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Fen Violet *Viola persicifolia* Schreber: a review of conservation work carried out under English Nature's Species Recovery Programme 1993-2005

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### Introduction

This review summarises the work carried out on fen violet *Viola persicifolia* in the period 1993 to 2005, under English Nature's Species Recovery Programme. The contractors were the Institute of Terrestrial Ecology (later the Centre for Ecology and Hydrology), Tim Pankhurst, and the Rare Plants Group of the Ashmolean Natural History Society of Oxfordshire. The sources of information for this review were reports produced by all these contractors

### What was done

Fen violet is Endangered in Britain and listed on Schedule 8 of the Wildlife and Countryside Act 1981. It has declined throughout western Europe and is rare in many countries. In Britain it is a plant of base-rich lowland fens and wet meadows. It has been recorded from over 20 sites in England, but its only remaining sites in 1993 were believed to be Woodwalton Fen and Wicken Fen National Nature Reserves, in Cambridgeshire. In 1997 it was rediscovered in Otmoor SSSI, Oxfordshire, in ground disturbed by the removal of willow two years earlier.

Populations of *Viola persicifolia* fluctuate widely in size and plants tend to appear in different locations from one year to the next, or to disappear from sites altogether for periods of years. Seeds can lie dormant for many years, germinating when conditions become favourable. During the period of the Recovery Programme, historic sites for *Viola persicifolia* in England were searched, but fen violet was not found. These sites were also assessed for their potential as re-introduction sites, but nowhere suitable was discovered.

### Results and conclusions

Autecological work carried out in the field and on cultivated plants showed that in order to remain viable, populations of *Viola persicifolia* need very specific conditions.

- There must not be too much competition from other plants.
- Periodic disturbance of the soil is necessary to stimulate germination.
- Wet soil is needed in winter but waterlogging in spring and summer is detrimental.

The extant British populations of *Viola persicifolia* were monitored annually from 1993 to 2005 and the results are detailed here. At Wicken Fen, numbers of *Viola persicifolia* fell sharply in the late 1990s and the species has not been found there since 2003. At Woodwalton Fen, *Viola persicifolia* declined drastically after its population peaked in 1996 and 1997, and only one plant was found there in 2005. However, there may still be a large viable seed bank in the peat. An attempt to revitalise populations by disturbing the soil was temporarily successful, but experiments to reinforce populations by introducing young plants and seed met with no success. The Oxfordshire population appears to be self-sustaining.

The decline of *Viola persicifolia* in Cambridgeshire may be reversible with appropriate management, but climate change could render the sites permanently unsuitable. Unless the water table or the local topography at Wicken Fen and Woodwalton Fen can be manipulated to prevent the soil remaining waterlogged in spring, and a regime of regular disturbance is introduced, the species will remain very vulnerable to extinction there.

A reserve population of *Viola persicifolia* is established in cultivation in Cambridgeshire. Seed from Wicken Fen and Otmoor is stored in the Millennium Seed Bank, Royal Botanic Gardens, Kew.

Suggestions for the future direction of work on *Viola persicifolia* are made.

## English Nature's viewpoint

Fen violet is a rare plant in England and is the subject of a full conservation programme. This ENRR gives an excellent overview of the work undertaken and suggestions for future work.

## Selected references

- Anon. 2005. *Great Fen Project*. English Nature, The Wildlife Trusts, Huntingdonshire District Council, Environment Agency.
- Annual reports made to English Nature: Croft et al, 1996-2001; Lambrick, C, 2001 a and b - 2005; Pankhurst 1997; 2001, 2003, 2004 a and b; 2005; Wells T 2008; Wells et al, 1993 and 1995
- Cheffings, C.M., & Farrell, L. 2005. *The vascular plants Red Data List for Great Britain*. Species Status No. 7. Peterborough: Joint Nature Conservation Committee.

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