



Bee-fly *Villa cingulata* (Meigen)

Biodiversity Action Plan

(Red Data Book Category 1 – Endangered)

A Wildthings Species Action Plan 2006–2010

Current status and distribution

The history, known ecological requirements and threats to this endangered species are summarised in Falk, S. (1991) *Research and survey in Nature Conservation No. 30 A review of the scarce and threatened flies of Great Britain (Part 1)* N.C.C., Peterborough and Stubbs, A & Drake, M. (2001) *British Soldierflies and their Allies* British Entomological & Natural History Society, Reading.

In brief, the fly was recorded prior to 1937 from sites primarily in Oxfordshire and with other records from Devon, Wiltshire, Hampshire and Kent. Calcareous grassland or woodland edge grassland are the favoured habitat. The lifecycle is not known but it is thought likely that the larvae are parasitoids of other insect larvae, principally lepidopterous or aculeate hymenopteran larvae. Adults appear in July and August. Former sites are now unsuitable as they have often been lost to afforestation or otherwise changed. The greatest threat to the species is considered to be habitat loss and the management of sites is given as “Maintain rotational grazing policies to produce a mosaic of vegetation types (including patches of bare soil) and prevent scrub invasion”.

In 2000 a female specimen of what is thought to be this fly was captured at Tucking Mill Avon Wildlife Trust Nature Reserve (ST76 61) on 19th July by Dave Gibbs. (At a European level the identity of this species relies upon examination of the male genitalia, so on existing knowledge this specimen must represent *V.cingulata* although there is a possibility that it represents a European species as yet unrecorded from the British Isles.) Coincidentally during 2000, a second sighting of what again is assumed to be this species was made by Matthew Oates of the National Trust at Daneway Banks, Gloucestershire Wildlife Trust Reserve (SO 93 03) on the Cotswolds. In this instance a male was observed on 23rd June and a fly was seen again on the following day. Capture was not made although close observation was possible.

In 2004 two examples were seen at Leigh Woods by Ray Barnett and a female captured (again the probability suggests that the fly was of this species). Dave Gibbs has also established that the species has now been seen at one or two further sites across Southern England in recent years.

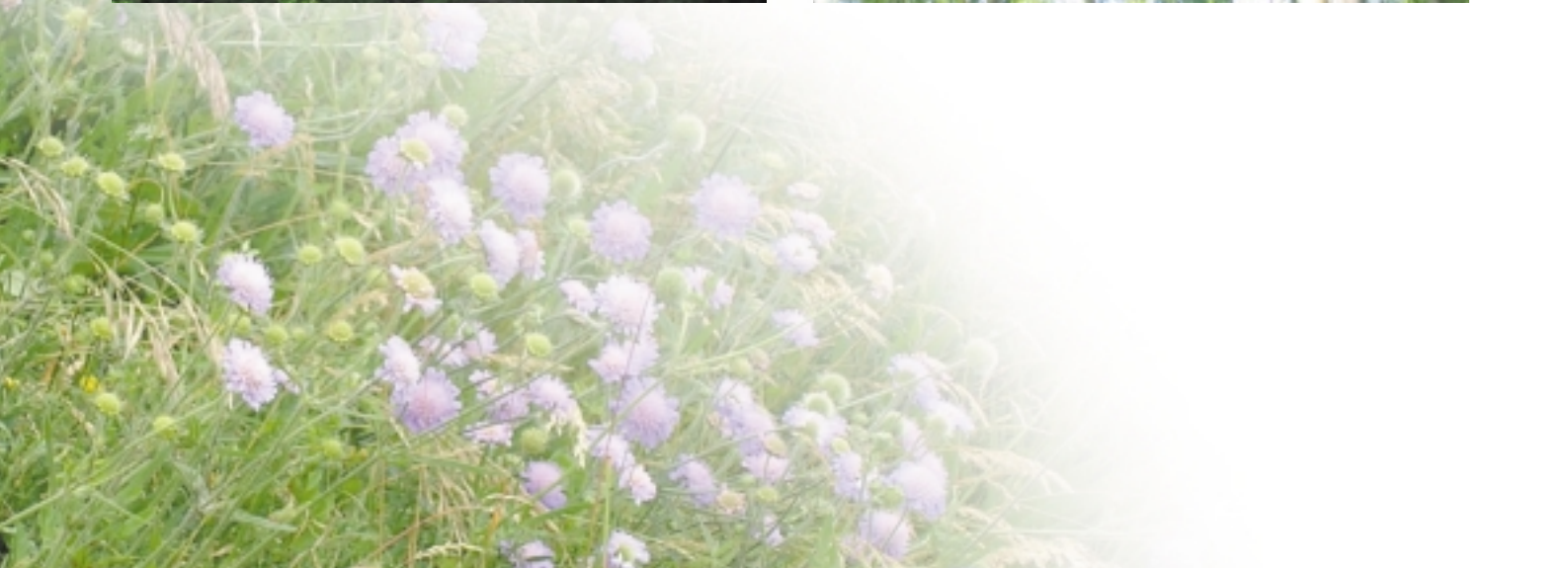
The possible explanations for these sightings include: that the fly has always been present on these sites (or ones nearby) but has never been found by an entomologist before (the records from Tucking Mill and Daneway Banks represent the first county records for Somerset and Gloucestershire respectively) or that the British population of this species is expanding or that they represent colonisation by European specimens which have arrived as migrants from the continent, which have been successful due to the impact of climate change.

Current factors causing loss or decline

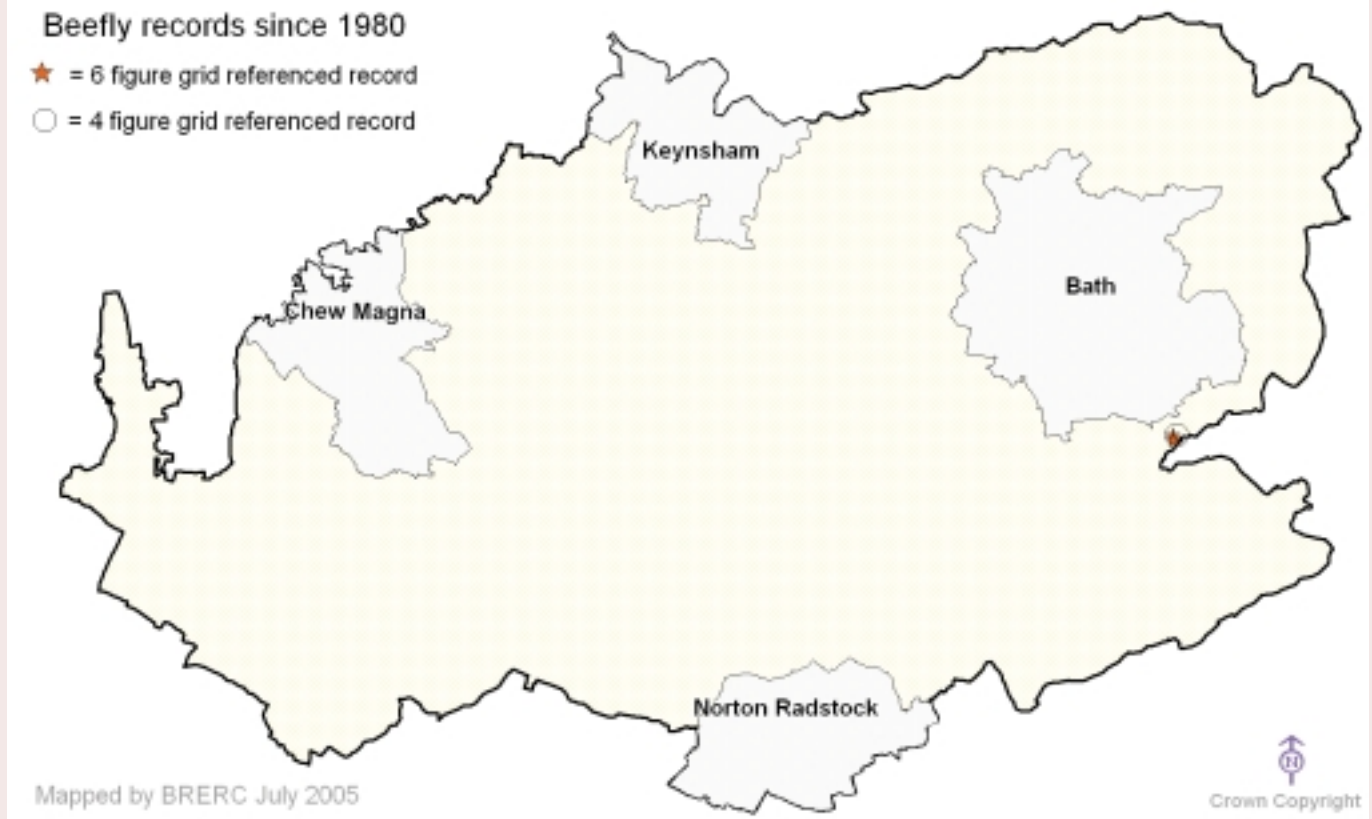
- Habitat loss
- Habitat neglect and / or mis-management
- Lack of awareness and understanding about this species

Current action in Bath and North East Somerset

- Site survey and monitoring of Tucking Mill 'Bee-fly' site



Distribution map



Action plan objectives and targets

- 1 Confirm continued presence or absence of *Villa cingulata* at Tucking Mill
- 2 If presence confirmed, encourage sympathetic management to protect and enhance population
- 3 If presence confirmed monitor population and habitat conditions
- 4 Identify habitat preferences and species associations
- 5 Identify further populations of *Villa cingulata* in Bath and North East Somerset if any do indeed exist
- 6 Assess potential for colonisation of *Villa cingulata* in other suitable locations

Proposed actions with lead agencies

Action	Lead	Measurable Outputs	Objectives	Target Date
A. Survey the Tucking Mill site to establish the continued presence of a <i>Villa</i> species of Bee-fly.	BRERC	Presence or absence of Bee-fly	1	2006
B. If found, confirm identity to species level by capture and examination of male genitalia.	BRERC	Confirmation of exact species	1	By 2010
C. Establish the potential size of the population and map the area of the site that it inhabits.		Distribution map		
D. Attempt to establish further details of its lifecycle in particular what sort of prey it utilises as a parasitoid and the likely habitat preferences needed at all stages of the lifecycle.	–	Greater knowledge gained	2,3	By 2010
E. Suggest potential management regime for the site to maximise the conservation of the species.	–	Changes in management to sites where Bee-fly recorded or potential new sites	2	By 2010
F. Survey other sites within the B&NES area which could potentially harbour populations of <i>Villa</i> species, look for adults and assess the potential for the species to be present or the management needed to encourage colonisation.	BRERC CVWG	Greater Knowledge of distribution of Bee-fly	2,3,5,6	By 2010
G. Establish European as well as British status of the species through liaison with dipterists etc	–	Greater Knowledge	–	By 2010

BRERC – Bristol Regional Environmental Records Centre

CVWG – Cam Valley Wildlife Group