

**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:

S1421 - Killarney fern (*Trichomanes speciosum*)

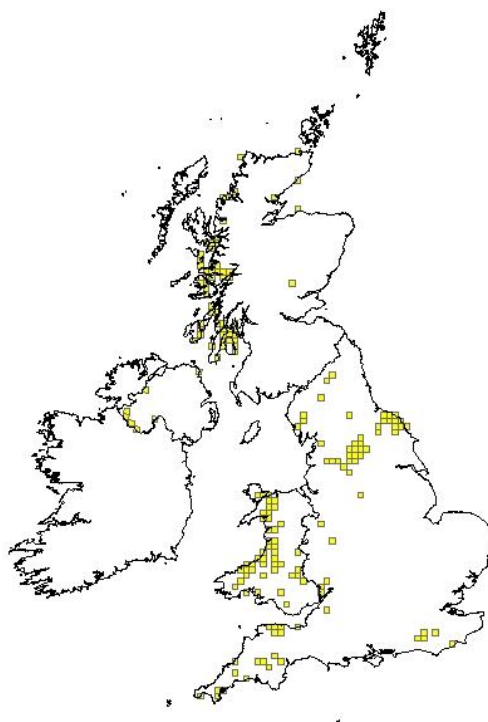
IMPORTANT NOTE – PLEASE READ

- 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>	
0.2 Species	0.2.1 Species code	S1421
	0.2.2 Species scientific name	<i>Trichomanes speciosum</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	Killarney fern

1.1 Maps			
1.1.1 Distribution map		Sensitive	True



1.1.2 Method used - map	Estimate based on partial data with some extrapolation and/or modelling BSBI (data held on the distributional database). Since the NBN does not have post-2000 records BSBI was asked for records 2000 - 2012. This overlaps with the last reporting period.		
1.1.3 Year or period	2000-2012		
1.1.4 Additional distribution map	False		

1.1.5 Range map	

2.1 Biogeographical region & marine regions	ATL
2.2 Published sources	<p>"No published sources of data were used since the previous assessment in 2007. For the previous assessment the following published data were used: PRESTON, C.D., PEARMAN, D.A. & DINES, T.D. 2002. New Atlas of the British & Irish Flora. Oxford University Press In addition the species distribution used the Vascular Plant Database, Botanical Society of the British Isles (BSBI) (via the NBN Gateway www.searchnbn.net for the date range 1987 - 1999). Since the 2007 report there have not been additional records submitted to the NBN (2000 onwards). However BSBI has received some records which are on its unpublished Distributional Database. These have been used to inform this assessment."</p> <p>No published sources of data were used since the previous assessment in 2007. For the previous assessment the following published data were used: PRESTON, C.D., PEARMAN, D.A. & DINES, T.D. 2002. New Atlas of the British & Irish Flora. Oxford University Press In addition the species distribution used the Vascular Plant Database, Botanical Society of the British Isles (BSBI) (via the NBN Gateway www.searchnbn.net for the date range 1987 - 1999). Since the 2007 report there have not been additional records submitted to the NBN (2000 onwards). However BSBI has received some records which are on its unpublished Distributional Database. These have been used to inform this assessment.</p>

2.3 Range	
2.3.1 Surface area Range	The distribution is an underestimate as historical effort has concentrated upon the sporophyte generation. The gametophyte generation has a much wider range across Scotland, but is likely to be under-recorded.
2.3.2 Method used Surface area of Range	<p>Estimate based on partial data with some extrapolation and/or modelling</p> <ol style="list-style-type: none"> 1. BSBI data via the NBN Gateway data for the period 1987 - 1999 2. BSBI Distributional Database records from 2000 - 2012
2.3.3 Short-term trend Period	
2.3.4 Short term trend Trend direction	stable
2.3.5 Short-term trend Magnitude	a) Minimum

	BSBI distributional database for the period 2000 -2012. Indeterminate trend. This species is data deficient due to a lack of records of the gametophyte generation. The sporophyte is much better-recorded. Comments from the few locations recorded by BSBI during the reporting period suggest that the species is locally frequent. It is likely that the short-term range trend is stable.	
	b) Maximum	
2.3.6 Long-term trend Period		
2.3.7 Long-term trend Trend direction	stable	
	Indeterminate.	
2.3.8 Long-term trend Magnitude	a) Minimum	
Optional	Indeterminate. This is due to a lack of recording of the gametophyte generation and a lack of empirical information on the sporophyte generation. A new 10 km square record was made in 2004. A detailed survey might locate new sites.	
	b) Maximum	
2.3.9 Favourable reference range	a) Value in km²	
	Indeterminate	
	b) Operator for FRR	
	c) FRR is unknown (indicated by "true")	False
	d) Method used to set FRR	
2.3.10 Reason for change	a) Genuine change?	False
Is the difference between the reported value in 2.3.1 and the previous reporting round mainly due to...		
	b) Improved knowledge/more accurate data?	False

	Indeterminate due to lack of data.	
	c) Use of different method (e.g. "Range tool")?	False

2.4 Population		
2.4.1 Population size estimation (using individuals or agreed exceptions where possible)	a) Unit	
	b) Minimum	Not applicable
	c) Maximum	
2.4.2 Population size estimation (using population unit other than individuals) Optional (<i>if 2.4.1 filled in</i>)	a) Unit	number of map 10x10 km grid cells
	b) Minimum	58
	Post-1987 10x10 km squares www.bsbimaps.org.uk/atlas/map_page.php?spid=2075.0	
	c) Maximum	58
2.4.3 Additional information on population estimates / conversion Optional	a) Definition of "locality"	
	b) Method to convert data	
	c) Problems encountered to provide population size estimation	
2.4.4 Year or period	2000-2012	
	Data obtained from BSBI for the period 2000-2012.	
2.4.5 Method used Population size	Estimate based on expert opinion with no or minimal sampling	
	BSBI Distributional Database, but very little information. Data deficient. Where a location is recorded the data is not empirical.	
2.4.6 Short-term trend Period		
	Indeterminate	
2.4.7 Short-term trend Trend direction	unknown	

2.4.8 Short-term trend Magnitude	a) Minimum	
	Not applicable	
	b) Maximum	
	c) Confidence interval	
2.4.9 Short-term trend Method used	Absent data Indeterminate.	
2.4.10 Long-term trend – Period	Indeterminate.	
2.4.11 Long-term trend Trend direction	unknown	
2.4.12 Long-term trend Magnitude Optional	a) Minimum	
	Indeterminate.	
	b) Maximum	
	c) Confidence interval	
2.4.13 Long term trend Method used	1	
2.4.14 Favourable reference population	a) Number of individuals/agreed exceptions/other units	
	The data apply to range rather than population.	
	b) Operator	
	c) FRP is unknown indicated by	True

	"true"	
	d) Method used to set FRP	
	<p>1. BSBI Distributional Database 2000-2012. 2. Vascular Plant Database, Botanical Society of the British Isles (BSBI) (via the NBN Gateway for the range 1987 - 1999). Due to a lack of data it is not possible to identify a trend for this species based upon empirical data. Expert opinion is that the population is likely to be stable. BSBI Distributional Database + Vascular Plant Database, Botanical Society of the British Isles (BSBI) (via the NBN Gateway www.searchnbn.net for the date range 1987 - 1999).</p>	
2.4.15 Reason for change Is the difference between the value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:	a) Genuine change?	False
	b) Improved knowledge/more accurate data?	False
	c) Use of different method (e.g. "Range tool")?	False

2.5 Habitat for the species	
2.5.1 Area estimation	<p>Not specifically associated with an Annex 1 habitat type. This species occupies a specialist niche, in Scotland being reported from holes, caves and shaded crevices on cliffs. The sporophyte is restricted in Scotland to the south-west with the centre of its distribution being the island of Arran. The gametophyte is more widespread.</p> <p>Preston et al. (2002) states: "The sporophyte occurs only in constantly damp, shaded localities, usually on acidic, but often base-flushed rocks, rarely on damp humic banks, and exceptionally as an epiphyte."</p> <p>"The gametophyte of <i>T. speciosum</i> grows deep in clefts, crevices and natural rock hollows on a range of acidic to neutral rocks. Such sites are dark (less than 1% ambient light) and are often humid, being located on sea-cliffs, river-cliffs or streamsides, or are kept damp through soil capillary action."</p> <p>It is unknown whether the amount of habitat in the UK is sufficient to support a viable population of the species. Indeterminate</p>

	<p>It is unknown whether the amount of habitat in the UK is sufficient to support a viable population of the species. This habitat is not under threat within the range of either the sporophyte or gametophyte.</p> <p>It is unknown whether the amount of habitat in the UK is sufficient to support a viable population of the species.</p>	
2.5.2 Year or period		
2.5.3 Method used Habitat for the species	Absent data	
2.5.4 Quality of the habitat	a) Habitat quality	Good
	<p>The assessment based upon expert opinion rather than upon empirical information.</p> <p>The habitat has not been systematically surveyed.</p>	
	b) Assessment method	
2.5.5 Short-term trend Period	Indeterminate.	
2.5.6 Short-term trend Trend direction	unknown BSBI Distributional Database. Indeterminate. The specialist habitat has not been surveyed across Scotland.	
2.5.7 Long-term trend Period		
2.5.8 Long-term trend Trend direction	unknown Indeterminate.	
2.5.9 Area of suitable habitat for the species	a) Value in km²	
	Indeterminate.	
	b) Absence of data indicated as '0'	
2.5.10 Reason for change Is the difference between the value reported at 2.5.1 and the previous reporting round mainly due to	a) Genuine change?	False
	b) Improved knowledge/more accurate data?	False
	c) Use of different method (e.g. "Range tool")?	False

--	--

2.6 Main pressures		
a) Pressure	b) Ranking	c) Pollution qualifier
	H = high importance M = medium importance L = low importance	
B02: Forest and Plantation management & use	L	
F04: Taking / Removal of terrestrial plants, general	L	
J02: human induced changes in hydraulic conditions	L	

Pressures are likely to be site-specific, local and in many cases not subject to a statutory consultation.

2.6.1 Method used – Pressures	based only on expert judgements
	Previous assessment published in 2007.

2.7 Threats		
a) Threat	b) Ranking	c) Pollution qualifier
	H = high importance M = medium importance L = low importance	
B02: Forest and Plantation management & use	L	
F04: Taking / Removal of terrestrial plants, general	L	
J02: human induced changes in hydraulic conditions	L	

Pressures are likely to be site-specific, local and in many cases not subject to a statutory consultation.

2.7.1 Method used – Threats	expert opinion
	Previous assessment published in 2007.

2.8 Complementary information	
2.8.1 Justification of % thresholds for trends	
2.8.2 Other relevant information	This species should be the subject of a planned national survey to identify a baseline for population and habitat condition.

	This species should be the subject of a planned national survey to identify a baseline for population and habitat condition.
2.8.3 Trans-boundary assessment	

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

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

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.

3.2.1 Measure	3.2.2 Type	3.2.3 Ranking	3.2.4 Location	3.2.5 Broad evaluation of the measure
		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
6.0: Other spatial measures	Y	Y				H			Y						Y
6.3: Legal protection of habitats and species	Y					H			Y						Y

Scottish Government website www.scotland.gov.uk
 The Wildlife and Natural Environment (Scotland) Act introduced measures in Scotland to control the spread of invasive non-native species. These measures became effective in September 2012.