

Dartmoor Species Action Plan for Scarce Dragonflies

A number of rare dragonfly species breed in Dartmoor's acidic mires and runnels. This Action Plan covers two key species from *The Nature of Dartmoor: A Biodiversity Profile*, the **southern damselfly** and the **keeled skimmer** dragonfly, and two

nationally scarce species, the small red and the scarce blue-tailed damselflies. In order to co-ordinate future survey, monitoring, research and management proposals, these four species are all incorporated into

this plan. (See the Dartmoor Moorland, Rhôs Pasture and Freshwater Habitat Action Plans for targets and actions affecting the general habitats in which these species live).

The southern damselfly is a globally threatened species with up to 25% of the world population being located in just 26 ten-kilometre squares within southern England

and Wales. 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 SAC. The UK

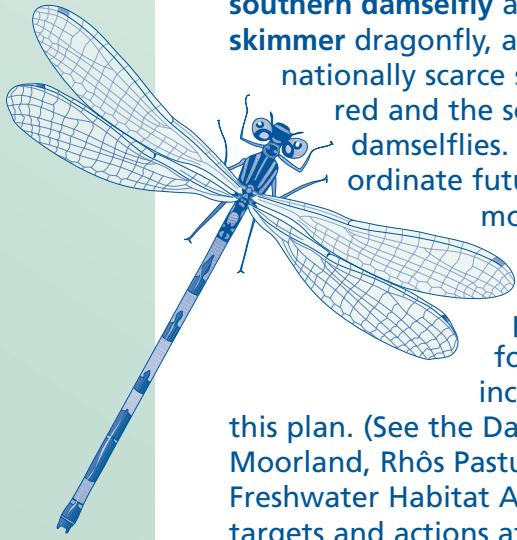
Biodiversity Steering Group Report and the *Devon Biodiversity Action Plan* both contain Species Action Plans for this species and include accounts of its general ecology. This action plan builds on the objectives and targets set in national and county action plans for the southern damselfly and produces more specific, local targets and actions for Dartmoor.

The keeled skimmer dragonfly is included as a key species because it is characteristic of Dartmoor's valley mires and Rhôs pastures, and is regarded as nationally scarce (recorded in less than 10% of ten kilometre squares).

Both the small red damselfly and the scarce blue-tailed damselfly are also classified as nationally scarce and are found in a range of habitats including valley mires, Rhôs pastures and old china clay workings.

Current status on Dartmoor

The distribution of these dragonfly and damselfly species has only recently been investigated in detail on Dartmoor. For example, the southern damselfly was not recorded at all until 1995 and the number of known scarce blue-tailed damselfly sites has increased greatly since 1994. Most of this information has been derived from the Scarce Damselfly Survey undertaken in 1998 by the DNPA, which followed on from a British Dragonfly Society (BDS) survey of key dragonfly sites in Devon in 1996. In 2005 a survey for new southern damselfly sites by the Environment Agency revealed a new colony and a BDS survey in 2005/6 monitored the other key sites. The most recent records have shown that within the National Park there are currently 3 known sites for southern damselfly, 5 sites for small red damselfly and 8 sites for scarce blue-tailed damselfly. However, the latter 2 species have usually been found in very small numbers and successful breeding may not have occurred at all sites. The keeled skimmer is widespread in suitable conditions, but no survey has attempted to catalogue the number of sites. It was recorded incidentally from 53 Rhôs pasture sites during botanical surveys



Dartmoor Scarce Dragonflies Distribution Map

(Keeled skimmer records are not included due to the large number of sites and the lack of representative data)



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in the mid-90s and is present on most valley mire sites on the commons.

On Dartmoor, all four species tend to be most closely associated with wet runnel communities comprising marsh St. John's-wort, bog pondweed and bog mosses and are often surrounded by areas of purple moor grass – tormentil mire and/or bog asphodel – bog moss valley mire. Almost all sites are found at altitudes of between 200 and 300 metres, although the keeled skimmer and scarce blue-tailed damselfly have a greater range at both ends of the altitudinal spectrum.

Current factors affecting the species on Dartmoor

With so many colonies of these species found only recently, it is not surprising that little detailed knowledge exists about their requirements on Dartmoor. Indeed, there is a paucity of information on their ecology generally, although the production of the UK action plan for southern damselfly has stimulated a number of national studies. In particular, factors affecting the aquatic larvae are still poorly understood.

Nevertheless, it is clear that scrub and rank grass invasion, caused by insufficient grazing and a lack of scrub control, has threatened two of the Dartmoor sites for the southern damselfly. The level of grazing still remains problematical at one of these sites. Several scarce blue-tailed damselfly colonies are centred on former clay workings or other man-made pools that are now becoming overgrown with rank vegetation and scrub. However, the majority of sites for all of these species are located on the fringes of large commons. Changes to grazing management (for instance as a result of these sites entering into an ESA agreement which is intended to benefit heathland in other parts of the grazing unit) may adversely affect the habitat of damsel and dragonflies at these sites. Here it will be important to monitor populations and habitat changes in the mires, taking appropriate action where necessary.

The quality and quantity of the water supply to dragonfly sites are clearly factors of major importance to these species, all of which have aquatic larvae. As yet, there is no indication that water supply or quality is causing a problem at Dartmoor sites, but there is so little information that it is unlikely that problems would be detected unless they produce catastrophic results.

Current action on Dartmoor

Of the three southern damselfly sites, one is managed under a management agreement with Dartmoor National Park Authority and the other two are covered by ESA agreements. All of these sites have been monitored annually for the past 4 years by DNPA with financial support from EA. The results of this work have driven changes in grazing regimes, scrub control and runnel alignment on two of the sites. Numbers at all 3 sites in 2006 were the highest recorded to date, but these populations remain



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Paired small red damselflies at Doe Tor mire

highly susceptible to management changes. Searches of other potential sites were carried out in 2006 by DNPA, but did not result in any further colonies being found.

The seven sites with small red damselfly records include two within SSSIs, and five which are covered by ESA agreements.

Virtually all of the sites with scarce blue-tailed damselfly records are located on commons, and two are within SSSIs.

The Devon Dragonfly Survey and the Scarce Damselfly Survey carried out by DNPA in 1998 are currently being updated.

Scarce Dragonflies Key Conservation Objectives and Targets

Scarce Dragonflies Objectives

Objective 1

Establish the distribution of southern damselfly colonies on Dartmoor and ensure they remain viable.

Dartmoor targets

- A** Complete a survey of potential new sites by 2001.*
- B** Maintain all 3 known colonies at or above their population levels for 2005/6 (ie. peak counts of 250+ at the largest site and 100+ at the two smaller ones).

Objective 3

Establish the distribution of small red and scarce blue-tailed damselflies and maintain viable populations throughout their range on Dartmoor.

Dartmoor targets

- A** Complete a survey of potential new sites by 2001.*
- B** Maintain recorded presence at or above the number of sites where they were known in 2005/6 (5 and 8 respectively) by 2011.

Objective 2

Maintain the keeled skimmer dragonfly as a common and widespread species on Dartmoor.

Dartmoor targets

- A** Establish a baseline for monitoring by surveying a sample of valley mires and Rhôs pastures by 2007 and re-survey every 5 years thereafter.
- B** Seek to maintain the same number of sites with keeled skimmer present, within the total of monitored sites by 2016.

Objective 4

Foster a greater understanding and awareness of the scarce dragonflies found on Dartmoor and the habitats they frequent.

Dartmoor targets

- A** Support and encourage research into the ecology of these species.
- B** Ensure public access is available to at least one Dartmoor site for each species.
- C** Produce at least one media item/guided walk a year incorporating scarce dragonflies and/or their habitats.

* Target from original (2001) version of the BAP that has already been achieved and therefore not taken forward in the revised Action Plan.

Actions for Scarce Dragonflies on Dartmoor

Monitoring responsibility: Dartmoor National Park Authority

Action	Meets Objective/Target	Deliverer		Complete by					Date achieved
		Lead	Partners	2007	2008	2011	2016	On-going	
Policy and Legislation									
Include protection policies for all sites in all relevant statutory plans and LEAPs when reviewed	1B, 2B, 3B	DNPA, EA							●
Site Safeguard									
Safeguard sites against direct threats via planning controls and other consultation procedures	1B, 2B, 3B	DNPA							●
Habitat Management									
Ensure all management agreements and plans take account of the needs of these species, especially in relation to ESA agreements on moorland	1B, 2B, 3B	NE, DNPA							●
Implement management plan at southern damselfly site covered by DNPA agreement	1B	DNPA							●
Draw up management plans for other SD sites as appropriate	1B, 2B, 3B	DNPA, NE	BDS	●					
Ensure as far as possible that all sites do not suffer from extremes of water levels, grazing pressures, or sources of pollution	1B, 2B, 3B	DNPA, NE, EA	BDS						●
Advisory									
Advise site owners and managers on the management requirements of the three scarce species of damselflies	1B, 3B	DNPA, NE	BDS	●					

(cont.)

Actions for Scarce Dragonflies on Dartmoor (cont.)

Action	Meets Objective/ Target	Deliverer		Complete by					Date achieved
		Lead	Partners	2007	2008	2011	2016	On-going	
Research & Monitoring									
Undertake a sample survey of valley mires and Rhôs pastures for keeled skimmers	2A	DNPA	BDS	●			●		
Monitor all southern damselfly sites annually	1	DNPA	NE, BDS					●	
Monitor all small red damselfly sites at least every 5 years	3	BDS, DNPA	NE			●	●		
Monitor all post 1996 scarce blue-tailed damselfly sites at least every five years	3	BDS, DNPA	NE			●	●		
Encourage research into the ecology of these species through the provision of information, access, support for students, etc.	4A	DNPA	NE, BDS					●	
Communication and Publicity									
Ensure relatively easy access is available to at least one Dartmoor site for each species	4B	DNPA		●					
Produce at least one article for the <i>Dartmoor Biodiversity Newsletter</i> or another media item each year	4C	DNPA, BDS	NE					●	

Abbreviations used this table:

BDS – British Dragonfly Society, DNPA – Dartmoor National Park Authority, EA – Environment Agency, MoD – Ministry of Defence, NE – Natural England