

**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:

S1654 - Early gentian (*Gentianella anglica*)

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 **Natural Resources Wales** and refers only to the state of the habitat/species in **Wales** - 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.

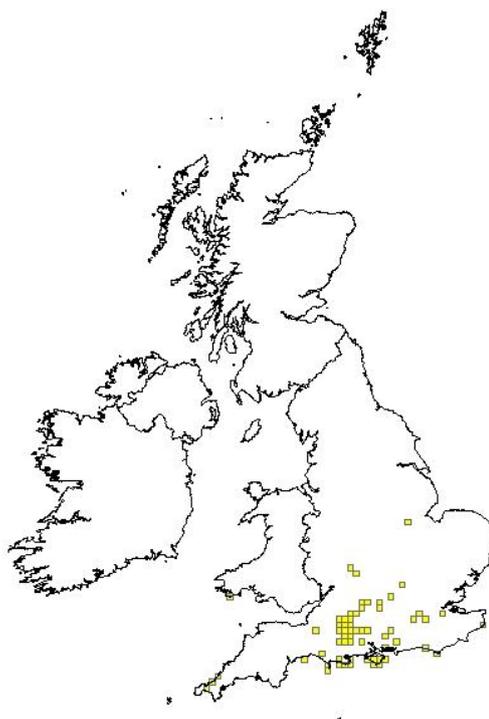
As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol Cymru

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	S1654
	0.2.2 Species scientific name	<i>Gentianella anglica</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	Early gentian

1.1 Maps

1.1.1 Distribution map		Sensitive	False
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1.1.2 Method used - map	<p>Complete survey/Complete survey or a statistically robust estimate</p> <p>The species, as currently determined, shows no range change in Wales. There are recent record for <i>Gentianella anglica</i> sensu lato from just one 10 km sq and this population (at Stackpole National Nature Reserve) is still extant. The leading taxonomic specialist in this field has found other candidate material to be indeterminable (Rees & Rich, 2012) and, more generally, there is disagreement between published Floras over the validity of this taxon (Stace, 2010; Sell & Murrell, 2009), although with the more conservative position (accepting "<i>G. anglica</i>") strongly considering a lower taxonomic rank.</p>
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1.1.3 Year or period	2007-2012
1.1.4 Additional distribution map	False
1.1.5 Range map	

2.1 Biogeographical region & marine regions	ATL
2.2 Published sources	<p>"Rees, I. & Rich, T.C.G. (2012) Spring flowering by <i>Gentianella amarella</i> s.l. in Anglesey (v.c.52) pp.43-4. BSBI News (121)</p> <p>Sell, P.D. & Murrell J.G. (2009) Flora of Great Britain and Ireland, Volume 3: Mimosaceae - Lentibulariaceae. CUP Cambridge.</p> <p>Stace, C.A. (2010) New Flora of the British Isles. `3rd ed. CUP Cambridge.</p> <p>Wilkinson, K. (2009) Limestone Coast of South West Wales SAC Monitoring. <i>Gentianella anglica</i> (1654) Monitoring Round 2 (2007-2012). Countryside Council for Wales internal report.</p> <p>Wilson, P. J. (1999) The distribution and status of <i>Gentianella anglica</i> (Pugsley) E. Warb. English Nature Species Recovery Programme/ Plantlife (Back from the Brink Project) Report No. 119"</p>

2.3 Range	
2.3.1 Surface area Range	
2.3.2 Method used Surface area of Range	Complete survey/ Complete survey or a statistically robust estimate
	See note 1.1.2
2.3.3 Short-term trend Period	
2.3.4 Short term trend Trend direction	The species, as currently determined, shows no range change in Wales. There are recent record for <i>Gentianella anglica</i> sensu lato from just one 10 km sq and this population (at Stackpole National Nature Reserve) is still extant. The leading taxonomic specialist in this field has found other candidate material to be indeterminable (Rees & Rich, 2012) and, more generally, there is disagreement between published Floras over the validity of this taxon (Stace, 2010; Sell & Murrell, 2009), although

	with the more conservative position (accepting "G. anglica") strongly considering a lower taxonomic rank.	
2.3.5 Short-term trend Magnitude	a) Minimum	
	The minimum 10km range trend is no decline	
	b) Maximum	
	There is no increase in the 10km sq distribution for this species, although occasional records have been reported from elsewhere in Wales. None of these records have been accepted by expert taxonomists and the most positive opinion is that the material is in some cases indeterminable (Rees & Rich, 2012). The taxonomic status of 'Gentianella anglica' (including material at the Pembrokeshire locality) is itself under question and the two major published Floras differ in their taxonomic treatment. Stace (2010) splits 'Gentianella anglica' from the generally unambiguous G. amarella but notes in the key that "hybrids and ... diminutive annuals ... can make determination difficult" and G. anglica (amongst others) "might be better as sspp [where] ... "the divergence ... might merely represent adoption of different life-cycle strategies in different habitats". Sell and Murrell (200) simply reduces "G. anglica" to a variety: G. amarella var praecox. Best practice requires a conservative definition of the range.	
2.3.6 Long-term trend Period	See previous notes 2.3.4 & 2.3.4a & b. <i>Gentianella anglica sensu lato</i> has been historically recorded from one 10km sq in Wales and continues to occupy the same range. There have been no accepted additions to this range since the first records here (and, indeed, this determination has been more recently subject to taxonomic query).	
2.3.7 Long-term trend Trend direction	The direction of trend in this narrow range remains stable (assuming the taxonomic determination of this population is correct).	
2.3.8 Long-term trend Magnitude Optional	a) Minimum	
	See previous notes. The minimum trend would be stable (no change).	
	b) Maximum	
	See previous notes.	
2.3.9 Favourable reference range	a) Value in km²	
	b) Operator for FRR	
	c) FRR is unknown (indicated by "true")	False

	d) Method used to set FRR	
2.3.10 Reason for change Is the difference between the reported value in 2.3.1 and the previous reporting round mainly due to...	a) Genuine change?	False
	There genuinely is no change (even if the " <i>Gentianella anglica</i> " does not genuinely exist).	
	b) Improved knowledge/more accurate data?	False
	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	
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 localities
	b) Minimum	1
	c) Maximum	1
2.4.3 Additional information on population estimates / conversion Optional	a) Definition of "locality"	A locality for <i>G. anglica</i> is an area of suitable habitat (in this case perched dunes) under
	A "single management unit" here is an enclosure or routinely connected set of fields grazed by the same stock.	
	b) Method to convert data	
	c) Problems encountered to provide population	

	size estimation	
2.4.4 Year or period	2007-2012	
2.4.5 Method used Population size	Estimate based on partial data with some extrapolation and/or modelling	
	These data on population size are necessarily "estimates based on partial data" because taxonomic identification of material in the field is imprecise and many individuals cannot be assigned to ' <i>Gentianella anglica</i> ' (or other supposedly related taxa) with any degree of confidence.	
2.4.6 Short-term trend Period	2001-2012	
2.4.7 Short-term trend Trend direction	unknown	
	The trend is "unknown" because verifiable counts of ' <i>G. anglica</i> ' are difficult if not impossible, for the reasons outlined in previous notes. Counts of candidate ' <i>G. anglica</i> ' can vary throughout the growth season as material approximating to this taxon either grows into or is replaced by other variants. There also appears to be significant differences between observers, due to differences in sampling and measurement technique and / or the overlapping range of taxonomic characters.	
2.4.8 Short-term trend Magnitude	a) Minimum	
	b) Maximum	
	c) Confidence interval	
2.4.9 Short-term trend Method used	Estimate based on partial data with some extrapolation and/or modelling	
	As with 2.4.5, the data on short term population trends has the same uncertainties as with methods for calculating population size. These are necessarily estimates based on partial data, due to uncertainties in the identification of ' <i>G. anglica</i> ' at this locality.	
2.4.10 Long-term trend – Period	1989-2012	
2.4.11 Long-term trend Trend direction	unknown	
	As with 2.4.7, the long term trend direction is "unknown" because the underlying presence-absence data for <i>Gentianella anglica</i> are so uncertain - or unquantifiable in practice.	

2.4.12 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
	c) Confidence interval	
2.4.13 Long term trend Method used	2	
	Again (as in 2.4.7 & 2.4.11), long term trends in this population are compromised by our lack of confidence in the taxonomic status of 'G. anglica' in Wales. Individuals and even colonies or populations approximating to this taxon could be identified here but often (and perhaps even always) in association with unknown amounts of other questionable material, seeming to alter in abundance over the field season (and perhaps through difficulties of interpretation).	
2.4.14 Favourable reference population	a) Number of individuals/agreed exceptions/other units	
	b) Operator	
	c) FRP is unknown indicated by "true"	False
	d) Method used to set FRP	
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
	It is impossible to say whether observed changes are "genuine" (in terms of absolute abundance and / or the result of habitat conditions) differences in measurement, due to inherent uncertainties in the taxonomic description and / or seasonal alterations in the growth form of plants.	
	b) Improved knowledge/more accurate data?	True

	Despite these uncertainties there is still an improving knowledge base and more accurate data (although the difficulty remains that it is insufficient for any definitive trend assessment).	
	c) Use of different method (e.g. "Range tool")?	False

2.5 Habitat for the species		
2.5.1 Area estimation	0.8	
	This is the approximate area of the management unit (or grazing area) referred to in the locality definition 2.4.3a 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	2007-2012	
	Standard period was selected	
2.5.3 Method used Habitat for the species	Complete survey/Complete survey or a statistically robust estimate	
	We believe that it is possible to define habitat condition with certainty even where the taxon is not unambiguously defined. A small annual species like <i>Gentianella anglica</i> (sensu lato) is thought to require measurable extents of open ground and particular associates (and the absence of certain other associated species) even when we are not sure about the exact extents of its taxonomic boundaries. Hence it is possible to make the first measurement in the absence of the latter.	
2.5.4 Quality of the habitat	a) Habitat quality	Moderate
	The measurement given here is "moderate", to reflect the perceived range of habitat quality, varying from "good" or "acceptable" in several sample sites to "poor" elsewhere (as measured by standard parameters, such as scrub presence and frequency of dominants) and the accompanying low frequency of ' <i>Gentianella anglica</i> ' (as found by observers using standard definitions). The 2009 monitoring report includes two items of habitat management as possible factors in the perceived low numbers for ' <i>G. anglica</i> ', without necessarily identifying them as the cause.	
	b) Assessment method	Habitat quality was assessed on the presence and absence of <i>Gentianella anglica</i> (sensu lato), dominant species cover / bare ground and presence / absence of defined indicator species.
2.5.5 Short-term trend Period	2001-2012	
	Standard period was selected	
2.5.6 Short-term trend Trend direction	decrease	
	The latest survey (Wilkinson, 2009) recorded the likely spread of bracken / scrub and coarse dominants in certain areas of the site, given	

	here as evidence of a recent decline in habitat.	
2.5.7 Long-term trend Period	1989-2012	
	Standard period was selected	
2.5.8 Long-term trend Trend direction	decrease	
	Surveyors record a low number of "successionally young" habitat indicators, reflecting a long term trend away from suitable habitat; hence the reported decrease in suitable habitat.	
2.5.9 Area of suitable habitat for the species	a) Value in km²	0.8
	The area of suitable habitat is defined by grazing unit rather than precise area of occupancy, the reason being that extensive grazing is required to produce the exact habitat conditions required for this species (and related taxa).	
	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?	True
	Recent surveys and surveillance have provided improved knowledge and more accurate data on the habitat.	
	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	
A04: grazing	H	
K02: Biocenotic evolution, succession	M	
H04: Air pollution, air-borne pollutants	L	N

Air-borne pollution (H04) is registered as a moderately significant pressure on the basis of reported increase in diffuse atmospheric nitrogen loads. Grazing pressures (A04) and habitat succession (K02) are both recognised as habitat pressures affecting the abundance and distribution of this species.

2.6.1 Method used – Pressures	mainly based on expert judgement and other data
	The published studies on <i>G. anglica</i> (eg Wilson, 1999) emphasise its

	ecological requirement for low-nutrient, closely grazed and bare ground (or disturbed, early successional habitats). Atmospheric nitrogen loads have been reported as c.25 kg / ha / yr and these would therefore constitute a pressure on <i>G. anglica</i> habitat.
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2.7 Threats		
a) Threat	b) Ranking	c) Pollution qualifier
	H = high importance M = medium importance L = low importance	
K02: Biocenotic evolution, succession	M	
A08: Fertilisation	L	

See note 2.6 above

2.7.1 Method used – Threats	expert opinion
	See note 2.6.1 above

2.8 Complementary information	
2.8.1 Justification of % thresholds for trends	
2.8.2 Other relevant information	
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	a) Unit	number of localities

Estimation of population size included in the SAC network	With reference to previous notes that qualify records of <i>Gentianella anglica</i> (sensu lato), this records the presence of one 10km sq and one grazing unit locality in Wales.	
	b) Minimum	1
	See note 3.1.1a above.	
	c) Maximum	1
3.1.2 Method used	Estimate based on partial data with some extrapolation and/or modelling	
	Despite the recorded presence of <i>G. anglica</i> in Wales (3.1.1a) this assessment is still based on partial data, due to methodological (largely taxonomic) uncertainties.	
3.1.3 Trend of population size within the network (short-term trend)	unknown	
	For the reasons given under 3.1.2, population trends in ' <i>G. anglica</i> ' have to be "unknown" here.	

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 M = medium importance L = low 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		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		H	Y					Y			
8.0: Other measures		Y				H	Y							Y	

There has been continued taxonomic work (reported here as "Other") to try and resolve questions over the status of *Gentianella anglica* (sensu lato) in Wales but, unfortunately, without any clear resolution.

Continued management of the grazing unit at Stackpole NNR is the main factor in maintaining and restoring habitat for this species.