

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

**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:

S1902 - Lady's-slipper orchid (*Cypripedium calceolus*)

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	S1902
	0.2.2 Species scientific name	<i>Cypripedium calceolus</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	

1.1 Maps			
1.1.1 Distribution map	True	Sensitive	False
	The distribution map is based on species records which are considered to be representative of the range within the current reporting period. For further details see the 2013 Article 17 UK Approach document.		



1.1.2 Method used - map	Complete survey/Complete survey or a statistically robust estimate
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information
1.1.3 Year or period	2007-2012
	The distribution map is based on species records which are considered to be representative of the range within the current reporting period. For further details see the 2013 Article 17 UK Approach document.

1.1.4 Additional distribution map Optional	False
1.1.5 Range map	True The range map was produced by applying the UK range mapping tool to the distribution map presented in 1.1.4. The alpha value for this species was 20km. For further details see the 2013 Article 17 UK Approach document.



2.1 Biogeographical region & marine regions	ATL
2.2 Published sources	<p>Cowan, R. S., Kahandawala, I. M. & Michael F. Fay, M. F., 2012. Parentage of a plant of <i>Cypripedium calceolus</i> at the wild site in Yorkshire. Unpublished report for Natural England.</p> <p><i>Cypripedium calceolus</i> introduction sites summary 2003-2011. Natural England report for and on behalf of the <i>Cypripedium</i> Committee.</p> <p>Fay MF, Bone R, Cook P, Kahandawala I, Greensmith J, Harris S, Pedersen HÆ, Ingrouille MJ, Lexer C. 2009. Genetic diversity in <i>Cypripedium calceolus</i> (Orchidaceae) with a focus on northwestern Europe, as revealed by plastid DNA length polymorphisms. <i>Annals of Botany</i> 104: 517-525.</p>

	<p>Kahandawala IM. 2009. Genome size evolution and conservation genetics in <i>Cypripedium</i> (Orchidaceae). PhD thesis, Birkbeck, University of London.</p> <p>Pedersen HÆ, Rasmussen HN, Kahandawala IM, Fay MF. 2012. Genetic diversity, compatibility patterns and seed quality in isolated populations of <i>Cypripedium calceolus</i> (Orchidaceae). <i>Conservation Genetics</i> 13: 89-98.</p> <p>Ramsay MM, Stewart J. 1998. Re-establishment of the lady's slipper orchid (<i>Cypripedium calceolus</i> L.) in Britain. <i>Botanical Journal of the Linnean Society</i> 126: 173-181. UK distribution map data sources</p> <p>BSBI BSBI:VPDB: Atlas2000 records on disc via Trevor Dines</p> <p>UK Distribution Map data sources</p> <p>BSBI BSBI:VPDB: Atlas2000 records on disc via Trevor Dines</p>
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2.3 Range	
2.3.1 Surface area Range	<p>100</p> <p>The surface area of the range was calculated from the map presented in 1.1.5. For further details see the 2013 Article 17 UK Approach document.</p>
2.3.2 Method used Surface area of Range	<p>Complete survey/ Complete survey or a statistically robust estimate</p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information</p>
2.3.3 Short-term trend Period	<p>2001-2012</p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information</p>
2.3.4 Short term trend Trend direction	<p>stable</p> <p>The short term trend direction was derived by comparing the range map in 1.1.5 with the range map produced in the 2007 report, by considering the range trend in the 2007 report, and by considering any further information provided by the UK country conservation agencies. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>
2.3.5 Short-term trend Magnitude Optional	<p>a) Minimum</p>

	b) Maximum	
2.3.6 Long-term trend Period Optional	1989-2012	
2.3.7 Long-term trend Trend direction Optional	stable	
2.3.8 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
2.3.9 Favourable reference range	a) Value in km²	3500
	The FRV for range is the same as reported in 2007. For further details please see the 2013 Article 17 UK Approach document.	
	b) Operator for FRR	
	c) FRR is unknown (indicated by "true")	False
	d) Method used to set FRR	The favourable reference value is the same as used in the 2007 Article 17 report. The value is considered to be large enough to support a viable population and no lower than the range estimate from when the Habitats Directive came into force in the UK. For further details please see the 2013 Article 17 UK Approach document.
	The favourable reference value is the same as used in the 2007 Article 17 report. The value is considered to be large enough to support a viable population and no lower than the range estimate from when the Habitats Directive came into force in the UK. For further details please see the 2013 Article 17 UK Approach document.	
2.3.10 Reason for change Is the difference between the reported value in 2.3.1 and the previous reporting round	a) Genuine change?	False
	There is no difference between the current range and the range reported in 2007.	

mainly due to...	b) Improved knowledge/more accurate data?	False
	There is no difference between the current range and the range reported in 2007.	
	c) Use of different method (e.g. "Range tool")?	False
	There is no difference between the current range and the range reported in 2007.	

2.4 Population		
2.4.1 Population size estimation (using individuals or agreed exceptions where possible)	a) Unit	number of individuals
	The population unit is the same as reported in 2007.	
	b) Minimum	2
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	c) Maximum	2
For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information		
2.4.2 Population size estimation (using population unit other than individuals) Optional (<i>if 2.4.1 filled in</i>)	a) Unit	
	b) Minimum	
	c) Maximum	
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	2007-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.5 Method used Population size	Complete survey/Complete survey or a statistically robust estimate	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	

2.4.6 Short-term trend Period	2001-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.7 Short-term trend Trend direction	increase	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.8 Short-term trend Magnitude Optional	a) Minimum	100
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	b) Maximum	100
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	c) Confidence interval	
2.4.9 Short-term trend Method used	Complete survey/Complete survey or a statistically robust estimate	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.10 Long-term trend – Period Optional	1989-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.11 Long-term trend Trend direction Optional	increase	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.12 Long-term trend Magnitude Optional	a) Minimum	100
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	b) Maximum	100
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	c) Confidence interval	
2.4.13 Long term trend Method used	Complete survey/Complete survey or a statistically robust estimate	

Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.14 Favourable reference population	a) Number of individuals/agreed exceptions/other units	2000
	The FRV for population is the same as reported in 2007. For further details please see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	b) Operator	
	c) FRP is unknown (indicated by "true")	False
	d) Method used to set FRP	The favourable reference value is the same as used in the 2007 Article 17 report. The value is considered to be large enough for the population to be viable and no lower than the population estimate from when the Habitats Directive came into force in the UK. For further details please see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
	The favourable reference value is the same as used in the 2007 Article 17 report. The value is considered to be large enough for the population to be viable and no lower than the population estimate from when the Habitats Directive came into force in the UK. For further details please see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
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?	True
	The increase in population is thought to be the result of genuine change.	
	b) Improved knowledge/more accurate data?	False
	The increase in population is thought to be the result of genuine change.	
	c) Use of different method (e.g. "Range tool")?	False
	The increase in population is thought to be the result of genuine change.	

2.5 Habitat for the species

2.5.1 Area estimation	The specific area of habitat occupied by this species in the UK is unknown.	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	It is unknown whether the amount of habitat in the UK is sufficient to support a viable population of the species.	
2.5.2 Year or period	N/A	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.3 Method used Habitat for the species	Absent data	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.4 Quality of the habitat	a) Habitat quality	Unknown
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	b) Assessment method	Although habitat requirements are understood at a coarse scale, the fungal associations or how fungal distribution might impact the species are not fully understood.
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.5 Short-term trend Period	2001-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.6 Short-term trend Trend direction	unknown	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.7 Long-term trend Period	Optional	
2.5.8 Long-term trend Trend direction	Optional	
2.5.9 Area of suitable habitat for the species	a) Value in km²	
	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
	Surface area of habitat is unknown so no comparison is possible.	
	b) Improved knowledge/more accurate data?	False

	Surface area of habitat is unknown so no comparison is possible.	
	c) Use of different method (e.g. "Range tool")?	False
	Surface area of habitat is unknown so no comparison is possible.	

2.6 Main pressures		
a) Pressure	b) Ranking	c) Pollution qualifier
	H = high importance (max 5 entries) M = medium importance L = low importance	
F04:	H	
A04:	M	
G02:	M	
K04:	M	

For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.

2.6.1 Method used – Pressures	mainly based on expert judgement and other data For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
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2.7 Threats		
a) Threat	b) Ranking	c) Pollution qualifier
	H = high importance (max 5 entries) M = medium importance L = low importance	
F04:	H	
G02:	M	
K04:	M	
A04:	L	

For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.

2.7.1 Method used – Threats	expert opinion For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
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2.8 Complementary information	
2.8.1 Justification of % thresholds for trends	
2.8.2 Other relevant information	The stable trend and very recent increase in population has only been possible due to very intensive conservation management and wardening. Without this direct human influence the plant is very likely to have become extinct.
2.8.3 Trans-boundary assessment	

2.9 Conclusions (<i>assessment of conservation status at end of reporting period</i>)		
2.9.1 Range	a) Conclusion	Bad
	Range has been assessed as Bad because the range more than 10% below the FRV.	
	b) Qualifier	stable
	Re-introduction programme in place but plants are not yet fully established so the current range trend has been assessed as stable.	
2.9.2 Population	a) Conclusion	Bad
	Population has been assessed as Bad because the population estimate is more than 25% below the FRV.	
	b) Qualifier	improving
	There has been a recent increase in population.	
2.9.3 Habitat for the species	a) Conclusion	Unknown
	Habitat for species has been assessed as unknown because it is unknown whether there is sufficient habitat available to support a viable population, and the habitat quality and trend are unknown.	
	b) Qualifier	
2.9.4 Future prospects	a) Conclusion	Bad
	Future prospects is assessed as Bad on the basis of assessments of the future prospects of the three parameters, range, population and habitat for species: Range future prospects: Bad Population future prospects: Bad Habitat future prospects: Unknown Overall future prospects: Bad.	
	b) Qualifier	improving

	Future trends have been assessed as increasing because of the re-introduction programme in place and extensive conservation effort.
2.9.5 Overall assessment of Conservation Status	Bad
	The overall conclusion has been assessed as Bad because range, population and future prospects have been assessed as bad.
2.9.6 Overall trend in Conservation Status	improving
	On balance, the overall trend is increasing.

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 number of individuals
	b) Minimum 2
	c) Maximum 2
3.1.2 Method used	Complete survey/Complete survey or a statistically robust estimate
3.1.3 Trend of population size within the network (short-term trend) Optional	increase

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 H = high importance	3.2.4 Location where the measure is PRIMARILY applied	3.2.5 Broad evaluation of the measure

	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
2.1: Maintaining grasslands and other open habitats	Y	Y				M			Y			Y			
3.1: Restoring/improving forest habitats	Y	Y	Y			M			Y			Y			
6.1: Establish protected areas/sites	Y					H	Y				Y				
6.3: Legal protection of habitats and species	Y					H			Y		Y				
7.4: Specific single species or species group management measures			Y		Y	H			Y		Y				
8.0: Other measures			Y			H			Y		Y				

For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.