

# Dartmoor Delivery Plan for Southern Damselfly

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## Description and Importance of the Species

The southern damselfly (*Coenagrion mercuriale*) is the smallest of the blue damselflies found in the UK. The larvae usually spend two years developing in small streams and runnels before hatching and breeding.

It is one of Europe's rarest and most threatened damselflies and is also defined as being a globally threatened species. Up to 25% of the world population are located in southern England and Wales, where it is on the northern edge of its range. It is listed in the European Habitats Directive, the Bern Convention, the UK Red List, and Schedule 5 of the *Wildlife and Countryside Act* and is cited as one of the international features within the Dartmoor Special Area of Conservation. Poor quality habitat and low genetic variation continue to threaten this species although the situation is improving.

This delivery plan builds on the objectives and actions set in national and county plans for the southern damselfly. The most recent of these are '*Ensure that sites where the species is present are adequately managed, removal of scrub often being the most important problem. At such sites efforts should be made to expand the area of suitable habitat where this is possible*' and '*Continue to monitor populations at known sites*', which are the two national actions sought by Natural England (NE, Nov 2013) for the southern damselfly due to its status as a NERC Act, Section 41 Species.



Southern damselfly male, copyright DNPA

## Current Status on Dartmoor

Southern damselflies were first located on Dartmoor in 1995 at Whiddon Down and since then a further two sites have been found through targeted searches at Gidleigh and Prewley. The sites occur on the north-western and north-eastern edges of the moors. Extensive monitoring has been undertaken since 2002 which has generally shown an increase in population sizes over that period, although in the last three years, they have declined slightly at one site whilst remained stable at the other two. The highest count made on any one day each year (the 'peak count') on the three sites have averaged 155, 174 and 191 adults and 53, 44 and 40 larvae, over the past 5 years, recorded respectively at Whiddon Down (1 transect) Gidleigh (3 transects) and Prewley (4 transects).



Typical runnel used by larvae, copyright DNPA



Southern damselfly larva, copyright DNPA

## Issues affecting the Species on Dartmoor

1. Insufficient grazing levels at the Gidleigh site along some of the runnels that the larvae inhabit
2. Sharp-flowered rush invasion along one of the breeding runnels at the Whiddon Down site
3. The Prewley site comes out of ESA in 2014. The Lower Prewley sub-site is in a different grazing unit and is currently under-grazed and in need of further scrub control

4. Genetic inbreeding may be a factor facing the rather isolated Dartmoor colonies
5. Only one of the sites (Gidleigh) is notified as either a Site of Special Scientific Interest (SSSI) or Special Area of Conservation (SAC)
6. The low pH of many runnels is thought to limit the range of this species on Dartmoor

### **Current Initiatives on Dartmoor**

1. Annual monitoring since 2002 of adults and larvae organised by DNPA, usually with funding from the Environment Agency
2. Management at the Whiddon Down site has been carried out through an agreement between the landowner and DNPA since 1995. The agreement runs until 2017.
3. Management at the Gidleigh site is undertaken as part of a Higher Level Stewardship agreement between the Commoners Association and Natural England that runs until 2020
4. The Prewley site is in an ESA until 2014.
5. Research at Liverpool University has been taking place over the past few years on the genetic differences between British populations which has included samples from the Dartmoor sites



Sampling southern damselfly larvae, copyright DNPA

## Targets

1. Maintain viable populations at all three sites, with an average adult peak count over the previous 5 years of at least 150, 170 and 190 at the Whiddon Down, Gidleigh and Prewley sites respectively

## Delivery and Monitoring

1. Annually check that sufficient grazing and scrub management is being carried out at all three sites, through management agreements where appropriate. Where this is not being achieved, a site visit with the graziers should be held in the same year to look at solutions for the following season.
2. Maintain annual monitoring at all three sites of both larvae and adults. These visits would also look at whether grazing and scrub control are at sufficient levels.
3. Liaise with researchers to look at genetic diversity and potential problems of inbreeding.
4. Seek SSSI/SAC status for the two sites currently lying outside these designations.

	Lead	2014	2015	2016	2017	2018
Any changes to management needed at each site discussed between NE/Commoners/DNPA in autumn and scrub control or grazing changes agreed	NE/DNPA	x	x	x	x	x
Annual monitoring of adults and larvae at all 3 sites, with simultaneous assessment of management needs	DNPA	x	x	x	x	x
Discuss further genetic research work with Liverpool University	DNPA	x				
Look at SSSI/SAC boundary extension to include the Prewley site	NE	x				
Secure agri-environment management agreements at all breeding sites	NE/DNPA	x	x	x	x	x