

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

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

on the implementation of the Directive  
from January 2013 to December 2018

Supporting documentation for the  
conservation status assessment for the species:

**S1395 - Petalwort (*Petalophyllum ralfsii*)**

**ENGLAND**

## **IMPORTANT NOTE - PLEASE READ**

- The information in this document is a country-level contribution to the UK Report on the conservation status of this species, submitted to the European Commission as part of the 2019 UK Reporting under Article 17 of the EU Habitats Directive.
- The 2019 Article 17 UK Approach document provides details on how this supporting information was used to produce the UK Report.
- The UK Report on the conservation status of this species is provided in a separate document.
- The reporting fields and options used are aligned to those set out in the European Commission guidance.
- Explanatory notes (where provided) by the country are included at the end. These provide an audit trail of relevant supporting information.
- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; (ii) completion of the field was not obligatory; (iii) the field was not relevant to this species (section 12 Natura 2000 coverage for Annex II species) and/or (iv) the field was only relevant at UK-level (sections 9 Future prospects and 10 Conclusions).
- For technical reasons, the country-level future trends for Range, Population and Habitat for the species are only available in a separate spreadsheet that contains all the country-level supporting information.
- The country-level reporting information for all habitats and species is also available in spreadsheet format.

Visit the JNCC website, <https://jncc.gov.uk/article17>, for further information on UK Article 17 reporting.

# Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

## NATIONAL LEVEL

### 1. General information

1.1 Member State	UK (England information only)
1.2 Species code	1395
1.3 Species scientific name	<i>Petalophyllum ralfsii</i>
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Petalwort

### 2. Maps

2.1 Sensitive species	No
2.2 Year or period	2013-2018
2.3 Distribution map	Yes
2.4 Distribution map Method used	Based mainly on extrapolation from a limited amount of data
2.5 Additional maps	No

### 3. Information related to Annex V Species (Art. 14)

3.1 Is the species taken in the wild/exploited?	No																
3.2 Which of the measures in Art. 14 have been taken?	<table> <tr> <td>a) regulations regarding access to property</td><td>No</td></tr> <tr> <td>b) temporary or local prohibition of the taking of specimens in the wild and exploitation</td><td>No</td></tr> <tr> <td>c) regulation of the periods and/or methods of taking specimens</td><td>No</td></tr> <tr> <td>d) application of hunting and fishing rules which take account of the conservation of such populations</td><td>No</td></tr> <tr> <td>e) establishment of a system of licences for taking specimens or of quotas</td><td>No</td></tr> <tr> <td>f) regulation of the purchase, sale, offering for sale, keeping for sale or transport for sale of specimens</td><td>No</td></tr> <tr> <td>g) breeding in captivity of animal species as well as artificial propagation of plant species</td><td>No</td></tr> <tr> <td>h) other measures</td><td>No</td></tr> </table>	a) regulations regarding access to property	No	b) temporary or local prohibition of the taking of specimens in the wild and exploitation	No	c) regulation of the periods and/or methods of taking specimens	No	d) application of hunting and fishing rules which take account of the conservation of such populations	No	e) establishment of a system of licences for taking specimens or of quotas	No	f) regulation of the purchase, sale, offering for sale, keeping for sale or transport for sale of specimens	No	g) breeding in captivity of animal species as well as artificial propagation of plant species	No	h) other measures	No
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3.3 Hunting bag or quantity taken in the wild for Mammals and Acipenseridae (Fish)

a) Unit

b) Statistics/ quantity taken	Provide statistics/quantity per hunting season or per year (where season is not used) over the reporting period					
	Season/ year 1	Season/ year 2	Season/ year 3	Season/ year 4	Season/ year 5	Season/ year 6
Min. (raw, ie. not rounded)						
Max. (raw, ie. not rounded)						
Unknown	No	No	No	No	No	No

3.4. Hunting bag or quantity taken in the wild Method used

3.5. Additional information

## BIOGEOGRAPHICAL LEVEL

### 4. Biogeographical and marine regions

4.1 Biogeographical or marine region where the species occurs

**Atlantic (ATL)**

4.2 Sources of information

British Bryological Society, 2018. Database to the end of 2017.  
 Blockeel, T.L., Bosanquet, S.D.S., Hill, M.O. & Preston, C.D. 2014. Atlas of British & Irish Bryophytes. Pisces Publications, Newbury.  
 Stribley, M.J. 2018. Monitoring Survey for Petalwort *Petalophyllum ralfsii* at selected sites in Devon and Cornwall 2017/ 2018. Report for Freshwater Habitats Trust.  
 Callaghan, D. 2016. Section 41 bryophytes of the Sefton Coast, Merseyside. Unpublished report to Natural England.  
 Callaghan, D. 2013. Section 41 bryophytes of the Sefton Coast, Merseyside. Unpublished report to Natural England.  
 Holyoak, D. 2006. *Petalophyllum ralfsii* species dossier, Plantlife International.  
 Cox, J.H.S. 2017. Survey for *Petalophyllum ralfsii* at Dawlish Warren on 28.2.17. Unpublished report of field visit by Natural England.

### 5. Range

5.1 Surface area (km<sup>2</sup>)

5.2 Short-term trend Period

5.3 Short-term trend Direction

Stable (0)

5.4 Short-term trend Magnitude

a) Minimum

b) Maximum

5.5 Short-term trend Method used

5.6 Long-term trend Period

5.7 Long-term trend Direction

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5.8 Long-term trend Magnitude	a) Minimum	b) Maximum
5.9 Long-term trend Method used		
5.10 Favourable reference range	a) Area (km <sup>2</sup> ) b) Operator c) Unknown d) Method	
5.11 Change and reason for change in surface area of range	Genuine change Improved knowledge/more accurate data The change is mainly due to: Improved knowledge/more accurate data	
5.12 Additional information	Some reduction in range is likely to have been caused by the absence of 2013-2018 records for the single East Anglian population in Norfolk, however this population has always been small, and it is possible Petalwort may still persist here. It is not considered that there is evidence of a significant overall decline in range.	

## 6. Population

6.1 Year or period	2013-2018	
6.2 Population size (in reporting unit)	a) Unit b) Minimum c) Maximum d) Best single value	number of map 1x1 km grid cells (grids1x1)   17
6.3 Type of estimate	Minimum	
6.4 Additional population size (using population unit other than reporting unit)	a) Unit b) Minimum c) Maximum d) Best single value	
6.5 Type of estimate		
6.6 Population size Method used	Based mainly on extrapolation from a limited amount of data	
6.7 Short-term trend Period	2007-2018	
6.8 Short-term trend Direction	Stable (0)	
6.9 Short-term trend Magnitude	a) Minimum b) Maximum c) Confidence interval	
6.10 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
6.11 Long-term trend Period		
6.12 Long-term trend Direction		
6.13 Long-term trend Magnitude	a) Minimum b) Maximum c) Confidence interval	

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## 6.14 Long-term trend Method used

6.15 Favourable reference population (using the unit in 6.2 or 6.4)

- a) Population size
- b) Operator
- c) Unknown
- d) Method

6.16 Change and reason for change in population size

No change  
The change is mainly due to:

## 6.17 Additional information

## 7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat

a) Are area and quality of occupied habitat sufficient (to maintain the species at FCS)? Unknown

b) Is there a sufficiently large area of occupied AND unoccupied habitat of suitable quality (to maintain the species at FCS)? Unknown

7.2 Sufficiency of area and quality of occupied habitat Method used

Based mainly on extrapolation from a limited amount of data

7.3 Short-term trend Period

2007-2018

7.4 Short-term trend Direction

Decreasing (-)

7.5 Short-term trend Method used

Based mainly on extrapolation from a limited amount of data

7.6 Long-term trend Period

7.7 Long-term trend Direction

7.8 Long-term trend Method used

7.9 Additional information

## 8. Main pressures and threats

### 8.1 Characterisation of pressures/threats

Pressure	Ranking
Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices) (L02)	H
Sea-level and wave exposure changes due to climate change (N04)	H
Agricultural activities generating air pollution (A27)	M
Agricultural activities generating diffuse pollution to surface or ground waters (A26)	M
Sports, tourism and leisure activities (F07)	M
Threat	Ranking
Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices) (L02)	H

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Sea-level and wave exposure changes due to climate change (N04) H

Agricultural activities generating air pollution (A27) M

Agricultural activities generating diffuse pollution to surface or ground waters (A26) M

Sports, tourism and leisure activities (F07) M

## 8.2 Sources of information

## 8.3 Additional information

## 9. Conservation measures

### 9.1 Status of measures

a) Are measures needed? Yes

b) Indicate the status of measures Measures identified and taken

### 9.2 Main purpose of the measures taken

Maintain the current range, population and/or habitat for the species

### 9.3 Location of the measures taken

Only inside Natura 2000

### 9.4 Response to the measures

Medium-term results (within the next two reporting periods, 2019-2030)

### 9.5 List of main conservation measures

Management of habitats (others than agriculture and forest) to slow, stop or reverse natural processes (CL01)

Reduce/eliminate air pollution from agricultural activities (CA12)

Reduce diffuse pollution to surface or ground waters from agricultural activities (CA11)

### 9.6 Additional information

## 10. Future prospects

### 10.1 Future prospects of parameters

- a) Range
- b) Population
- c) Habitat of the species

### 10.2 Additional information

## 11. Conclusions

### 11.1. Range

### 11.2. Population

### 11.3. Habitat for the species

### 11.4. Future prospects

### 11.5 Overall assessment of Conservation Status

### 11.6 Overall trend in Conservation Status

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11.7 Change and reasons for change in conservation status and conservation status trend

a) Overall assessment of conservation status

No change

The change is mainly due to:

b) Overall trend in conservation status

No change

The change is mainly due to:

11.8 Additional information

## 12. Natura 2000 (pSCIs, SCIs and SACs) coverage for Annex II species

12.1 Population size inside the pSCIs, SCIs and SACs network (on the biogeographical/marine level including all sites where the species is present)

a) Unit                      number of map 1x1 km grid cells (grids1x1)  
b) Minimum  
c) Maximum  
d) Best single value    13

12.2 Type of estimate

Minimum

12.3 Population size inside the network Method used

Based mainly on extrapolation from a limited amount of data

12.4 Short-term trend of population size within the network Direction

Stable (0)

12.5 Short-term trend of population size within the network Method used

Based mainly on extrapolation from a limited amount of data

12.6 Additional information

## 13. Complementary information

13.1 Justification of % thresholds for trends

13.2 Trans-boundary assessment

13.3 Other relevant Information

## Distribution Map

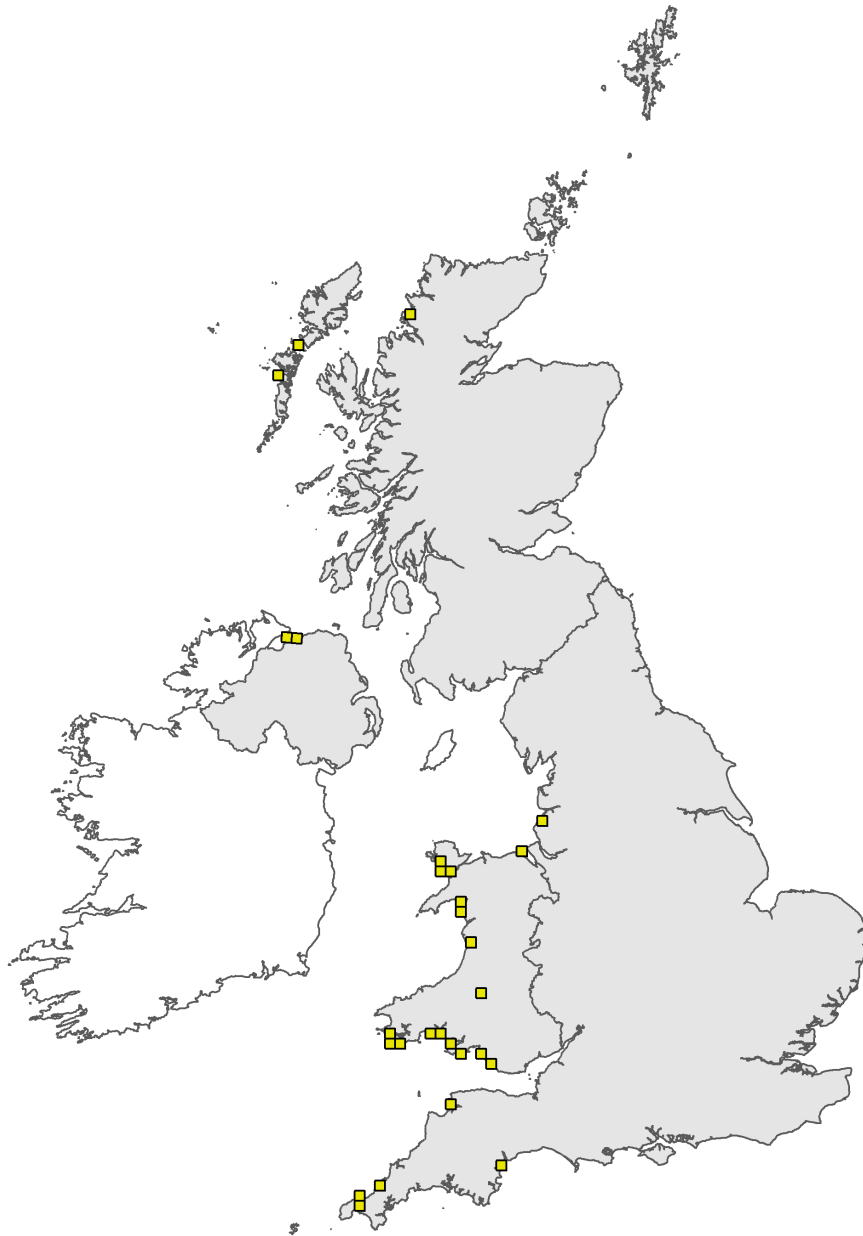


Figure 1: UK distribution map for S1395 - Petalwort (*Petalophyllum ralfsii*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The 10km grid square distribution map is based on available species records within the current reporting period. For further details see the 2019 Article 17 UK Approach document.

## Range Map

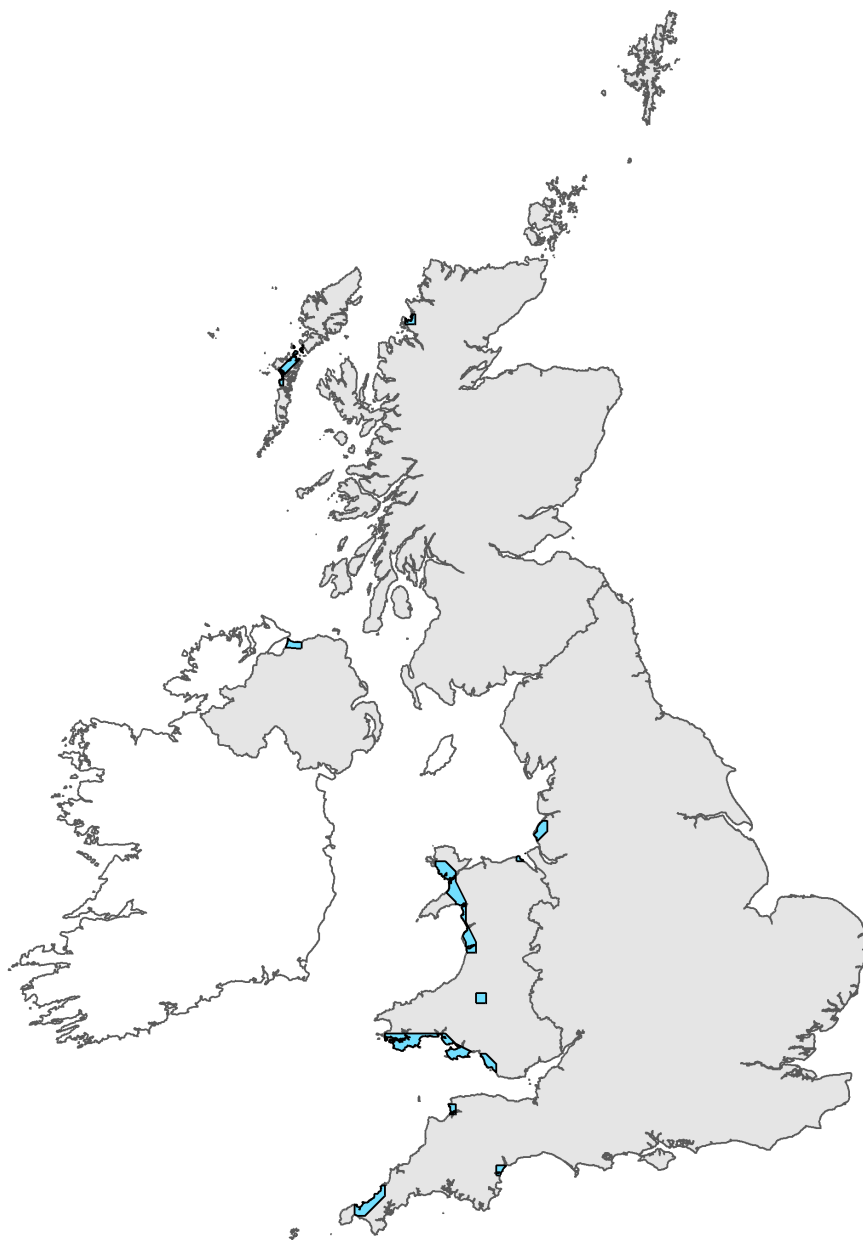


Figure 2: UK range map for S1395 - Petalwort (*Petalophyllum ralfsii*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The range map has been produced by applying a bespoke range mapping tool for Article 17 reporting (produced by JNCC) to the 10km grid square distribution map presented in Figure 1. The alpha value for this species was 20km. For further details see the 2019 Article 17 UK Approach document.

# Explanatory Notes

## Species name: *Petalophyllum ralfsii* (1395)

Field label	Note
2.1 Sensitive species	The species is not considered to be at risk from collecting, hence not sensitive.
2.2 Year or Period	Species records from 2013, 2017 & 2018 have been used for this reporting round.
2.3 Distribution map	1 x 1 km grid map, produced by Natural England.
2.4 Distribution map; Method used	Records of <i>Petalophyllum ralfsii</i> on the British Bryological Society database, plus two records from a single site verified by BBS county recorder but not yet on BBS database..

## Species name: *Petalophyllum ralfsii* (1395) Region code: ATL

Field label	Note
5.2 Short term trend; Period	This trend covers the years 2007 to 2018.
5.3 Short term trend; Direction	<i>Petalophyllum ralfsii</i> was recorded in 17 1x1 km grid squares in this 2013-18 reporting round, compared to 19 in the 2007-12 reporting round. There have been localised declines, such as in the Sefton Coast and Norfolk populations, but these are balanced by an increase in records in the south-west, the latter much due to a thorough survey in winter 2017-18. It is not considered that there is evidence of overall decline.
5.11 Change and reason for change in surface area of range	Some reduction in range is likely to have been caused by the absence of 2013-2018 records for the single East Anglian population in Norfolk, however this population has always been small, and it is possible Petalwort may still persist here. It is not considered that there is evidence of a significant overall decline in range.
6.1 Year or Period	2013-2018, with species records made in 2013, 2017 & 2018.
6.2 Population size	A total of 17 1x1 km grid squares were recorded as supporting <i>Petalophyllum ralfsii</i> in England in the 2013-18 reporting round, with records from 2013, 2017 & 2018.
6.7 Short term trend; Period	2007 to 2018 (there are no records for the species on the BBS database from 2010, 2011, 2014, 2015 & 2016).
6.8 Short term trend; Direction	There have been localised declines, such as in the Sefton Coast and Norfolk populations, but these are balanced by an increase in records in the south-west, the latter much due to a thorough survey in winter 2017-18. It is considered that the population is overall stable, without evidence of overall decline.
7.1 Sufficiency of area and quality of occupied habitat	It is difficult to make an overall assessment of the quality of occupied habitat for Petalwort as this varies between sites. For example a 2016 survey recorded declining habitat quality at sites on the Sefton Coast (due to an increase in rank competing vegetation, exacerbated by a decline in grazing by rabbits), but conversely a recent survey of Petalwort sites in the south-west has recorded good populations and overall good habitat quality.
8.1 Characterisation of pressures/ threats	N04 Sea level and wave exposure changes relates in particular to the Petalwort population at Dawlish Warren in South Devon, but may also be relevant to some other sites.
10.1 Future prospects of parameters	Although it is considered that the population is overall stable, without evidence of overall decline in this reporting round, Petalwort is a very small and low-growing species that is vulnerable to a range of threats, in particular being out-competed by coarser vegetation. Its future prospects are thus considered to be uncertain.

12.4 Short term trend of the population size within the network; Direction

Although it is considered that the population is overall stable, without evidence of overall decline in this reporting round, Petalwort is a very small and low-growing species that is vulnerable to a range of threats, in particular being out-competed by coarser vegetation. Its future prospects are thus considered to be uncertain.

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