

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

Supporting documentation for the  
Third Report by the United Kingdom under  
Article 17

on the implementation of the Directive  
from January 2007 to December 2012  
Conservation status assessment for

Species:

S1378 - Cladonia subgenus Cladina subgenus of lichens *Cladonia  
subgenus Cladina*

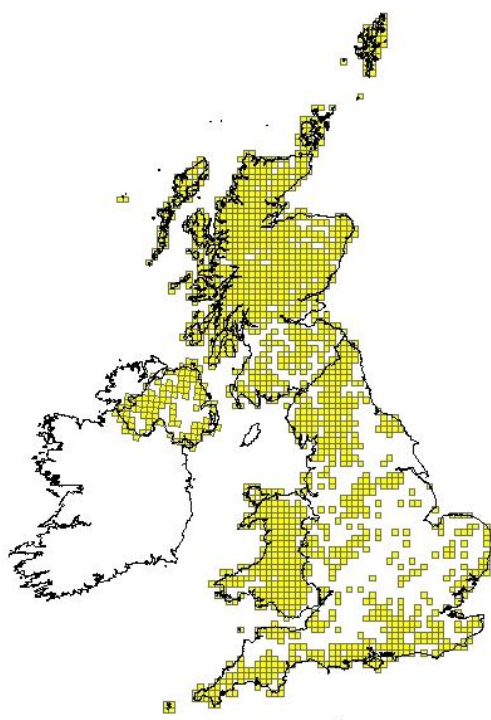
**IMPORTANT NOTE – PLEASE READ**

- The country-level reporting information contained in this document is a contribution to the Article 17 UK report for the habitat/species concerned.
- It has been provided by **Scottish Natural Heritage** and refers only to the state of the habitat/species in **Scotland** - it does not constitute an assessment for the whole of the UK.
- The Article 17 UK Approach document provides details on how this information has been used and, combined with information supplied by other Statutory Nature Conservation Bodies
- The format of the document is closely aligned to that set out by the European Commission for Member State reporting – as a result, some of the fields are not applicable at a country-level and have deliberately been left blank – in addition, the content of most fields is constrained by the EC reporting categories.

**Reporting format on the 'main results of the surveillance under Article 11' for Annex II, IV & V species**

<i>Field name</i>	<i>Brief explanations</i>	
<b>0.2 Species</b>	<b>0.2.1 Species code</b>	<b>S1378</b>
	<b>0.2.2 Species scientific name</b>	<b><i>Cladonia subgenus Cladina</i></b>
	<b>0.2.3 Alternative species scientific name</b> Optional	<b>Cladonia subgenus Cladina</b>
	<b>0.2.4 Common name</b> Optional	<b>Subgenus of lichens</b>

<b>1.1 Maps</b>			
<b>1.1.1 Distribution map</b>		<b>Sensitive</b>	<b>False</b>



<b>1.1.2 Method used - map</b>	None of the options apply. The correct method is partial data without extrapolation of modelling. JNCC download from the NBN Gateway <a href="http://www.searchnbn.net">www.searchnbn.net</a> The data come from a large number of ad hoc records. There are clearly many unsurveyed and the real distribution is most likely equivalent to the map produced by including all post-1980 records
<b>1.1.3 Year or period</b>	<b>2001-2012</b>

<b>1.1.4 Additional distribution map</b>	<b>False</b>
<b>1.1.5 Range map</b>	

<b>2.1 Biogeographical region &amp; marine regions</b>	<b>ATL</b>
<b>2.2 Published sources</b>	<b>"N/A"</b>
	N/A

<b>2.3 Range</b>	
<b>2.3.1 Surface area Range</b>	
<b>2.3.2 Method used Surface area of Range</b>	None of the options apply. The correct method is partial data without extrapolation or modelling. JNCC download from the NBN Gateway <a href="http://www.searchnbn.net">www.searchnbn.net</a> Cladonia subgenus Cladina is widespread in Scotland and most likely occurs in every 10 km square. The absence from some 10 km squares is most likely due to under-recording.
<b>2.3.3 Short-term trend Period</b>	
<b>2.3.4 Short term trend Trend direction</b>	<b>stable</b>
<b>2.3.5 Short-term trend Magnitude</b>	<b>a) Minimum</b>
	There have been no measurable changes in the range for the subgenus in Scotland.
	<b>b) Maximum</b>
<b>2.3.6 Long-term trend Period</b>	
<b>2.3.7 Long-term trend Trend direction</b>	<b>stable</b>
<b>2.3.8 Long-term trend Magnitude</b>  Optional	<b>a) Minimum</b>

	<b>b) Maximum</b>	
<b>2.3.9 Favourable reference range</b>	<b>a) Value in km<sup>2</sup></b>	
	The FRR should be all of Scotland for this common subgenus	
	<b>b) Operator for FRR</b>	
	<b>c) FRR is unknown (indicated by "true")</b>	<b>False</b>
<b>2.3.10 Reason for change</b> Is the difference between the reported value in 2.3.1 and the previous reporting round mainly due to...	<b>a) Genuine change?</b>	<b>False</b>
	<b>b) Improved knowledge/more accurate data?</b>	<b>False</b>
	<b>c) Use of different method (e.g. "Range tool")?</b>	<b>False</b>

<b>2.4 Population</b>		
<b>2.4.1 Population size estimation</b> (using individuals or agreed exceptions where possible)	<b>a) Unit</b>	
	<b>b) Minimum</b>	Most 10 km squares in Scotland Total number of 10 km squares in Scotland that intersect land above MHS (using OS MasterMap MHS line)
	<b>c) Maximum</b>	Most 10 km squares in Scotland
<b>2.4.2 Population size</b>	<b>a) Unit</b>	<b>number of map 10x10 km grid cells</b>

<b>estimation</b> (using population unit other than individuals) Optional ( <i>if 2.4.1 filled in</i> )	<b>b) Minimum</b>	<b>1116</b>
	<b>c) Maximum</b>	<b>1116</b>
	<b>a) Definition of "locality"</b>	
<b>2.4.3 Additional information on population estimates / conversion</b> Optional	<b>Number of 10 km squares in Scotland that intersect land above MHWS (using OS MasterMap MHWS line)</b>	
	Total number of 10 km squares in Scotland that intersect land above MHWS (using OS MasterMap MHWS line)	
	<b>b) Method to convert data</b>	
	<b>c) Problems encountered to provide population size estimation</b>	<b>Total number will include some squares that do not support the species, therefore the minimum figure is an overestimate.</b>
	Total number will include some squares that do not support the species, therefore the minimum figure is an overestimate.	
<b>2.4.4 Year or period</b>	<b>2007-2012</b>	
<b>2.4.5 Method used Population size</b>	<b>Estimate based on expert opinion with no or minimal sampling</b> JNCC download from the NBN Gateway <a href="http://www.searchnbn.net">www.searchnbn.net</a> Although we initially agreed that the maps for Cladonia subgenus Cladina should be based on post-2007 data, it is so likely that these species occur in almost every 10 km square in Scotland (other than some fully urban squares) that this has been reported as the best estimate. Use of 10 km square data may mask considerable fluctuations in the diversity and abundance of Cladonia subgenus Cladina at smaller scales however because only one record of the most common species counts as a 10 km square record. This should be addressed for future reporting periods but will have to be based on a statistical sample of 10 km squares. Method to be developed.	
<b>2.4.6 Short-term trend Period</b>	<b>2001-2012</b> 2001-2006 compared with 2007-2012	
<b>2.4.7 Short-term trend Trend direction</b>	<b>stable</b>	
<b>2.4.8 Short-term trend Magnitude</b>	<b>a) Minimum</b>	
	<b>b) Maximum</b>	

	<b>c) Confidence interval</b>	
<b>2.4.9 Short-term trend Method used</b>	<b>Estimate based on expert opinion with no or minimal sampling</b> The number of 10 km squares is not significantly different between the two periods given variation in survey effort	
<b>2.4.10 Long-term trend – Period</b>		
<b>2.4.11 Long-term trend Trend direction</b>		
<b>2.4.12 Long-term trend Magnitude</b>  Optional	<b>a) Minimum</b>	
	<b>b) Maximum</b>	
	<b>c) Confidence interval</b>	
<b>2.4.13 Long term trend Method used</b>		
<b>2.4.14 Favourable reference population</b>	<b>a) Number of individuals/agreed exceptions/other units</b>	
	<b>b) Operator</b>	
	<b>c) FRP is unknown indicated by "true"</b>	<b>False</b>
	<b>d) Method used to set FRP</b>	
<b>2.4.15 Reason for change</b> Is the difference between the	<b>a) Genuine change?</b>	<b>False</b>

value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:		
	<b>b) Improved knowledge/ more accurate data?</b>	<b>False</b>
	<b>c) Use of different method (e.g. "Range tool")?</b>	<b>False</b>

<b>2.5 Habitat for the species</b>			
<b>2.5.1 Area estimation</b>	<p>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. The following Annex 1 habitat assessments should be consulted for the best available current trends:</p> <p>H2130 – Fixed dunes with herbaceous vegetation  H2250 – Coastal dunes with Juniperus spp.  H4010 – Northern Atlantic wet heaths with Erica tetralix  H4030 – European dry heaths  H4060 – Alpine and Boreal heaths  H7110 – Active raised bogs  H7130 – Blanket bogs  H7140 – Transition mires and quaking bogs  H91C0 – Caledonian forest</p>		
<b>2.5.2 Year or period</b>	<b>2001-2012</b>		
<b>2.5.3 Method used Habitat for the species</b>	<p><b>Estimate based on partial data with some extrapolation and/or modelling</b></p> <p>See individual habitat assessments:  H2130 – Fixed dunes with herbaceous vegetation  H2250 – Coastal dunes with Juniperus spp.  H4010 – Northern Atlantic wet heaths with Erica tetralix  H4030 – European dry heaths  H4060 – Alpine and Boreal heaths  H7110 – Active raised bogs  H7130 – Blanket bogs  H7140 – Transition mires and quaking bogs  H91C0 – Caledonian forest</p>		
<b>2.5.4 Quality of the habitat</b>	<table border="1"> <tr> <td><b>a) Habitat quality</b></td> <td><b>Unknown</b></td> </tr> </table> <p>The area estimate should be based on the species' ranges because the genus has a broad ecological range. This is clearly an under-estimate and strongly biased by ad hoc surveyor effort. Although there are large areas where the subgenus is clearly widespread and in good condition, there is uncertainty as to what this means for the diversity and extent of</p>	<b>a) Habitat quality</b>	<b>Unknown</b>
<b>a) Habitat quality</b>	<b>Unknown</b>		

	Cladonia subgenus Cladina-rich habitat at the Scotland scale.	
	<b>b) Assessment method</b>	
	<p>See habitat assessments for annex 1 habitats:</p> <p>H2130 – Fixed dunes with herbaceous vegetation</p> <p>H2250 – Coastal dunes with Juniperus spp.</p> <p>H4010 – Northern Atlantic wet heaths with Erica tetralix</p> <p>H4030 – European dry heaths</p> <p>H4060 – Alpine and Boreal heaths</p> <p>H7110 – Active raised bogs</p> <p>H7130 – Blanket bogs</p> <p>H7140 – Transition mires and quaking bogs</p> <p>H91C0 – Caledonian forest.</p> <p>The broad habitat quality is unknown.</p> <p>Annex 1 habitat reports and species distribution data from the NBN.</p>	
<b>2.5.5 Short-term trend Period</b>	<b>2001-2012</b>	
	2001-2012 unless otherwise for individual Annex 1 habitat assessments	
<b>2.5.6 Short-term trend Trend direction</b>	<b>stable</b>	
	Trend is probably not significantly different from '0'. This may however mask underlying losses in extent	
<b>2.5.7 Long-term trend Period</b>		
<b>2.5.8 Long-term trend Trend direction</b>	<b>stable</b>	
<b>2.5.9 Area of suitable habitat for the species</b>	<b>a) Value in km<sup>2</sup></b>	
	It isn't possible to estimate the area of suitable habitat because there is no suitable data.	
	<b>b) Absence of data indicated as '0'</b>	
<b>2.5.10 Reason for change</b>	<b>a) Genuine change?</b>	<b>False</b>
Is the difference between the value reported at 2.5.1 and the previous reporting round mainly due to		
	<b>b) Improved knowledge/more accurate data?</b>	<b>False</b>
	<b>c) Use of different method (e.g.</b>	<b>False</b>



	<b>"Range tool")?</b>	

<b>2.6 Main pressures</b>		
<b>a) Pressure</b>	<b>b) Ranking</b>	<b>c) Pollution qualifier</b>
	H = high importance M = medium importance L = low importance	
A04: grazing	H	
B06: grazing in forests/ woodland	H	
F03: Hunting and collection of wild animals (terrestrial)	H	
H04: Air pollution, air-borne pollutants	H	N
I02: problematic native species	H	
J01: fire and fire suppression	H	
B01: forest planting on open ground	M	
C03: Renewable abiotic energy use	M	
K02: Biocenotic evolution, succession	M	
D01: Roads, paths and railroads	L	
I01: invasive non-native species	L	
K04: Interspecific floral relations	L	
M01: Changes in abiotic conditions	L	

<b>2.6.1 Method used – Pressures</b>	<b>mainly based on expert judgement and other data</b> See individual habitat assessments: H2130 – Fixed dunes with herbaceous vegetation H2250 – Coastal dunes with Juniperus spp. H4010 – Northern Atlantic wet heaths with Erica tetralix H4030 – European dry heaths H4060 – Alpine and Boreal heaths H7110 – Active raised bogs H7130 – Blanket bogs H7140 – Transition mires and quaking bogs H91C0 – Caledonian forest
--------------------------------------	---

<b>2.7 Threats</b>		
<b>a) Threat</b>	<b>b) Ranking</b>	<b>c) Pollution qualifier</b>
	H = high importance M = medium importance L = low importance	

A04: grazing	H	
B01: forest planting on open ground	H	
F03: Hunting and collection of wild animals (terrestrial)	H	
H04: Air pollution, air-borne pollutants	H	N
C03: Renewable abiotic energy use	M	
D01: Roads, paths and railroads	M	
I02: problematic native species	M	
J01: fire and fire suppression	M	
M01: Changes in abiotic conditions	M	
G01: Outdoor sports and leisure activities, recreational activities	L	
K01: abiotic (slow) natural processes	L	

<b>2.7.1 Method used – Threats</b>	<b>expert opinion</b>
	See individual habitat assessments: H2130 – Fixed dunes with herbaceous vegetation H2250 – Coastal dunes with Juniperus spp. H4010 – Northern Atlantic wet heaths with Erica tetralix H4030 – European dry heaths H4060 – Alpine and Boreal heaths H7110 – Active raised bogs H7130 – Blanket bogs H7140 – Transition mires and quaking bogs H91C0 – Caledonian forest

<b>2.8 Complementary information</b>	
<b>2.8.1 Justification of % thresholds for trends</b>	
<b>2.8.2 Other relevant information</b>	

<b>2.8.3 Trans-boundary assessment</b>	

### 2.9 Conclusions (*assessment of conservation status at end of reporting period*)

Please refer to the United Kingdom assessment for this species.

### 3 Natura 2000 coverage & conservation measures - Annex II species (*only applies to species listed under Annex II of the Directive*)

#### 3.1 Population

<b>3.1.1 Population size</b>  Estimation of population size included in the SAC network	<b>a) Unit</b>	
	<b>b) Minimum</b>	
	<b>c) Maximum</b>	
<b>3.1.2 Method used</b>		
<b>3.1.3 Trend of population size within the network</b> (short-term trend)		

#### 3.2 Conservation measures

Conservation measures taken (i.e. already being implemented) within the reporting period and provided information about their importance, location and evaluation.

<b>3.2.1 Measure</b>	<b>3.2.2 Type</b>	<b>3.2.3 Ranking</b>	<b>3.2.4 Location</b>	<b>3.2.5 Broad evaluation of the measure</b>
		H = high importance	where the measure is PRIMARILY applied	

	a) Legal/statutory	b) Administrative	c) Contractual	d) Recurrent	e) One-off	M = medium importance L = low importance	a) Inside	b) Outside	c) Both inside & outside	a) Maintain	b) Enhance	c) Long term	d) No effect	e) Unknown	f) Not evaluated

--