

**European Community Directive  
on the Conservation of Natural Habitats  
and of Wild Fauna and Flora  
(92/43/EEC)**

**Second Report by the United Kingdom under  
Article 17  
on the implementation of the Directive  
from January 2001 to December 2006**

**Conservation status assessment for :  
S5113: *Cladonia* subgenus *Cladina* - subgenus  
lichens**

Please note that this is a section of the report. For the complete report visit <http://www.jncc.gov.uk/article17>

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## **S5113 *Cladonia* subgenus *Cladina* subgenus lichens**

*Audit trail compiled and edited by JNCC and the Plant Conservation Working Group*

This document is an audit of the data and judgements on conservation status in the UK's report on the implementation of the Habitats Directive (January 2001 to December 2006) for this species. Superscript numbers accompanying the headings below, cross-reference to headings in the corresponding Annex B reporting form. This supporting information should be read in conjunction with the UK approach for species (see 'Assessing Conservation Status: UK Approach').

### **1. Range Information<sup>2.3</sup>**

#### **1.1 Surface area of range<sup>2.3.1</sup>**

**Unknown**

The range of the group as a whole is probably the whole of the UK, although there are far fewer sites in Eastern England (Seaward & Hitch, 1984).

#### **1.2 Date of range determination<sup>2.3.2</sup>**

**Not applicable**

#### **1.3 Quality of range data<sup>2.3.3</sup>**

**Poor**

Published maps and data are difficult to obtain.

#### **1.4 Range trend<sup>2.3.4</sup> and range trend magnitude<sup>2.3.5</sup>**

**Stable**

The post-1960 range for these species remains similar to the historic range even though there may well have been significant declines in the number of sites within the range (Seaward & Hitch, 1984).

#### **1.5 Range trend period<sup>2.3.6</sup>**

**1900 – 2006**

In the absence of quantifiable data, trends are considered more generally across the 20th Century.

#### **1.6 Reasons for reported trend in range<sup>2.3.7</sup>**

**Not applicable**

#### **1.7 Favourable reference range<sup>2.7.1</sup>**

**Unknown (Equal to current)**

The decision tree in Note 1 has been used as a guide in determining the favourable reference range estimate (see 'Assessing Conservation Status: UK Approach').

From the limited information available, this group of species appears to be relatively widespread, and the group as a whole does not appear to have suffered a noticeable historic decline in range. Based on expert opinion and Note 1, the favourable reference range need

not be larger than the current extent. However since this is Unknown, the extent of the favourable reference range is also Unknown.

## **1.8 Range conclusion<sup>2.8</sup>**

### **Favourable**

On the basis of incomplete information, range is currently reported as stable. Further, although current extent is not known (in terms of km<sup>2</sup>), there is no evidence to suggest that it is not sufficiently widespread to support the species at Favourable status. For these reasons, the conclusion for range is Favourable.

## **2. Population of the species<sup>2.4</sup>**

### **2.1 Population estimate<sup>2.4.1</sup>**

#### **Unknown**

The appropriate proxy to use would be the number of 10-km squares occupied within the range. However, the available mapping data does not provide a good source for this purpose.

### **2.2 Date of population estimate<sup>2.4.2</sup>**

Not applicable

### **2.3 Method of population estimate<sup>2.4.3</sup>**

Not applicable

### **2.4 Quality of population data<sup>2.4.4</sup>**

#### **Poor**

Published maps and data are difficult to obtain.

### **2.5 Population trend<sup>2.4.5</sup> and population trend magnitude<sup>2.4.6</sup>**

#### **Unknown**

Insufficient data are available to suggest a population trend.

### **2.6 Population trend period<sup>2.4.7</sup>**

1994 - 2006

### **2.7 Reasons for reported trend in population<sup>2.4.8</sup>**

Not applicable

### **2.8 Justification of % thresholds for trends<sup>2.4.9</sup>**

Not applicable

### **2.9 Main pressures<sup>2.4.10</sup>**

**180 Burning**

**140 Grazing**

**400 Urbanised areas, human habitation** (fragmentation and disturbance from developments such as housing and road constructions)

**720 Trampling, overuse**

**950 Biocenotic evolution**

## **2.10 Threats<sup>2.4.11</sup>**

**180 Burning**

**140 Grazing**

**400 Urbanised areas, human habitation**

**720 Trampling, overuse**

**950 Biocenotic evolution**

## **2.11 Favourable reference population<sup>2.7.2</sup>**

**Unknown**

Given the uncertainties over current population and trends, it would be inappropriate to suggest a favourable reference population at this time.

## **2.12 Population conclusion<sup>2.8</sup>**

**Unknown**

Insufficient information is available to assess population status.

## **3. Habitat for the Species in the Biogeographic Region or Sea<sup>2.5</sup>**

The principal habitats occupied by Subgenus *Cladina* are heathlands and acid dunes, with other habitats including some stable shingle systems, acid mires and native pine woodlands.

### **3.1 Surface area of habitat<sup>2.5.2</sup>**

**Unknown**

### **3.2 Date of estimation<sup>2.5.3</sup>**

**Not applicable**

### **3.3 Quality of data on habitat area<sup>2.5.4</sup>**

**Poor**

### **3.4 Habitat trend<sup>2.5.5</sup>**

**Unknown**

There is insufficient evidence to identify the current trend. Historically, large areas of heathland were lost, although these losses have slowed or stabilised. Pressures still exist, in particular grazing and burning. It is unknown whether these pressures are currently causing declines. Further, more than halving the levels of sulphur dioxide deposition since 1980 (Fowler, 2001) may even mean that the group is increasing as more habitat becomes available for colonisation.

### **3.5 Habitat trend period<sup>2.5.6</sup>**

**1994 – 2006**

### **3.6 Reasons for reported trend in habitat<sup>2.5.7</sup>**

**3 = Direct human influence (restoration, deterioration, destruction)**

**5 = Natural processes**

In the past, heathland was lost primarily to agriculture, forestry, mineral extraction and development. Overgrazing and inappropriate burning regimes currently pose the greatest pressures.

Natural erosion, coastal defence works, and recreation have contributed to declines in coastal dune systems. Machair has, and continues to be, highly susceptible to agricultural modification and is particularly sensitive to changes in grazing, and sand and shingle extraction.

### 3.7 Suitable habitat for the species (in km<sup>2</sup>)<sup>2.7.3</sup>

Unknown

### 3.8 Habitat conclusion<sup>2.8</sup>

Unknown

Major declines in heathland took place in the 19th century or even earlier; in England only one sixth of the heathland present in 1800 now remains. Dune systems and machair have also suffered losses. The broad habitats associated with *Cladina* have all suffered historic decline; common standards monitoring shows only 21% of upland heathlands, 18% of lowland heathlands and 49% of dunes, shingle and machair in Favourable condition. Expert opinion is that these broad habitat assessments are not sufficient to inform a judgment of Unfavourable-Inadequate, on the basis that habitat quality is insufficient.

## 4. Future Prospects<sup>2.6</sup>

Unknown

Without good population measures or additional information on how the habitat quality is impacting the subgenus, the future prospects remain Unknown.

### 4.1 Future prospects conclusion<sup>2.8</sup>

Unknown

## 5. Overall Assessment<sup>2.8</sup>

Unknown

**Table 5.1** Summary of conclusions

Parameter	Judgement	Grounds for Judgement (in accordance with Annex C)	Reliability*
Range	Favourable	Range is stable and equal to the favourable reference range	3
Population	Unknown	No or insufficient reliable information available	N/A
Habitat	Unknown	No or insufficient reliable information available	N/A
Future Prospects	Unknown	No or insufficient reliable information available	N/A
Overall Assessment	Unknown	One Favourable with two or more unknown	N/A

\*1=High, 2=Moderate, 3=Low

High – Expert opinion is that the concluding judgement accurately reflects the current situation based on a professional understanding of the species. For range, population, and habitat, quality of data used to establish the current estimate has been identified as Good; data used to inform trends is comprehensive and up to date.

Moderate – A greater understanding of the feature, or the factors affecting it, is required before a confident concluding judgement can be made by experts. For range, population, and habitat, the current estimate and/or trend are based on recent, but incomplete or limited survey data; or alternately, a comprehensive, but outdated (pre-1994) review.

Low – Judgements, and comprising estimates, are almost based predominately on expert opinion.

N/A – Assessment conclusion is Unknown, on the basis of insufficient reliable information

## 6. References

FOWLER, D. 2001 Transboundary air pollution: acidification, eutrophication and ground-level ozone in the UK. National Expert Group on Transboundary Air Pollution

SEAWARD, M. R. D. & HITCH, C. J. B. 1984 Atlas of the Lichens of the British Isles. Vol 1. The Journal of Applied Ecology

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