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:

S1016 - Desmoulin's whorl snail (*Vertigo moulinsiana*)

IMPORTANT NOTE – PLEASE READ

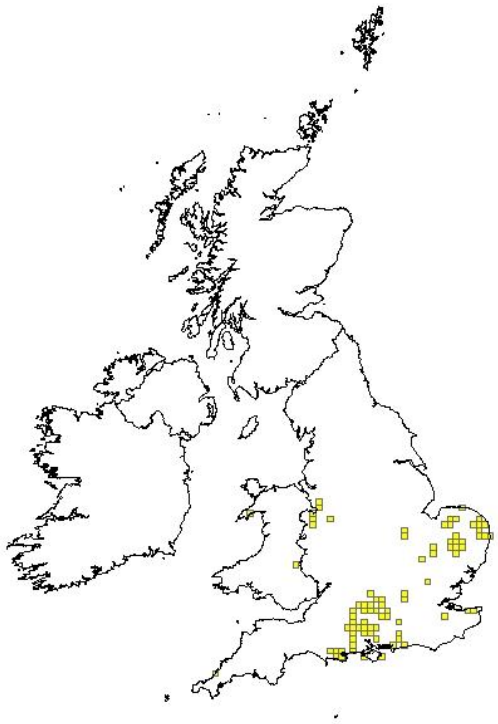
- The country-level reporting information contained in this document is a contribution to the Article 17 UK report for the habitat/species concerned.
- It has been provided by **Natural Resources Wales** and refers only to the state of the habitat/species in **Wales** - it does not constitute an assessment 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

Field name	*Brief explanations*	
0.2 Species	**0.2.1 Species code**	**S1016**
	0.2.2 Species scientific name	***Vertigo moulinsiana***
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	**DesMoulin's Whorl Snail**

1.1 Maps			
1.1.1 Distribution map		**Sensitive**	**False**



1.1.2 Method used - map	**Estimate based on expert opinion with no or minimal sampling**
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	**"Boyce, D.C. 2008. Monitoring invertebrate features on Sites of Special Scientific Interest: the wetland invertebrate assemblage on Rhos Goch National Nature Reserve, Radnorshire. CCW Regional Report. CCW/SEW/07/2. Countryside Council for Wales.** **Killeen, I.J. 2000. Status and distribution of Des Moulin's whorl snail Vertigo moulinsiana on Cors Geirch SSSI. CCW Contract Science. 373. Countryside Council for Wales.** **Killeen, I.J. 2004. Condition monitoring of Vertigo moulinsiana in Cors Geirch, Corsydd Lleyn/Lleyn Fens candidate Special Area of Conservation, Wales. CCW Contract Science. 624. Countryside Council for Wales.** **Lloyd, D. 2008. The condition of Vertigo moulinsiana on Corsydd Llyn / Lleyn Fens SAC. File Note:CCW File note, 10 October 2008."**

2.3 Range		
2.3.1 Surface area Range		
2.3.2 Method used Surface area of Range	**Estimate based on expert opinion with no or minimal sampling**	
	JNCC have calculated Range from UK data using alpha-hull. This has not been separately calculated for Wales and hence the entry here does not indicate that Range analysis has taken place for Wales. It is merely a marker for JNCC to indicate the quality of the raw distribution data that was supplied to them in order to undertake the UK analysis. See note 1.1.1	
2.3.3 Short-term trend Period		
2.3.4 Short term trend Trend direction		
	Impossible to comment on range within Wales, given the recent discovery of the species and the distance between the two main locations	
2.3.5 Short-term trend Magnitude	**a) Minimum**	
	See note 2.3.4	
	b) Maximum	
2.3.6 Long-term trend Period		
	First discovered in Wales in 1998 so it is not possible to comment on long-term range trends	

2.3.7 Long-term trend Trend direction		
	See note 2.3.6	
2.3.8 Long-term trend Magnitude Optional	**a) Minimum**	
	b) Maximum	
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**
	See note 2.3.6	
	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	

	c) Maximum	
2.4.2 Population size estimation (using population unit other than individuals) Optional *(if 2.4.1 filled in)*	**a) Unit**	**number of map 1x1 km grid cells**
	moulinsiana is known from three sites in Wales - Cors Geirch NNR (straddling two 1km squares), Rhosgoch NNR and the Afon Penrhos Floodplain	
	b) Minimum	**4**
	c) Maximum	**4**
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	**2001-2012**	
	See note 1.1.3	
2.4.5 Method used Population size	**Complete survey/Complete survey or a statistically robust estimate**	
	There is limited monitoring of the population.	
2.4.6 Short-term trend Period	**2001-2012**	
2.4.7 Short-term trend Trend direction	**stable**	
	The Rhosgoch population was only discovered in 2007 (Boyce 2008), Willing (pers. comm.) surveyed the Afon Penrhos Floodplain in 2008 and reported a strong population present, Lloyd (2008) repeated monitoring of the Cors Geirch population in 2008 and found the species in both 1km squares. It is therefore reasonable to conclude that the short-term population trend is stable	
2.4.8 Short-term trend Magnitude	**a) Minimum**	
	See note 2.4.7	
	b) Maximum	
	c) Confidence	

	interval	
2.4.9 Short-term trend Method used	**Complete survey/Complete survey or a statistically robust estimate**	
	See note 2.4.7	
2.4.10 Long-term trend – Period		
	The recent discovery of this species in Wales (1998) makes it impossible to comment on long-term population trends	
2.4.11 Long-term trend Trend direction	**unknown**	
2.4.12 Long-term trend Magnitude Optional	**a) Minimum**	
	b) Maximum	
	c) Confidence interval	
2.4.13 Long term trend Method used	**0**	
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	**a) Genuine change?**	**False**

value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:	See note 2.4.10	
	b) Improved knowledge/more accurate data?	**True**
	c) Use of different method (e.g. "Range tool")?	**False**

2.5 Habitat for the species		
2.5.1 Area estimation	**1**	
	The area of habitat occupied by this species has not been accurately mapped. At each of three sites it occupies relatively small patches of habitat that in total will probably add up to less than 1 sq km There is thought to be a sufficient amount of habitat in the UK to support a viable population of the species.	
2.5.2 Year or period	**2002-2008**	
	See note 2.5.4b	
2.5.3 Method used Habitat for the species	**Estimate based on expert opinion with no or minimal sampling**	
2.5.4 Quality of the habitat	**a) Habitat quality**	**Unknown**
	Lloyd (2008) repeated monitoring on Cors Geirch in 2008 and found that 93% of samples had suitable vegetation structure and composition and 100% of samples had suitable soil mositure conditions. No monitoring of the other two populations has taken place	
	b) Assessment method	**no specific assessment of habitat quality has been attempted, although CSM (Killeen 2004, Lloyd 2008) includes limited habitat attributes for the sole SAC population**
2.5.5 Short-term trend Period	**2001-2012**	
2.5.6 Short-term trend Trend direction	**stable**	
	It is only possible to report on habitat quality trends for the SAC population on Cors Geirch, where repeat monitoring (Killeen 2004, Lloyd 2008) indicates that the habitat continues to be in a favourable condition	
2.5.7 Long-term trend Period	**1989-2012**	
2.5.8 Long-term trend Trend direction	**unknown**	
	See 2.5.4b	

2.5.9 Area of suitable habitat for the species	**a) Value in km²**	**1**
	moulinsiana occupies a wide range of fen conditions so potentially suitable habitat could occur anywhere on wetlands throughout Wales. Many such sites have had casual surveys of one form or another without moulinsiana being recorded so it is likely to be highly localised in its distribution, but estimating 'suitable habitat' is a meaningless exercise. All that can be said is that it occupies most of the available habitat on the three sites on which it has been recorded	
	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**
	See 2.5.4b	
	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	
X: No threats or pressures	L	

Killeen (2000) assessed the status of moulinsiana on Cors Geirch and concluded that the habitat was in good condition with no evident pressures at the time of survey. This was confirmed by repeat monitoring (Lloyd 2008) who also found the habitat to be in good condition and concluded that "there are no problems currently to be addressed ". The small area of occupied transition mire on Rhosgoch NNR has not been specifically assessed with moulinisiana in mind, though scrub encroachment needs to be controlled (Boyce 2008). The Afon Penrhos Floodplain was visited by MJ Willing in 2008 (per. comm.) and he noted that moulinsiana was abundant over quite large areas of fen, but he did not draw attention to any specific pressures
2.6.1 Method used – Pressures **mainly based on expert judgement and other data**

2.7 Threats		
a) Threat	**b) Ranking**	**c) Pollution qualifier**

	H = high importance M = medium importance L = low importance	
A02: modification of cultivation practices	L	
A04: grazing	L	
J02: human induced changes in hydraulic conditions	L	

Two of the populations are on NNRs, one of which has moulinsiana in a boundary ditch system that could be threatened by run-off from adjacent agricultural land. This (SAC) population could also be damaged by grazing of the Cladium fen in which it occurs, though that should be avoided by appropriate management. The third population is in floodplain fen that is not protected by any conservation deisgnation. In theory this population could be thretaened by agricultural intensification, although there is no indication that this is likely	
2.7.1 Method used – Threats	**expert opinion**
	Neither population on the NNRs is considered to be directly under threat and as long as scrub encroachment is held in check and water levels maintained the habitats should remain in good condition. The population on Afon Penrhos Floodplain has no formal protection and in theory could be damaged by draining and improving the area of sedge fen it occupies. There is no indication that this is a possibility so the threats are seen as remote at present, but long-term notification of this area as SSSI would be desirable

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 Estimation of population size included in the SAC network	**a) Unit**	**number of map 1x1 km grid cells**
	b) Minimum	**2**
	c) Maximum	**2**
3.1.2 Method used	**Estimate based on partial data with some extrapolation and/or modelling**	
	Killeen (2004) and Lloyd (2008) have monitored the sole SAC population on Cors Geirch NNR, which occupies two 1km squares. They have reported the population as being in Favourable Condition	
3.1.3 Trend of population size within the network (short-term trend)	**stable**	

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		M			Y	Y					

4.2: Restoring/improving the hydrological regime				Y		M			Y	Y					

Maintaining water flow in the peripheral ditch system
Ongoing conservation management on both NNRs requires maintenance of the hydrological regime and control of scrub encroachment by appropriate levels of grazing and selective cutting.