

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

**Second Report by the United Kingdom under  
Article 17**

**on the implementation of the Directive  
from January 2001 to December 2006**

**Conservation status assessment for :**

**S1015: *Vertigo genesii* - Round-mouthed whorl  
snail**

Please note that this is a section of the report. For the complete report visit <http://www.jncc.gov.uk/article17>

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# S1015 *Vertigo genesii* Round-mouthed whorl snail

*Audit trail compiled and edited by JNCC and the Invertebrate Inter-Agency Working Group*

This document is an audit of the data and judgements on conservation status in the UK's report on the implementation of the Habitats Directive (January 2001 to December 2006) for this species. Superscript numbers accompanying the headings below, cross-reference to headings in the corresponding Annex B reporting form. This supporting information should be read in conjunction with the UK approach for species (see 'Assessing Conservation Status: UK Approach').

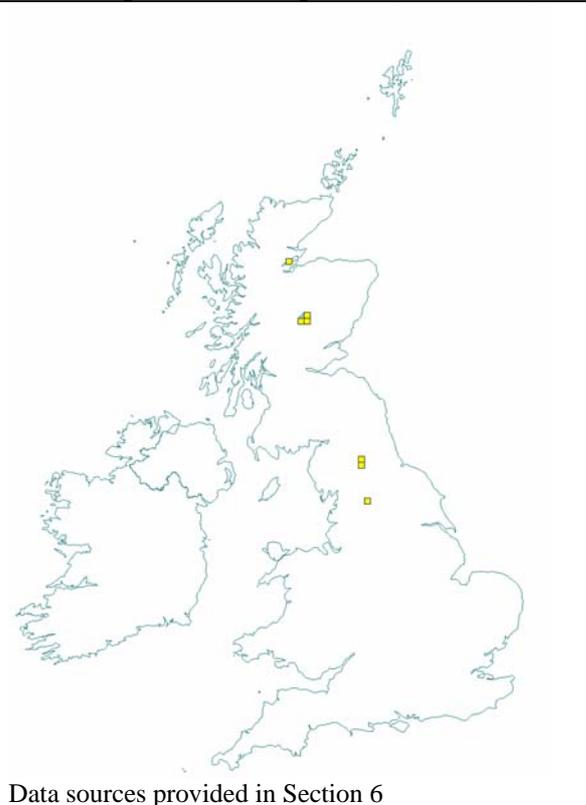
## 1. Range Information<sup>2,3</sup>

### 1.1 Surface area of range<sup>2,3,1</sup>

**720 km<sup>2</sup>**

The above estimate was calculated using records collected from 1990 onwards, within Alpha Hull software. Extent of occurrence was used as a proxy measure for range (see Map 1.1 below), at 10km<sup>2</sup> resolution. The value of alpha was set at 20km to reflect the mobility of this species.

**Map 1.1** Current extent of occurrence  
and occupied 10-km squares (1990-2005)



### 1.2 Date of range determination<sup>2,3,2</sup>

**1990 – 2005**

Records from the Mollusc (non-marine) data for Great Britain and Ireland and the Invertebrate Site Register for England (both provided via the NBN Gateway), Norris 2007,

and additional records provided by the Countryside Council for Wales (A. Fowels, *Pers. comm.*) dated 1990 onwards, were used to calculate the 'current' extent of occurrence; the most recent records available through these sources were from 2005.

Records from this time period provide the best representation of current range as it is understood by experts.

### **1.3 Quality of range data<sup>2.3.3</sup>**

#### **Moderate**

All known UK populations have been surveyed in the past decade, some on several occasions. However, a survey of potential sites across the UK has not been undertaken. Data is therefore reported as moderate, rather than good.

### **1.4 Range trend<sup>2.3.4</sup> and range trend magnitude<sup>2.3.5</sup>**

#### **Stable**

With the exception of sub-fossil evidence, this species was not recorded in the UK until 1979. It is not known to have disappeared from any sites in the UK in the last 25 years. Hence, since the Habitat Directive came into force in 1994, trend in range has been stable.

### **1.5 Range trend period<sup>2.3.6</sup>**

**1994 – 2006**

### **1.6 Reasons for reported trend in range<sup>2.3.7</sup>**

**Not applicable**

### **1.7 Favourable reference range<sup>2.7.1</sup>**

**720 km<sup>2</sup> (Equal to current)**

Based on the decision tree in Note 1 (see 'Assessing Conservation Status: UK Approach') and a professional understanding of the species, the current range has been identified as sufficiently large to support the species in the long term. Current extent is therefore a suitable baseline for the favourable reference value.

### **1.8 Range conclusion<sup>2.8</sup>**

#### **Favourable**

Current range is stable, and equivalent to the favourable reference range. The conclusion for this parameter (in accordance with Annex C) is therefore Favourable.

## **2. Population of the Species<sup>2.4</sup>**

### **2.1 Population estimate<sup>2.4.1</sup>**

**23 occupied 1-km squares**

*V. genesii* is currently known in 23 1-km squares (see Table 2.1)

### **2.2 Date of population estimate<sup>2.4.2</sup>**

**2005**

**Table 2.1** UK population

Country	Date Assessed	Occupied 1-km squares	Accuracy	Data Source
England	2005	12	Sample or full survey	-
Scotland	2005	11	Sample or full survey	-
Wales	Not relevant for this country			
Northern Ireland	Not relevant for this country			
UK Total	2005	23	Best guess	Data collated by the UK BAP Terrestrial Mollusc Steering Group

SOURCE: 2005 UK Biodiversity Action Plan reporting & Norris 2007

### **2.3 Method of population estimate<sup>2.4.3</sup>**

#### **2 = extrapolation from surveys of part of the population, sampling**

All known populations have been surveyed over the past decade. The current estimate is based upon the findings of these surveys.

### **2.4 Quality of population data<sup>2.4.4</sup>**

**Moderate**

### **2.5 Population trend<sup>2.4.5</sup> and population trend magnitude<sup>2.4.6</sup>**

**Stable**

Population monitoring has not been undertaken for this species and trials have generated ambiguous results. In general, only presence/absence data has been collated, but this, and additional information on the status of occupied habitat, suggests that populations are generally stable at present.

### **2.6 Population trend period<sup>2.4.7</sup>**

**2002 – 2005**

Population trend data has been extracted from the last Biodiversity Action reporting round (2002-2005).

### **2.7 Reasons for reported trend in population<sup>2.4.8</sup>**

**Not applicable**

### **2.8 Justification of % thresholds for trends<sup>2.4.9</sup>**

**Not applicable**

### **2.9 Main pressures<sup>2.4.10</sup>**

The habitat for this species is fragile, and sensitive to: modification of site hydrology, heavy grazing, lack of grazing, supplementary feeding of livestock, scrub encroachment, eutrophication, herbicides, pesticides and trampling. Therefore, historically, pressures are likely to have included:

**140 Grazing**

**622 Walking, horseriding and non-motorised vehicles**

**810 Drainage**

**920 Drying out**

## **950 Biocenotic evolution**

## **952 Eutrophication**

### **2.10 Threats<sup>2.4.11</sup>**

#### **None**

There are no major threats to this species at present. However, as with all *Vertigo species*, it is highly dependent on maintenance of existing local hydrological conditions.

### **2.11 Favourable reference population<sup>2.7.2</sup>**

#### **Unknown**

The decision tree in Note 1 has been used as a guide in determining the favourable reference population estimate (see 'Assessing Conservation Status: UK Approach'). However, for this species, not enough is known about current population and trends, to confidently judge whether populations are sufficiently large to ensure long-term viability. The favourable reference value is therefore unknown.

### **2.12 Population conclusion<sup>2.8</sup>**

#### **Unknown**

There is insufficient information to assess population at this time.

## **3. Habitat for the Species in the Biogeographic Region or Sea<sup>2.5</sup>**

The species occurs in soligenous fens and mires, wet flushes and constantly humid meadows that are calcareous and have a high pH. It lives at the base of short sedges, particularly *Carex viridula* and mosses, especially *Palustriella*. It occurs where the substrates are at or near field capacity, in often incompletely vegetated, rather stony or gravely wet flushes (on sloping ground) not subject to flooding. *V. genesii* occurs mainly at altitudes between 300 and 900 metres, but has been recorded as low as 75 m at the Black Isle site in Scotland, and as high as 2000 m in other parts of Europe (the Alps).

### **3.1 Surface area of habitat<sup>2.5.2</sup>**

#### **Unknown**

Although this species has been recorded in 22 1-km squares, the actual area occupied may be as small as a few square metres.

### **3.2 Date of estimation<sup>2.5.3</sup>**

#### **Not applicable**

### **3.3 Quality of data on habitat area<sup>2.5.4</sup>**

#### **Poor**

Although *V. genesii* habitat has been documented, an area estimate has not been calculated. Quality of data must therefore be reported as poor.

### **3.4 Habitat trend<sup>2.5.5</sup>**

#### **Stable**

The habitat for this species is fragile, and sensitive to modification of site hydrology, heavy grazing, lack of grazing, supplementary feeding of livestock, scrub encroachment, eutrophication, herbicides, pesticides and trampling. Historically, it has most probably suffered declines in both area and quality as a result of these pressures. However, since the

Directive came into force in 1994, expert opinion is that habitat has remained relatively stable.

### **3.5 Habitat trend period<sup>2.5.6</sup>**

1994 – 2006

### **3.6 Reasons for reported trend in habitat<sup>2.5.7</sup>**

Not applicable

### **3.7 Suitable habitat for the species (in km<sup>2</sup>)<sup>2.7.3</sup>**

Unknown

### **3.8 Habitat conclusion<sup>2.8</sup>**

Unknown

We do not know how much of a given site is suitable for the species nor how much is needed for the species to thrive.

## **4. Future Prospects<sup>2.6</sup>**

**Good prospects**

“Species is expected to survive and prosper.”

Two SACs have been designated for this species. Although one is currently assessed Unfavourable (Joint Nature Conservation Committee Site Condition Monitoring), there are good prospects for its return to a Favourable condition. Further, most known sites are currently subject to conservation management; it has been the subject of a species action plan under the UK Biodiversity Action Plan, and is included on the revised UKBAP list. Therefore, on the provision that this work continues, and existing local hydrological conditions at extant sites remain the same, prospects for this species are good.

### **4.1 Future prospects conclusion<sup>2.8</sup>**

Favourable

## **5. Overall Conclusion<sup>2.8</sup>**

Unknown

**Table 5.1** Summary of conclusions

Parameter	Judgement	Grounds for Judgement (in accordance with Annex C)	Reliability*
Range	Favourable	Current range is stable and not smaller than the favourable reference range	2
Population	Unknown	Insufficient reliable information available	N/A
Habitat	Unknown	No or insufficient reliable information available	N/A
Future Prospects	Favourable	Main pressures and threats to the species not significant; species will remain viable on the long-term	2
Overall Assessment	Unknown	Two or more Unknown combined with Favourable	3

\*1=High, 2=Moderate, 3=Low

High – Expert opinion is that the concluding judgement accurately reflects the current situation based on a professional understanding of the species. For range, population, and habitat, quality of data used to establish the current estimate has been identified as “good”; data used to inform trends is comprehensive and up to date.

Moderate – A greater understanding of the feature, or the factors affecting it, is required before a confident concluding judgement can be made by experts. For range, population, and habitat, the current estimate and/or trend are based on recent, but incomplete or limited survey data; or alternately, a comprehensive, but outdated (pre-1994) review.

Low – Judgements, and comprising estimates, are based predominately on expert opinion.

N/A – Assessment conclusion is “unknown”, on the basis of insufficient reliable information.

## 6. References

Biodiversity Action Plan on-line reporting system <https://www.ukbap-reporting.org.uk>

BAP form completed by Ian Killeen and submitted to JNCC.

KERNEY M.P., 1999. *Atlas of the land and freshwater molluscs of Britain and Ireland*. 264pp. Harley Books, Colchester.

KILLEEN, I.J., 2005. Studies on the round-mouthed whorl snail *Vertigo genesii* (Gastropoda: Vertiginidae) in northern England: observations on population dynamics and life history. *Journal of Conchology* **38**(6): 701.

NORRIS, A., 2007. Y.N.U. Excursion Meeting Report. *Conchology*. Malham VC64, 22-24 August 2005 *Naturalist* **13**:146.

SPEIGHT, M.C.D., MOORKENS, E.A. & FALKNER, G., 2003. Proceedings of the workshop on the conservation biology of European *Vertigo* species, Dublin, April 2002. *Heldia* **5** (7): 1-183.

## **Map Data Sources**

Conchological Society - Mollusc (non-marine) data for Great Britain and Ireland; Natural England - Invertebrate Site Register (via the NBN Gateway).

NORRIS, A., 2007. Y.N.U. Excursion Meeting Report. Conchology. Malham VC64, 22-24 August 2005 Naturalist **13**:146.

*Vertigo spp* dataset compiled by A. Fowles, Countryside Council for Wales (*Pers. comm.*)