

Creation of a large pool for colonisation by white-faced darter *Leucorrhinia dubia* dragonflies at Chartley Moss NNR, Staffordshire, England

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SUMMARY

At a nature reserve in central England, after failure of smaller pools dug to provide long-term white-faced darter *Leucorrhinia dubia* breeding habitat, a larger 7 x 7m pool was created in 1992. Breeding by white-faced darters was confirmed in 1995 and they have since bred annually with 54 individuals recorded in 2003.

BACKGROUND

In Britain the white-faced darter *Leucorrhinia dubia* is a rare dragonfly with a disjunct distribution. It has declined in the last 35 years and it is now present at only half of the localities at which it occurred in the mid 20th Century. In Britain it is found at isolated sites from the English Midlands to northern Scotland. Currently there are only five breeding sites in England and, due to its rarity, it is a UK Biodiversity Action Plan species. Chartley Moss is the most southerly known extant site in the UK and a new pool was dug in 1992 in an attempt to increase the availability of white-faced darter breeding habitat and bolster the population.

ACTION

Excavation of breeding pool: At Chartley Moss National Nature Reserve (National Grid ref: SK 027243) in Staffordshire, central England, in an attempt to increase the available breeding habitat, management work was undertaken by English Nature.

The white-faced darter, requires relatively deep, oligotrophic, acidic bog pools with semi-submerged rafts of *Sphagnum* moss at the edges in which to breed. They are confined to waters without fish. Larvae also occur among

waterlogged *Sphagnum* in depressions devoid of open standing water.

After the failure of smaller pools dug in 1988 to provide suitable long-term white-faced darter breeding habitat in 1992 (Beynon 2001), one large pool, 'Wood Pool', was dug in the peat mechanically with a tracked excavator. This pool was approximately 7 x 7 m in size with a small island in the middle. The new pool was located 85 m north-east of the nearest existing darter breeding pool, 'Shooters Pool'.

CONSEQUENCES

Confirmation of breeding success: The first confirmation of white-faced darters breeding at Wood Pool was established in 1995, three years after its creation. Subsequently, the species has bred there annually ever since. The most recent population estimates (number of individuals observed around the pool) are: 2002 - 24; 2003 - 54; 2004 - 42.

Conclusions: In contrast to the smaller pools dug in 1988 (Bailey 1992), the larger pool has provided suitable long-term breeding habitat for white-faced darters, with successful breeding confirmed in every year over the past 10 years.

REFERENCES

Bailey M.P. (1992) The White-faced dragonfly *Leucorrhinia dubia* at Chartley Moss National Nature Reserve. *Journal of the British Dragonfly Society*, 8, 1, 1-3.

Beynon T.G. (2001) Colonization by White-faced Darter *Leucorrhinia dubia* (Vander Linden) of the East-West Ditch at Chartley Moss NNR, Staffordshire, with notes on its status at other pools. *Journal of the British Dragonfly Society*, 17, 20-30

For more information about white-faced darters see:

www.dragonflysoc.org.uk/mffledubfull.htm

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