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

Conservation status assessment for the species:

S1044 - Southern damselfly (*Coenagrion mercuriale*)

UNITED KINGDOM

IMPORTANT NOTE - PLEASE READ

- The information in this document represents 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.
- It is based on supporting information provided by the geographically-relevant Statutory Nature Conservation Bodies, which is documented separately.
- The 2019 Article 17 UK Approach document provides details on how this supporting information contributed to the UK Report and the fields that were completed for each parameter.
- The reporting fields and options used are aligned to those set out in the European Commission guidance.
- Maps showing the distribution and range of the species are included (where available).
- Explanatory notes (where provided) are included at the end. These provide additional audit trail information to that included within the UK assessments. Further underpinning explanatory notes are available in the related country-level reports.
- 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; and/or (iii) the field was not relevant to this species (section 12 Natura 2000 coverage for Annex II species).
- The UK-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.

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NATIONAL LEVEL

1. General information

1.1 Member State	**UK**
1.2 Species code	**1044**
1.3 Species scientific name	**Coenagrion mercuriale**
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Southern damselfly

2. Maps

2.1 Sensitive species	No
2.2 Year or period	2008-2017
2.3 Distribution map	Yes
2.4 Distribution map Method used	Complete survey or a statistically robust estimate
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?	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

England

Boyce, D. & Baldock, N. (2015). Monitoring and Management for the Southern Damselfly on Dartmoor 2015. Unpublished report.

Harvey, M.C., Daguet, C., Poland J. & Thomas, J. (2005). Assessment of Favourable Condition for the Southern Damselfly Coenagrion mercuriale on the New Forest candidate Special Area of Comservation (cSAC), Hampshire, England. English Nature/British Dragonfly Society/ Hampshire & Isle of Wight Wildlife Trust.

Insall, C. (2012). An Overview of the Management Requirements of the Southern Damselfly (Coenagrion mercuriale-Charpentier) with Recommendations and Suggested Methodology for Habitat Improvement within and near to the Preseli SAC.Report published by the British Dragonfly Society.

Panter, C. Lake, S. & Liley, D. (2016). Southern damselfly monitoring reports 2015/16. Natural England/ Footprint Ecology.

Purse, B.V. (2002). The Ecology and Conservation of the Southern Damselfly (Coenagrion Mercuriale - Charpentier) in Britain. Environment Agency.

Wales

Boardman, P. 2005. Assessment of favourable condition for the southern damselfly Coenagrion mercuriale on candidate Special Areas of Conservation in Wales (part 2). CCW Environmental Monitoring Report No. 18. Countryside Council for Wales, Bangor.

Boyce, D. 2002. Southern damselfly Coenagrion mercuriale GB site assessment project. CCW Contract Science No. 537. Countryside Council for Wales & UK BAP Southern Damselfly Steering Group.

Boyce, D. 2004. Condition assessment for the southern damselfly Coenagrion

mercuriale on candidate Special Areas of Conservation in Pembrokeshire (Gweunydd Blaencleddau & Preseli (part 1). CCW Contract Science No. 622. Countryside Council for Wales, Bangor.
Coker, S. 2002. A long-term plan for Coenagrion mercuriale in north-east Pembrokeshire. Privately published.
Dalley, G. 2016. British Dragonfly Society Conservation Officer report on the visit to southern damselfly sites on Cors Erddreiniog on Friday 8th July 2016. Unpublished report by the British Dragonfly Society.
Dalley, G. 2016. Southern Damselfly Management Handbook. British Dragonfly Society.
Fowles, A.P. 2013. 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: S1044 - Southern Damselfly (Coenagrion mercuriale).
Hopkins, G.W. & Day, K.J. 1997. The southern damselfly Coenagrion mercuriale: dispersal and adult behaviour. CCW Contract Science No. 184. Countryside Council for Wales, Bangor.
Howe, M.A. & Harrison, T. 2015. Southern damselfly Coenagrion mercuriale on Nant Isaf spring field, Cors Erddreiniog in July 2015. NRW unpublished report. Natural Resources Wales, Bangor.
Howe, M. A. & Harrison, T. 2016. Southern Damselfly Coenagrion mercuriale on Nant Isaf spring field, Cors Erddreiniog in July 2016. NRW unpublished report. Natural Resources Wales, Bangor.
Install, C. 2012. An Overview of the Management Requirements of the Southern Damselfly (Coenagrion mercuriale-Charpentier) with Recommendations and Suggested Methodology for Habitat Improvement within and near to the Preseli SAC. Unpublished report for the British Dragonfly Society.
Jenkins, R.A. 1997. Surveys of southern damselfly (Coenagrion mercuriale) on Gower, June/July 1997. CCW filenote 16/7/97. Countryside Council for Wales, Swansea.
Skidmore, P. 1996. A baseline survey of the status of the southern damselfly Coenagrion mercuriale on Mynydd Preseli pSAC. CCW Contract Science No. 181. Countryside Council for Wales, Bangor.
Surry, K. 2012. Corsydd Mon SAC monitoring - Coenagrion mercuriale (1044). CCW draft report May 2012. Countryside Council for Wales.
Sutton, M. 2013. Southern damselfly Coenagrion mercuriale on the Anglesey fens. Survey and monitoring 2013. C.15: Action for Annex II species. Matt Sutton Ecology October 2013. LIFE 07 Nat UK 000948. Natural Resources Wales, Bangor.
Unpublished CCW & NRW SAC monitoring data for Coenagrion mercuriale.
Watts, P. C., Saccheri, I.J., Kemp, S.J. & Thompson, D.J. 2006. Population structure and the impact of regional and local habitat isolation upon levels of genetic diversity of the endangered damselfly Coenagrion mercuriale (Odonata: Zygoptera). Freshwater Biology51: 193-205.

5. Range

5.1 Surface area (km²)	3423.9	
5.2 Short-term trend Period	2007-2018	
5.3 Short-term trend Direction	Stable (0)	
5.4 Short-term trend Magnitude	a) Minimum	b) Maximum

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5.5 Short-term trend Method used	Complete survey or a statistically robust estimate	
5.6 Long-term trend Period		
5.7 Long-term trend Direction		
5.8 Long-term trend Magnitude	a) Minimum	b) Maximum
5.9 Long-term trend Method used		
5.10 Favourable reference range	a) Area (km²)	
	b) Operator	Approximately equal to (≈)
	c) Unknown	
	d) Method	The FRR has changed since 2013 and is approximately equal to the current range. An FRR operator has been used because it has not been possible to calculate the exact FRR. The FRR is considered to be sufficient to maintain a viable population and is no less than when the Habitats Directive came into force in the UK. For further details see the 2019 Article 17 UK Approach document.
5.11 Change and reason for change in surface area of range	Improved knowledge/more accurate data Use of different method	
	The change is mainly due to:	Use of different method
5.12 Additional information	The current range surface area calculation does not represent the real range surface area. Change in availability of underpinning mapping data has resulted in an apparent decrease in range area compared to 2013, but this is not due to genuine change. Expert opinion considers the trend in range to be stable. The real range surface area is considered to be the range in 2013 - 4,140.73km2. The FRR in 2013 was 3,941km2. The FRR has been changed to an operator 'approximately equal to current' to reflect this. For further information see the 2019 Article 17 UK Approach document.	

6. Population

6.1 Year or period	2008-2017	
6.2 Population size (in reporting unit)	a) Unit	number of map 1x1 km grid cells (grids1x1)
	b) Minimum	
	c) Maximum	
	d) Best single value	56
6.3 Type of estimate	Best estimate	
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	Complete survey or a statistically robust estimate	
6.7 Short-term trend Period	2004-2017	

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6.8 Short-term trend Direction	Decreasing (-)
6.9 Short-term trend Magnitude	a) Minimum b) Maximum c) Confidence interval
6.10 Short-term trend Method used	Complete survey or a statistically robust estimate
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
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: More than (>) c) Unknown d) Method: The FRP has changed since 2013. An FRP operator has been used because it has not been possible to calculate the exact FRP. The FRP is considered to be large enough to maintain a viable population and is no less that when the Habitats Directive came into force in the UK. For further details see the 2019 Article 17 UK Approach document.
6.16 Change and reason for change in population size	Genuine change Improved knowledge/more accurate data The change is mainly due to: Genuine change
6.17 Additional information	The short term trend direction is considered to be 'decreasing ≤1% (one percent or less) per year on average'. This relates to declines in Wales within all four SACs and the loss of the population at Sluxton Farm, Whitemoor. Remedial works have been initiated on three of the SACs to address these declines but may not be on the necessary scale to reverse current trends.

7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat	a) Are area and quality of occupied habitat sufficient (for long-term survival)? No b) Is there a sufficiently large area of unoccupied habitat of suitable quality (for long-term survival)? No
7.2 Sufficiency of area and quality of occupied habitat Method used	Complete survey or a statistically robust estimate
7.3 Short-term trend Period	2004-2017
7.4 Short-term trend Direction	Decreasing (-)
7.5 Short-term trend Method used	Complete survey or a statistically robust estimate
7.6 Long-term trend Period	
7.7 Long-term trend Direction	

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7.8 Long-term trend Method used	
7.9 Additional information	The sufficiency of the quantity and quality of habitat for the species varies across the distribution of the species, with insufficiency reported in Wales.

8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Abandonment of grassland management (e.g. cessation of grazing or mowing) (A06)	H
Abandonment of management/use of other agricultural and agroforestry systems (all except grassland) (A07)	M
Extensive grazing or undergrazing by livestock (A10)	M
Abiotic natural processes (e.g. erosion, silting up, drying out, submersion, salinization) (L01)	H
Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices) (L02)	M

Threat	Ranking
Abandonment of grassland management (e.g. cessation of grazing or mowing) (A06)	H
Abandonment of management/use of other agricultural and agroforestry systems (all except grassland) (A07)	M
Extensive grazing or undergrazing by livestock (A10)	M
Abiotic natural processes (e.g. erosion, silting up, drying out, submersion, salinization) (L01)	H
Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices) (L02)	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		Both inside and outside Natura 2000
9.4 Response to the measures		Short-term results (within the current reporting period, 2013-2018)

9.5 List of main conservation measures

Reinstate appropriate agricultural practices to address abandonment, including mowing, grazing, burning or equivalent

measures (CA04)

Adapt mowing, grazing and other equivalent agricultural activities (CA05)

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

Other measures related to natural processes (CL04)

Improvement of habitat of species from the directives (CS03)

9.6 Additional information

10. Future prospects

10.1 Future prospects of parameters

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

10.2 Additional information

Future trend of Range is Negative - decreasing <=1% (one percent or less) per year on average; Future trend of Population is Negative - decreasing <=1% (one percent or less) per year on average; and Future trend of Habitat for the species is Negative - slight/moderate deterioration. For further information on how future trends inform the Future Prospects conclusion see the 2019 Article 17 UK Approach document.

11. Conclusions

11.1. Range	Favourable (FV)
11.2. Population	Unfavourable - Inadequate (U1)
11.3. Habitat for the species	Unfavourable - Inadequate (U1)
11.4. Future prospects	Unfavourable - Inadequate (U1)
11.5 Overall assessment of Conservation Status	Unfavourable - Inadequate (U1)
11.6 Overall trend in Conservation Status	Deteriorating (-)

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

Conclusion on Range reached because: (i) the short-term trend direction in Range surface area is stable; and (ii) the current Range surface area is approximately equal to the Favourable Reference Range.
Conclusion on Population reached because: (i) the short-term trend direction in Population size is decreasing by 1% per year or less; and (ii) the current Population size is not more than 25% below the Favourable Reference Population.
Conclusion on Habitat for the species reached because: (i) the area of occupied and unoccupied habitat is not sufficiently large and (ii) the habitat quality is not adequate for the long-term survival of the species; and (iii) the short-term trend

in area and quality of occupied habitat is decreasing.
Conclusion on Future prospects reached because: (i) the Future prospects for Range are poor; (ii) the Future prospects for Population are poor; and (iii) the Future prospects for Habitat for the species are poor.
Overall assessment of Conservation Status is Unfavourable-inadequate because three of the conclusions are Unfavourable-inadequate.
Overall trend in Conservation Status is based on the combination of the short-term trends for Range - stable, Population - decreasing, and Habitat for the species - decreasing.
Overall assessment of Conservation Status has not changed since 2013.
Overall trend in Conservation Status has not changed since 2013.

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	56
12.2 Type of estimate		Best estimate
12.3 Population size inside the network Method used		Complete survey or a statistically robust estimate
12.4 Short-term trend of population size within the network Direction		Decreasing (-)
12.5 Short-term trend of population size within the network Method used		Complete survey or a statistically robust estimate
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

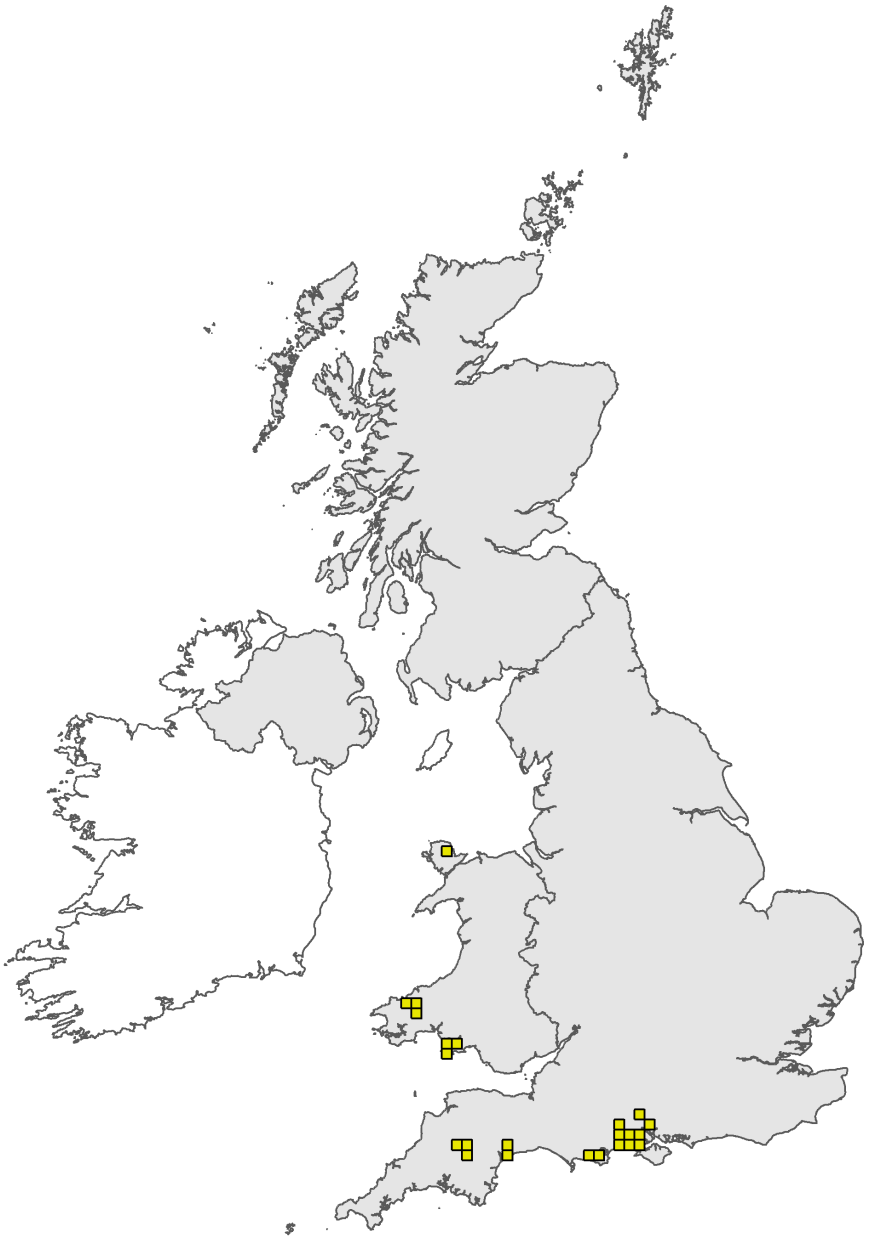

Figure 1: UK distribution map for S1044 - Southern damselfly (*Coenagrion mercuriale*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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 S1044 - Southern damselfly (*Coenagrion mercuriale*). 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.