

Tree and scrub clearance to enhance habitat for the southern damselfly *Coenagrion mercuriale* at Creech Heath, Dorset, England

Liley D.

Footprint Ecology, Court House, Binnegar Lane, East Stoke, Wareham, Dorset BH20 6AJ, UK

SUMMARY

Scrub and trees were removed from overgrown clay pits at a nature reserve in southern England. Prior to management the maximum counts of southern damselfly *Coenagrion mercuriale* was 40-70 adults annually, but this increased to around 150-200 adults after management opened up the pools.

BACKGROUND

Abandoned mineral workings and clay pits on heathlands can hold small streams and pools. Such sites add to the range of habitats and species present on heathland sites and in particular can hold a number of rare species. However, these wetland areas, without some kind of intervention, can dry out and become choked with scrub. This leads to shading out of the open habitat required by some fauna and flora, including a variety of local and uncommon invertebrate and plant species.

Management by the RSPB's Heathland Project to open up and enhance old, water-filled mineral workings at Creech, in Dorset are described here. These former clay pits, now owned by the Herpetological Conservation Trust (HCT), hold a number of UK conservation priority species including southern damselfly *Coenagrion mercuriale*, medicinal leech *Hirudo medicinalis* and pillwort *Pilularia globulifera*.

ACTION

Restoration area: The site Creech Heath (National Grid ref: SY 928837) is about 80 ha in extent and contains many small-scale, old clay workings (pits from which clay has been extracted), with permanent pools, running water and seepages. Some of the channels receive water (pH 7.3) from a chalk spring outside the site. A southern damselfly *Coenagrion mercuriale* colony is located on

the main spring-fed stream, where the stream flows slowly through a narrow mire. Much of the wetland area contained dense (100% cover) willow *Salix* spp. and some alder *Alnus glutinosa* scrub. These areas were heavily shaded, contained little water and were drying out.

Scrub clearance: The first stage of restoration commenced in 1994 when 0.45 ha of scrub downstream from the damselfly colony was removed, opening up an additional 120 m of stream. About 80% of the *Salix* scrub was removed, leaving small clumps in places to give some shelter to the newly opened areas from the prevailing wind. Further management work was conducted in 1998, extending in 1999 to adjacent areas. This further work resulted in one third of a hectare of interlinking gullies and hollows being cleared of scrub. The clearance was conducted largely with chainsaws, but also manually with bow saws in the wetter areas to prevent petrol/chain oil contamination of the water courses. Cut material was dragged to drier ground and burnt. Large lengths of wood and some stumps were pulled out using a winch. Stumps away from the water course were treated with Triclopyr herbicide to prevent re-growth. Channels were dug out in places, using spades. Approximately five large pines *Pinus* and some birch *Betula* trees growing round the edges of the gullies were also removed, further decreasing the amount of shade. One small channel was blocked using cut timber to create an area of deeper water.

CONSEQUENCES

Damselfly monitoring: Monitoring of the southern damselflies was conducted in most years, using a standard transect route and following the methodology described by Smallshire (2001). Surveys from the early 1990s (prior to management) showed the damselfly to be confined to the small remaining open area and numbers (total number of males and females combined) ranged from 40–70. Damselflies were recorded within the newly cleared areas within two years of the scrub clearance and channel

restoration, with numbers rising to a peak of over 250 adults. Counting has continued on an annual basis and maximum counts have stabilised between 150 and 200 (e.g. 183 was the maximum count in 2004).

REFERENCES

Smallshire D. (2001) Surveillance monitoring of southern damselfly. *British Dragonfly Society News*, 2001.

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