

**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:

S1441 - Shore dock (*Rumex rupestris*)

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 England** and refers only to the state of the habitat/species in **England** - 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.

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	S1441
	0.2.2 Species scientific name	<i>Rumex rupestris</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	Shore Dock

1.1 Maps			
1.1.1 Distribution map		Sensitive	False



1.1.2 Method used - map	Complete survey/Complete survey or a statistically robust estimate		
	The extant and recent historic distribution of this species is well recorded by local botanists and by SSSI ISA work. 10km square data is good.		
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>"BSBI tetrad maps http://www.bsbimaps.org.uk/mstetrads/showmap.php?spid=1752.0&sppname=Rumex%20rupestris&commname=Shore%20Dock&countback=0</p> <p>BIORET, F. & DANIELS, R. (2005). Assessments of threats to populations of <i>Rumex rupestris</i> Le Gall (Shore Dock) in Britain and France, in LEACH S. J., PAGE, C. N., PEYTOUREAU, Y. & SANDFORD, M. N. eds. <i>Botanical Links in the Atlantic Arc</i>, pp. 201-209. Botanical Society of the British Isles, London.</p> <p>DANIELS, R. E. & MOY, I. L. (1998). Species Recovery Programme - Shore Dock (<i>Rumex rupestris</i> Le Gall). Second report. Report to English nature, Species Recovery Programme.</p> <p>KING, M. P. (1989). An investigation into the current status and ecology of the shore dock <i>Rumex rupestris</i> in Devon and Cornwall. M. Sc. Thesis, University College, London</p> <p>KING, M. P. (2002). Shore Dock <i>Rumex rupestris</i> in 2001. Plantlife Report No. 196</p> <p>KING, M. P. (2003-2004). Species Dossier for <i>Rumex rupestris</i> Le Gall. Plantlife. Http://www.plantlife.org.uk/downloads/species_dossier/Rumex_rupestris_dossier</p> <p>KING, M. P., MCDONNELL, E. J., LEACH, S. J. & WIGGINGTON, M. J. (1999). <i>Rumex rupestris</i> le Gall, in WIGGINGTON, M. J. Ed. <i>British Red Data Books. 1. Vascular Plants</i>, pp 320-321. JNCC, Peterborough</p> <p>LEACH S.J., MCDONNELL, E.J., PARKER S.J., and REAY P. J. 2009. <i>Rumex rupestris</i> Le Gall at Soar Mill Cove, S. Devon. <i>BSBI News 110: 27-29</i></p> <p>McDONNELL, E.J. (1995). The status of shore dock (<i>Rumex rupestris</i> Le Gall) in Britain in 1994. Report to English Nature, Species Recovery programme.</p> <p>McDONNELL, E.J. (1998). <i>Rumex rupestris</i> (Shore Dock). Report on fieldwork. Plantlife report No. 101.</p> <p>McDONNELL, E.J. (1999). <i>Rumex rupestris</i> (Shore Dock). Report on 1998 fieldwork. Plantlife report No. 128.</p> <p>McDONNELL, E.J. & KING, M.P. (2000). <i>Rumex rupestris</i> (Shore Dock). Report on fieldwork undertaken in 1999. Plantlife Report No. 140.</p>

	<p>McDONNELL, E.J. & KING, M.P. (2006). <i>Rumex rupestris</i> Le Gall (Shore Dock) in S.W. England: review of recent surveys and assessment of current status, in LEACH, S.J., PAGE, C.N., PEYTOUREAU, Y. & SANFORD, M.N. eds. <i>Botanical Links in the Atlantic Arc</i>, pp 201-209. BSBI, London.</p> <p>PARSLOW, R. (1996). Shore Dock <i>Rumex rupestris</i> Le Gall in the Isles of Scilly. Report to English nature, Species Recovery programme.</p> <p>PARSLOW, R. & COLSTON, A. (1994). The current status of <i>Rumex rupestris</i> Le Gall in the Isles of Scilly. Report to English Nature, Species Recovery Programme."</p>

2.3 Range					
2.3.1 Surface area Range	Alpha Hull software generated range includes much of inland Cornwall. In fact this species is confined to the shore.				
2.3.2 Method used Surface area of Range	Complete survey/ Complete survey or a statistically robust estimate All extant and recent historic sites for this species are well known and kept under close surveillance either by local botanists or by SSSI ISA work.				
2.3.3 Short-term trend Period					
2.3.4 Short term trend Trend direction					
2.3.5 Short-term trend Magnitude	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">a) Minimum</td> <td></td> </tr> <tr> <td>b) Maximum</td> <td></td> </tr> </table>	a) Minimum		b) Maximum	
a) Minimum					
b) Maximum					
2.3.6 Long-term trend Period					
2.3.7 Long-term trend Trend direction					
2.3.8 Long-term trend Magnitude Optional	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">a) Minimum</td> <td></td> </tr> </table>	a) Minimum			
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
	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	number of individuals
	Complete counts are available for the vast majority on English sites during the period 2006(exceptionally 2005)-12. The sum of the minimum counts for each locality counted is 367; the sum of the maximum counts is 915 but does not include the major site of Tregiffian, where 38 were counted most recently, and which would take the maximum to an estimated 953. Only three sites were not counted and they previously only had very few plants (single plants at two sites, an unknown small number at the third).	
	b) Minimum	367

	c) Maximum	953
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	30
	pers. comm. Simon Leach	
	c) Maximum	38
	pers. comm. Simon Leach	
2.4.3 Additional information on population estimates / conversion Optional	a) Definition of "locality"	Locality is defined by coastal landforms e.g. coves; bays; dune/beach-head habitat separated by unsuitable stretches of coast such as cliffs, headlands, built up areas etc. On Scilly, islands are treated as separate sites.
	Locality is defined by coastal landforms e.g. coves; bays; dune/beach-head habitat separated by unsuitable stretches of coast such as cliffs, headlands, built up areas etc. On Scilly, islands are treated as separate sites.	
	b) Method to convert data	
	c) Problems encountered to provide population size estimation	In some cases it is not clear what constitutes and individual plant. Clumps are counted as individuals even though they might not always be the same genet.
	In some cases it is not clear what constitutes and individual plant. Clumps are counted as individuals even though they might not always be the same genet.	
2.4.4 Year or period	2005-2012	
	2005-2012 is the chosen period because there was a near-comprehensive survey in 2005, which covered nearly all known extant localities, a few of which have no post 2007 coverage.	
2.4.5 Method used Population size	Complete survey/Complete survey or a statistically robust estimate	
	Count of individuals and clumps.	
2.4.6 Short-term trend Period	1998-2012	
	There are six localities that only have 1998-2000 data; all others have data from 2001-2006.	
2.4.7 Short-term trend Trend direction	stable	
2.4.8 Short-term trend Magnitude	a) Minimum	
	b) Maximum	

	c) Confidence interval	
2.4.9 Short-term trend Method used	Complete survey/ Complete survey or a statistically robust estimate	
2.4.10 Long-term trend – Period	1989-2012	
2.4.11 Long-term trend Trend direction	stable	
2.4.12 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
	c) Confidence interval	
2.4.13 Long term trend Method used	2	
	Early data, prior to 1999, is partial and based on vitits to the then limited number of known sites. 1999 marked the beginning of a concerted attempt to survey this species comprehensively.	
2.4.14 Favourable reference population	a) Number of individuals/agreed exceptions/other units	200
	b) Operator	more than
	c) FRP is unknown indicated by "true"	False
	d) Method used to set FRP	The decision tree in Note 1 has been used as a guide in determining the favourable reference population estimate (see

		<p>'Assessing Conservation Status: UK Approach.')</p> <p>The post-1994 trend is decreasing. However, the evidence suggests that this is attributable to natural fluctuations. The species persists at low abundance, but is at low risk from stochastic events (more than 5 sites), and has persisted at this abundance for at least 15 years prior to 1994. Therefore it is appropriate to use an estimate of the 1994 population as the favourable reference value.</p> <p>Under IUCN criteria, for the species to be outside of the threat threshold there would need to be 1000+ plants on average. One could argue that this should represent the favourable reference population. However there is nothing to indicate that historic population levels were actually any higher, or more 'secure', than those occurring today. In order to account for natural fluctuations, the favourable reference population has been set to include a range of values which include the 1994 value.</p>
<p>2.4.15 Reason for change</p> <p>Is the difference between the value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:</p>	<p>a) Genuine change?</p>	<p>True</p>
	<p>A genuine increase in overall numbers reflects large increases in some populations and might mask declines in some small populations. Number of localities has remained stable. Some populations are prone to natural fluctuations including temporary local extinctions.</p>	
	<p>b) Improved knowledge/more accurate data?</p>	<p>False</p>
	<p>c) Use of different method (e.g. "Range tool")?</p>	<p>False</p>

2.5 Habitat for the species

2.5.1 Area estimation

2.5.2 Year or period

2.5.3 Method used Habitat for the species	Absent data	
2.5.4 Quality of the habitat	a) Habitat quality	Good
	b) Assessment method	Where the species occurs it is mostly in designated sites (SSSI/SAC). Integrated site assessments indicate good condition.
2.5.5 Short-term trend Period	2001-2012	
2.5.6 Short-term trend Trend direction	stable While we are unable to provide a figure for habitat area it is believed to be stable. ISA reports do not report habitat reduction or loss on designated sites.	
2.5.7 Long-term trend Period	1989-2012	
2.5.8 Long-term trend Trend direction	unknown There are likely to have been some losses early in the period, although firm data is lacking, but more recently the bulk of sites are designated (see 2.5.6).	
2.5.9 Area of suitable habitat for the species	a) Value in km²	No figure entered because of lack of data.
	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?	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	
G05: Other human intrusions and disturbances	L	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	L	
H02: Pollution to groundwater (point sources and diffuse sources)	L	
J02: human induced changes in hydraulic conditions	L	
K01: abiotic (slow) natural processes	L	
K02: Biocenotic evolution, succession	L	
L05: collapse of terrain, landslide	L	
L07: storm, cyclone	L	
M01: Changes in abiotic conditions	L	

G05 anecdotal evidence of a few plants being lost through trampling and other visitor pressures. Beach cleaning at one site (Leach et al. 2009) and management plant should avert repeats of this. H01 Sewage discharge issues on one site, now resolved. H02 Groundwater pollution is believed likely to be a minor issue but unquantifiable. J02 and M01.02 dry summers (M01) and water abstraction led to the temporary drying out of the dune slacks at one site (Penhale). K01, K02, L05, L07 Erosion (cliff landslips and occasional storms) caused loss of several plants; burial under beach sand and strandline deposits covered a few plants at another site. All these losses subsequently offset by new colonisation. Erosion is vital in creating new habitat niches for this species. M01 Soar Mill Cove colony affected by summer floods and increased beach scour in 2012.

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	
D03: shipping lanes, ports, marine constructions	L	
G05: Other human intrusions and disturbances	L	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	L	
H02: Pollution to groundwater (point sources and diffuse sources)	L	

J02: human induced changes in hydraulic conditions	L	
J03: Other ecosystem modifications	L	
K01: abiotic (slow) natural processes	L	
K02: Biocenotic evolution, succession	L	
L05: collapse of terrain, landslide	L	
L07: storm, cyclone	L	

J02 and J03. The creation and maintenance of suitable habitat patches and niches for this species rely on natural dynamic coastal processes including cliff landslips, storm scour of beaches etc. Modifications which disrupt these processes, e.g. new sea defence work, would be detrimental.

2.7.1 Method used – Threats expert opinion

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 individuals

Estimation of population size included in the SAC network	b) Minimum	315
	Based on complete counts at all but one site during the reporting period (sum of all the lowest counts at each SAC locality during the reporting period and exceptionally back to 2005).	
	c) Maximum	717
	Based on complete counts at all but one site during the reporting period (sum of all the highest counts at each SAC locality during the reporting period and exceptionally back to 2005).	
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)	stable	
	Populations at most sites are considered to be stable while roughly equal numbers are increasing or declining respectively. Losses are small and are partly but not completely offset by new sites.	

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
2.1: Maintaining grasslands and other open habitats	Y	Y				L		Y					Y	
6.1: Establish protected areas/sites	Y					H			Y	Y				

6.3: Legal protection of habitats and species	Y					H				Y			Y			
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26 SAC units with the plant are deemed favourable, one considered 'destroyed' (Wingletang, St Agnes, Scilly). Most other sites are SSSIs. Agri-environment schemes have maintained or re-established some grazing of coastal habitat at some sites. While not directly required this might help by providing small scale patches of bare ground or by slowing or reversing scrub colonisation.