

Southern damselfly

1. A Definition

The southern damselfly (*Coenagrion mercuriale*) is a small, delicate blue damselfly, less than 3cm long, which takes its scientific name from the presence of the characteristic mark (supposedly resembles winged-helmet of Mercury, the Roman deity) on the male's abdomen.

The species breeds in slow-moving streams and boggy runnels, and takes to the wing from late June to early August.

In the UK the southern damselfly is restricted to the south of England and coastal Wales. Elsewhere it is mainly a southern European species, with a sub-species in Italy and another in North Africa, unable to spread any further north than Holland.



2. Why an Action Plan?

The southern damselfly has very particular habitat requirements, as described below, and as a result of habitat loss it is declining in all parts of its range. In Britain it has become rare in the last thirty years, and internationally the species is considered to be in danger of extinction.

Up to 25% of the global population of this species occurs in the UK, and it is the only British resident dragonfly species to be listed in the European Habitats Directive. This recognition demonstrates that this is a species in urgent need of action to reverse its decline.

Devon holds an important part of the UK population of this species, which is present in only 26 ten-kilometre squares across southern England and Wales, including Anglesey. There is therefore clearly a particular responsibility on those parties in Devon with the ability to influence the sites and circumstances surrounding this species, to act collectively to try and retain this small jewel amongst our dragonfly and damselfly fauna.

3. Relevant ecology

The precise habitat requirements and detailed ecology of this species is poorly understood, and this itself is one of the factors which hampers its conservation. However, in general terms its needs are as follows:

- Southern damselfly occurs in base-rich runnels and streams, generally over a slightly acid substrate.
- Breeding sites are usually small, shallow and slow flowing vegetated runnels, with a shallow silt/peat sediment layer.
- In Devon the three sites where the species is recorded are either wet heath or Rhôs pastures. Plants associated with its presence include marsh St John's Wort and bog pondweed.
- To retain their suitability for the southern damselfly, sites need a certain level of poaching of flush areas, preferably by cattle (though ponies are important in this regard in the New Forest). Sites thus need to be in active grazing management, particularly in order to control the dominance of purple moor grass and black bog rush, western gorse and willow scrub.

4. Distribution and current population of southern damselfly (1998)

In Devon: The longest-known populations of southern damselfly are at Aylesbeare Common and Colaton Raleigh on the East Devon Pebblebed Heaths. In addition, the species was discovered on one Rhôs pasture site (1995) – [2004 update](#); and a mire (1998) - on Dartmoor. Colonies previously occurred on Hense Moor SSSI on the Blackdown Hills until 1965, and at Venn Ottery DWT Nature Reserve until 1990.

Elsewhere in Britain: Between 1975 and 1990 the species has only been recorded from 25 ten km squares, in Hampshire (on New Forest sites and water meadow ditches on flood plains of Rivers Itchen and Test), Dorset, Devon, the Gower Peninsular, Anglesey and Pembrokeshire. The largest populations are in the New Forest and Pembrokeshire.

5. Current problems for southern damselfly in Devon (1998)

Poorly understood ecology: Knowledge of the ecology and conservation management needs of southern damselfly is poor, as it is for many thousands of other invertebrates. This lack of knowledge makes it hard to provide even the simplest habitat management guidelines for practical conservationists

concerned with the species. There is an urgent need to conduct proper research into the ecology of the species in its range of habitats, in order that its management needs can be properly understood and acted upon. Knowledge of effective re-establishment techniques is also a limiting factor.

Drainage and dredging: Despite the lack of detailed understanding of the species' ecology, it is clear that its decline in recent decades can be attributed to habitat loss. Drainage and dredging of breeding sites in shallow streams is likely to have been the major factor in this respect, mainly in the southern counties other than Devon.

Inappropriate site management: Habitat loss has occurred not just as a result of dramatic change like drainage, but also due to changes in management regimes on heathland sites, including lack of grazing, which has allowed sites to become rank and overgrown, leading to a smothering of the open runnels and flushes which the damselfly requires.

Water supply: At least one site for the species in Devon is potentially under threat from a reduced water supply, highlighting the importance of the water regime of surrounding land in determining the success of colonies.

6. Recent changes in population (1998)

The southern damselfly has disappeared from five 10km squares in the UK since 1950, representing a 16% reduction. Two sites have ceased to support the species in Devon over that period. Venn Ottery held the species until 1990, and Hense Moor had a colony until 1965.

There has been a welcome recent increase in the population at Aylesbeare in response to improvements in grazing regimes and other management.

Monitoring at Colaton Raleigh suggests a possible decline due to successional changes in the absence of grazing.

7. Current protection

- Southern damselfly is a globally threatened species listed on Annex II of the EC Habitats Directive, and Appendix II of the Bern Convention.
- The major location for the species in Devon, the East Devon Pebblebed Heaths, is a Special Area of Conservation under the EC Habitats Directive, partly because of the presence of this species.
- Currently being considered for full protection under Schedule 5 of the 1981 Wildlife & Countryside Act.
- The species is listed as rare on the UK Red List and is a British Dragonfly Society 'Rare' species (BRC/BDS Rare Dragonfly Project).

- The species is the subject of a Species Action Plan in the 1995 UK Biodiversity Steering Group Report.

8. Biodiversity planning context

National BAP Context

Species of principal importance in England (NERC Act, S.41):

- Southern damselfly

Current national BAP targets can be viewed on the [Biodiversity Action Reporting System](#) (BARS).

Associated Action Plans within the Devon BAP:

- Lowland heathland
- Rhôs pasture

9. Biodiversity objectives and targets for southern damselfly in Devon

Please note: objectives and targets have not yet been reviewed.

Objective 1

Maintain the current status of the species in Devon, preventing further loss of breeding populations within the County.

Target:

- Maintain populations at the four known breeding sites in Devon.

Objective 2

Expand breeding populations to formerly occupied sites in Devon, by appropriate means.

Target: re-introduce species to 2 former sites in Devon by 2005.

10. Priority or indicative actions for southern

damselfly in Devon

Action	Key Partners
1. Continue appropriate management prescriptions at known breeding sites on East Devon Pebblebed Heaths.	RSPB; CDE; EN
2. Continue management on Dartmoor sites through DNPA management agreements.	DNPA; EN
3. Promote suitable habitat management at former sites at Venn Ottery and Hense Moor and encourage appropriate land management schemes on other suitable sites.	DWT; EN; DEFRA; FWAG
4. Ensure relevant catchment-based management plans take into account the hydrology of occupied sites and potential re-introduction sites.	EA; DNPA
5. Advise land managers, where the species is found or might occur, of the importance of the site, the presence of the species and the importance of habitat management for its conservation.	EN; BDS; DNPA; DWT; EA; DEFRA; RSBP; FWAG
6. Regularly monitor all known sites; supply information to the DBRC and UK BAP steering group.	BDS; DNPA; RSPB; DBRC
7. Continue to carry out surveys to determine whether the species is present on other suitable sites in Devon.	BDS; EA; DNPA; DWT
8. Identify suitable sites for re-introduction.	BDS; DWT; RSPB; EA; EN
9. Use the species to promote awareness of the importance of wet heathland, Rhôs pasture and mires.	RSPB; DWT; EN

Southern Damselfly Action Plan Champion - British Dragonfly Society

Abbreviations used in text and table

BAP	Biodiversity Action Plan
BDS	British Dragonfly Society (Devon Branch)
CDE	Clinton Devon Estates
DBRC	Devon Biodiversity Records Centre
DEFRA	Department of Environment Food and Rural Affairs
DNPA	Dartmoor National Park Authority
DWT	Devon Wildlife Trust
EA	Environment Agency
EN	English Nature
FWAG	Farming & Wildlife Advisory Group
RSPB	Royal Society for the Protection of Birds
DWT	Devon Wildlife Trust