plants grew in very closely grazed Bilberry (*Vaccinium myrtillus*); it is suggested that the density of the Bilberry growth, due to the intensive sheep grazing, was the chief cause of the extinction.

The third locality has remained a mystery. However, in spring 2003 a former locality was shown to S. Martin and P.Jepson and others on Darwen Moor by Jim Ingham, a former gamekeeper. As this locality is approximately one mile from those on Turton Moor, it is assumed that the third and the Darwen Moor localities are one and the same.

Current factors affecting the Species

The main destructive factors affecting this species in Lancashire are considered to be uncontrolled fires and heavy grazing pressure in its moorland habitat. Sympathetic moorland management through the Moorland/Fells BAP is key to this species.

Dwarf Cornel may also be affected by increase in ground fertility through nitrate pollution leading to increased competition from more vigorous species.

Climate change is a factor to consider, although populations of other similar northern/arctic species such as Chickweed Wintergreen (*Trientalis europaea*) and Cloudberry (*Rubus chamaemorus*) have not shown to date any decline directly attributable to this factor.

Current Action / Mechanisms

- *Policy*
There is no UK BAP for this species. A Local BAP is in preparation for the North York Dales.
- *Site safeguard*
Sites that support Dwarf Cornel in Lancashire are eligible for identification as Biological Heritage Sites (LCC 1998), although the moorland sites that formerly supported Dwarf Cornel are identified as Biological Heritage Sites on a habitat basis. These comprise Turton Moor and Longworth Moor BHS and Darwen Moor BHS.
- *Land Management*
There are no specific measures in place at present.
- *Advisory*
Through the BHS Project the owners of both Turton Moor and Darwen Moor were notified of the identification of the BHS with management advice given to United Utilities (the landowner) for all their land holdings in the West Pennine Moors.
- *Research and Monitoring*
Other than the above-mentioned monitoring (P.Jepson unpublished) no other detailed piece of local research has been traced. Whilst there is no current action on the ground, investigations are underway to determine the feasibility of re-introduction by seed and/or by propagated material from appropriate populations.
- *Public Relations*
It is the intention that this BAP will form the basis of developing public awareness of sustainable moorland management and local identity with this rare and attractive plant.

Species Targets

Target	Area	Measure	Timescale
To re-introduce Dwarf Cornel to 2 sites within its historical range	West Pennine Moors	No. of sites	2010
To establish expanding populations at the reintroduced sites	West Pennine Moors	No. of shoots/ flowering shoots per site	2020

Proposed Actions

Action (priority: H,M,L)	Area	Milestone/ Measure	Partners	Timescale
Site safeguard				
Seek to reinstate favourable management of selected moors (H)	West Pennine Moors	Changes to management agreed by West Pennine Moors Biodiversity Group	United Utilities, farming tenants, LCC, WPM, LRF, DEFRA	2008
Species management and protection				
Produce re-introduction strategy (M)	West Pennine Moors	Strategy approved by West Pennine Moors Biodiversity Group	United Utilities, LCC, WPM, NE, LWT	2008
Introduce to selected sites over 2-yr period (M)	West Pennine Moors	No. of sites	United Utilities, LCC, WPM	2010

Research and Monitoring				
Investigate methods of preventing fire damage (H)		Report presented to West Pennine Moors Biodiversity Group	United Utilities, Lancashire Fire Service	2008
Investigate methods of propagation and re-introduction (M)		Report presented to West Pennine Moors Biodiversity Group	LCC, LWT	2008
Monitor introduced populations (M)	West Pennine Moors	No. of shoots/flowering shoots	LCC, LWT	Ongoing
Publicity				
Publicise Dwarf Cornel as a flagship species for West Pennine Moors (M)		No. of appearances in publications/media	United Utilities, LCC, Blackburn with Darwen BC, WPM,LWT	Ongoing

Related Action Plans

Habitat Action Plans

- Moorland and Fells
- Broadleaved and mixed woodland (Upland oak woodland)

Species Action Plans

- Chickweed Wintergreen (*Trientalis europaea*)

References

LCC 1998, *Biological Heritage Sites Guidelines for Site Selection*. Lancashire County Council.

Preston C.D., Pearman D.A. and Dines T.D., 2002, *New Atlas of the British & Irish Flora*. OUP.

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

Taylor, K. (1999) *Cornus suecica* L. (*Chamaepericlymenum suecicum* (L) Ascherson & Graebner) Biological Flora of the British Isles No. 209, *Journal of Ecology* 1999, **87**, 1068-1077.

Western, W.H. (1910) *Cornus suecica* L. & C. Nat., **3**: 161-4

