

HORNET ROBBERFLY

Asilus crabroniformis

Hampshire Biodiversity Partnership

SPECIES ACTION PLAN

1 INTRODUCTION

The hornet robberfly has been identified by the UK Biodiversity Steering Group as a species that requires conservation action. It is listed on the priority list of the UK Biodiversity Action Plan. A species action plan for the hornet robberfly was published as part of Tranche 1 of the UK action plans in *Biodiversity: The UK Steering Group Report Volume 2* (page 124)¹. The Hampshire Biodiversity Partnership has identified the hornet robberfly as a species requiring action in Hampshire where important populations are present.

2 CURRENT STATUS

2.1 Ecology and Habitat Requirements

The hornet robberfly is a species of open, unimproved or semi-improved pasture, heathland, dunes and occasionally wide forestry rides. The presence of livestock is an important aspect of the hornet robberfly's ecology, but the species appears to favour those sites which have a mosaic of mixed height vegetation, rather than those sites with heavily grazed short swards. Adults fly in temperatures above 16°C from late June to late October and feed on a range of insects including grasshoppers, adult beetles, and flies. Adults are known to range over distances of 500m or more from core breeding sites². Eggs are laid primarily in, or immediately beneath, drying friable soil mixed with livestock dung². Larval habits are still largely unknown, but it is thought that they feed on dung beetle larvae and other dung and soil borne invertebrates. It is likely that larval development may take as long as two years.

2.2 Population and Distribution

In the UK the hornet robberfly is restricted to southern England and Wales. It has been recorded from 142 (post 1970), 123 (post 1980) and only 101 (post 1990) 10km squares in Britain³. Numbers of adults vary at known colonies from year to year making colony population size difficult to determine. Recent distribution maps have shown that a stronghold of the hornet robberfly in the UK is in west Hampshire and east Dorset³.

2.3 Important Sites

The hornet robberfly has been recorded from 28 post 1970 sites in Hampshire^{4,5}. The majority of those sites in Hampshire, which support populations of the hornet robberfly are National Nature Reserves or Sites of Special Scientific Interest (SSSI).

2.4 Protection

There is currently no protection afforded to the hornet robberfly in the UK.

3 CURRENT FACTORS AFFECTING THE HORNET ROBBERFLY

- Reduction in species-rich unimproved pasture due to high intensity farming practices.
- Use of persistent treatments for livestock such as Ivermectins resulting in the loss of dung fauna.
- Loss of suitable habitat through lack of appropriate management, e.g. overgrazing by livestock, changes in livestock grazing regimes, lack of scrub control on grassland sites, use of short-term improved agricultural grass keys.
- Habitat destruction through development.
- Isolation and scarcity of suitable habitats.

4 CURRENT ACTION

4.1 National

- English Nature commissioned research into the habits of adult hornet robberflies during 1997 as part of the Species Recovery Programme².
- English Nature commissioned a study of the land use and livestock grazing regimes on 40 sites with hornet robberfly populations during 1999/2000³.
- The Countryside Council for Wales commissioned research into the autecology of the larvae during 1998 and 1999^{6,7}.

5 OBJECTIVES

The overall aim of this Plan is to protect and increase the distribution and population of the hornet robberfly in Hampshire. This broad aim translates into the specific objectives set out below. Where feasible, objectives have been allocated targets against which achievement can be measured.

The 'Proposed Action' table in section 6 identifies the action to be taken to meet these objectives.

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	OBJECTIVES	PROPOSED ACTIONS
A	Maintain existing Hornet Robberfly populations by preventing any loss of breeding populations or key habitat sites in Hampshire.	1 – 13, 15, 17 - 20
B	Enhance the status of Hornet Robberfly in Hampshire by establishing and monitoring areas of suitable habitat adjacent to known colonies.	1 – 11, 15, 17 - 20
C	Contribute towards monitoring procedures and a comprehensive understanding of the Hornet Robberfly distribution, status, and ecological requirements in Hampshire through appropriate research, survey and monitoring,	13 –17, 21
D	Promote communication, education and awareness of the status and needs of the Hornet Robberfly.	4, 5, 7, 8, 12 - 15

6 PROPOSED ACTION

The following table lists the actions required to achieve the objectives set out in this Plan. Each action has been assigned to one or more 'Key Partners'. Key Partners are those organisations that are expected to take responsibility for the delivery of the actions assigned to them, according to the targets set in this Plan. Other organisations may also be involved in the delivery of action, and they have been indicated in the 'Others' column.

Key to symbols in Action Table:

- ◆ To be completed by the indicated year. Work can commence at any time before the due date, at the discretion of the Key Partner.
- ◆⇄ Design or production of a plan/strategy to be completed by this year and then followed by its implementation.
- ➡ To start by the indicated year and usually followed by ongoing work. A start arrow in year 2000 can indicate a new action, or a new impetus to existing work.
- ⇄ Work that has already begun and is ongoing.

	ACTION	DELIVERY BY		YEAR						MEETS OBJ.	
		Key Partner	Others	◆ = complete by	◆⇄ = design by and implement	➡ = start by	⇄ = ongoing	2001	2002		2003
Site and Species Policy and Protection											
1	Ensure that the needs of hornet robberfly are included in land management incentive schemes.	EN	LA,HWT DEFRA	⇄	⇄	⇄	⇄	⇄	⇄	⇄	A, B
2	Ensure that the needs of this species are fully considered in local development plans and policies.	LAs	EN, HWT		◆						A, B
3	Review and assess the effectiveness of current management policies/advice and amend where necessary.	EN	LAs	◆							A, B
4	Take into account conservation of this species when reviewing and adjusting agri-environment schemes.	DEFRA		⇄	⇄	⇄	⇄	⇄	⇄	⇄	A, B, D
5	Ensure that advisors receive appropriate advice/training in the identification and habitat management requirements of the species.	EN, HWT	DEFRA			◆					A, B, D
6	Designate all sites with large breeding populations as SSSI to ensure that core sites are appropriately protected.	EN	HWT	➡							A, B, D
7	Designate sites as SINCs where appropriate.	HCC	DCs			◆					A, B
Site and Species Management											
8	Implement appropriate management of all occupied sites, to ensure suitable habitat present.	EN, HWT		⇄	⇄	⇄	⇄	⇄	⇄	⇄	A, B

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	ACTION	DELIVERY BY		YEAR						MEETS OBJ.
		Key Partner	Others	◆ = complete by	◆⇄ = design by and implement	⇄ = ongoing	→ = start by			
				2001	2002	2003	2004	2005	2010	
9	Ensure development schemes do not affect colonies	LAs, EN	HWT	⇄	⇄	⇄	⇄	⇄	⇄	A, B
10	Encourage landowners to take up beneficial land management schemes and on adjacent land	DEFRA, FWAG, HMAP	EN, HWT	⇄	⇄	⇄	⇄	⇄	⇄	A, B, D
11	Encourage favourable management of adjacent land to aid dispersal.	EN, HWT	DEFRA, HMAP, FWAG		→					A, B
12	English Nature to target core SSSI sites and secure Site Management Statements by 2003.	EN				◆				A
Research, Survey and Monitoring										
13	Develop and maintain database for hornet robberfly records in Hampshire.	HWT	HCC	◆⇄						A, C, D
14	Ensure records are fed to national and local biological databases.	HCC, HWT	EN, FC	⇄	⇄	⇄	⇄	⇄	⇄	C, D
15	Collate all records of this species and identify important colonies to pursue other actions	EN, HWT		◆						A, B, C, D
16	Consider initiating surveys for this species across Hampshire	EN, HWT				◆				C, D
Communication, Awareness and Promotion										
17	Ensure the relevant landowners, managers and all others involved in hornet robberfly sites have easy access to advice on appropriate management techniques.	EN	HWT	⇄	⇄	⇄	⇄	⇄	⇄	A, B, D
18	Promote awareness, appreciation and conservation of the hornet robberfly in Hampshire through press releases, leaflets and appeals.	EN, HWT	DEFRA	→						A, B, D

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KEY TO ORGANISATIONS:

DCs District Councils
 DEFRA Department of Environment, Food and Rural Affairs
 EN English Nature
 FC Forestry Commission
 FWAG Farming and Wildlife Advisory Group

HCC Hampshire County Council
 HMAP Habitat Management Advisory Project
 HWT Hampshire Wildlife Trust
 LAs Local Authorities

REFERENCES

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1. ***Biodiversity – The UK Steering Group Report, Volume 2: Action Plans.*** Department of the Environment, HMSO, 1995
2. ***The Hornet Robberfly, Asilus crabroniformis Linnaeus – Adult behaviour at selected sites in Dorset, Hampshire and Surrey in 1997.*** B. J. Pinchen, D. Bird, and J. Denton. English Nature Research Reports, No. 274. Peterborough, 1997.
3. ***The Hornet Robberfly Asilus crabroniformis: land use and livestock grazing regimes at sites in England.*** M. Smith. English Nature Research Reports, No.387. Peterborough, 2000.
4. ***Records of Asilus crabroniformis (Diptera: Asilidae)*** held by Hampshire Wildlife Trust. Unpublished data sets. 12 December 2000.
5. ***Hornet Robberfly records.*** B. J. Pinchen. Unpublished records 2000.
6. ***The autecology of the Hornet Robberfly Asilus crabroniformis L in Wales, 1998.*** D. K. Clements, P. Skidmore and J. S. Denton. Countryside Council for Wales Contract Science Report. Bangor, 1999.
7. ***The autecology of the Hornet Robberfly Asilus crabroniformis L in Wales, 1999.*** D. K. Clements and P. Skidmore. Countryside Council for Wales Contract Science Report. Bangor. In preparation.

This is one of many Habitat, Species and Topic Action Plans being prepared by the Hampshire Biodiversity Partnership. It will be monitored by the Partnership and fully reviewed and updated in 2005.

This species action plan has been prepared by Bryan J Pinchen on behalf of the Hampshire Biodiversity Partnership.

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