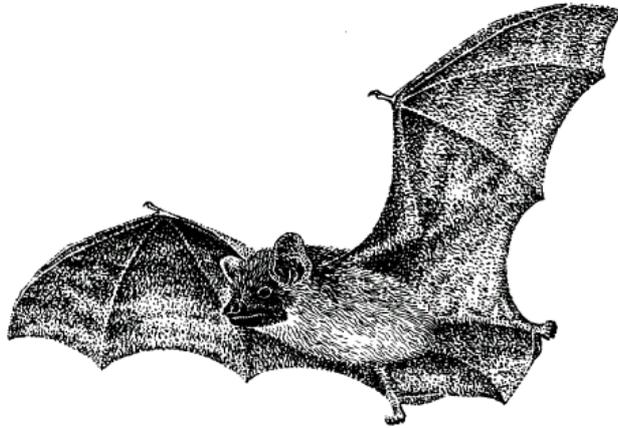


Species Action Plan for Sussex



pipistrelle bat species *Pipistrellus* spp.

I. Introduction/Current Status

The pipistrelles are Britain's smallest bats. They vary in colour, but are usually medium to dark brown on the back and only slightly paler underneath. They are the most common species in towns. Their flight appears fast and jerky as they dodge about pursuing small insects, which are caught and eaten in flight. A single pipistrelle may consume up to 3000 insects in a night.

There are two species of pipistrelle which are native to the UK, *Pipistrellus pipistrellus* (also known as the '45kHz') and *Pipistrellus pygmaeus* (also known as the '55kHz'). There is also one species of pipistrelle which is a common vagrant in Sussex and may be able to breed here, *Pipistrellus nathusii* (Nathusius' pipistrelle). The picture that is gradually emerging is that the habitat requirements, at least of the first two, are quite different. There is some overlap and they can frequently be found foraging in the same locations. Differentiation of species is difficult but can be achieved in the field by experienced bat workers or by using a basic heterodyne bat detector. Some calls cannot be attributed to one or the other, but identification is possible sufficiently often for the species to be recorded separately during monitoring (as they have been in the National Bat Monitoring Programme). Most bat records predate the recognition that there are three species. This SAP, and the term 'pipistrelle' used within it, shall refer to all three species.

Although it remains the most abundant and widespread bat species in the UK, the pipistrelle is thought to have undergone a significant decline in numbers this century. Estimates from the National Bat Colony Survey suggest a population decline of approximately 70% between 1978 and 1993. The current pre-breeding population estimate for the UK stands at approximately 2,000,000. The problems of estimating population trends have been compounded by the recent discovery that there are three distinct species of pipistrelle bat in the UK.

The pipistrelle is listed in Appendix III of the Bern Convention, Annex IV of the EC Habitats Directive and Appendix II of the Bonn Convention (and is included under the Agreement on the Conservation of Bats in Europe). It is protected under Schedule 2 of the Conservation (Natural Habitats, etc.) Regulations, 1994 (Regulation 38), Schedules 5 and 6 of the Wildlife and

Countryside Act 1981 and Schedules 5 and 6 of the Wildlife (Northern Ireland) Order 1985. Under UK law it is an offence to harm or disturb any bat species or bat roost. (www.english-nature.org.uk/ & www.naturenet.net/law/wca.html)

The pipistrelle can be found throughout Sussex, in varying population densities. The relevant natural areas in Sussex include Folkstone to Selsey Bill, High Weald, Low Weald and Pevensey, South Downs and Wealden Greensand. The Highest populations are found in the Wealden areas and the lowest on the Downs.

1.1. Habitat Requirements

Each of the three species will have its own specific habitat requirements, with some overlap, within the following:

- Roost sites (for hibernation, summer feeding, and maternity colonies) in buildings and trees.
- Feeding areas (close to summer feeding roosts and, especially, to maternity colonies) providing numerous small insect prey, often associated with water.
- Navigation features/flyways (for migration between different roosts, and between roosts and feeding areas) such as hedgerows, tree lines and woodland edges.
- It is also possible that swarming areas (for social and, perhaps, mating purposes) are required.

2. Current Factors Causing Decline

- There is a national decline in the species due to a reduction in insect prey abundance, caused by high intensity farming practice (such as large-scale use of pesticides and removal of hedgerows), inappropriate riparian management and activities (pollution, excessive water extraction), and building development.
- Loss of insect-rich feeding habitats and flyways, due to loss of wetlands, hedgerows and other suitable prey habitats.
- Loss of winter roosting/hibernation sites in buildings and old trees.
- Disturbance and destruction of roosts, including the loss of maternity roosts due to the use of toxic timber treatment chemicals.
- New building development in both brown-field and green-field sites.
- Destruction of old buildings and destruction of roost sites within buildings being renovated/repared.
- Reduction of water tables due to extraction of water for domestic (primarily) and business use.

3. National Species Action Plan

The National SAP does not differentiate between *Pipistrellus pipistrellus* and *Pipistrellus pygmaeus*, nor does it include consideration of *Pipistrellus nathusii*.

The National SAP's objectives and targets are to:

- Maintain existing populations and range of pipistrelles.
- Restore populations to pre-1970 numbers.

The National SAP's proposed actions are:

Policy and legislation

- Encourage water quality levels which will help support populations of aquatic insects on which pipistrelles feed. (ACTION: EA, SEPA)
- Ensure the needs of this species are considered in incentive schemes designed to encourage the management of habitat suitable for this species. (ACTION: FA, DEFRA, SOAEFD, WOAD)

Site safeguard and management

- Encourage favourable management of land adjacent to known roost sites to support foraging by juvenile pipistrelles. (ACTION: CCW, DoE(NI), EN, FA, SNH)

Species management and protection

- Maintain current licensing procedures and training schemes as appropriate. Assess the effect of current management and protection policies and amend as necessary to ensure maintenance of healthy populations. (ACTION: CCW, DoE(NI), EN (EN), SNH)

Advisory

- Ensure landowners are aware of the presence and legal status of pipistrelle bats, and that advice is available on appropriate methods of management for conservation of their roosts and foraging habitats. (ACTION: CCW, DoE(NI), EN, FA, SNH)

Future research and monitoring

- Undertake research to clarify the taxonomic status of pipistrelle bats in the UK. (ACTION: JNCC)
- Continue to research the habitat requirements and ecology of the species to help develop appropriate management advice. (ACTION: CCW, DoE(NI), EN, SNH, JNCC)
- Develop and implement a systematic survey technique to clarify the conservation status of the species in the UK. This should include monitoring of summer maternity roosts and the extent and effect of reproductive isolation of summer colonies used for monitoring. (ACTION: CCW, DoE(NI), EN, SNH, JNCC)
- Encourage research on the ecology and conservation of pipistrelles on an international level. (ACTION: CCW, DoE(NI), EN, JNCC, SNH)
- Pass information gathered during survey and monitoring of this species to JNCC in order that it can be incorporated in a national database and contribute to the maintenance of an up-to-date Red List. (ACTION: CCW, DoE(NI), EN, SNH)

Communications and publicity

- Maintain programmes of carefully supervised roost visiting, general education and publicity. (ACTION: CCW, DoE(NI), EN, SNH)

(List of abbreviations in appendix)

4. Current Action

4.1. Nationally

- The JNCC recently commissioned a National Bat Habitat Survey, which provided much information on habitat preference and distribution.
- In December 1995, the Department of the Environment, Transport and Regions (DETR) commissioned a five-year programme of research (1996-2000), the National Bat Monitoring Programme (NBMP), with the overall goal of developing an effective monitoring strategy for resident species of bat in the UK. The full report of the first five years of the NBMP is now available from the Bat Conservation Trust website - <http://www.bats.org.uk/nbmp/>.
- The National Bat Colony Survey has monitored many pipistrelle roosts since 1978 on the basis of annual summer roost counts.
- A large amount of research is underway, investigating reproductive physiology, mating strategies, field activity, and the morphology and ecology of two taxa by investigation of echolocation calls and mitochondrial DNA.
- Scottish Natural Heritage has developed design briefs for the conservation of pipistrelle roosts in houses.

4.2. Locally

- Collation of local bat records by the Sussex Bat Group. (www.batbox.com/sbg/)
- Other licensed bat worker activity on behalf of English Nature. (www.english-nature.org.uk/)
- Bat walks, talks and other awareness activity by members of the Sussex Bat Group.
- Bat protection law enforcement and talks to raise public awareness by the Sussex Police Wildlife Liaison Officers 0845 6070999 (www.sussex.police.uk/)

5. Objectives

- i. Maintain and enhance existing populations and ranges of pipistrelles in Sussex.
- ii. Ensure pipistrelle populations are restored to pre-1970 numbers in Sussex.
- iii. Work with developers and other stakeholders to ensure large-scale building development does not cause significant local reductions in the populations of pipistrelles in Sussex.
- iv. Work with the farming community to reduce the impact of modern farming activities on pipistrelle bats.

6. Targets

This Species Action Plan has now been archived

7. Potential

The scale of opportunity and potential for pipistrelles in Sussex:

- Sussex has large numbers of mixed and deciduous woodland areas, in and around which pipistrelles can feed.
- Many rivers, streams, lakes and ponds in Sussex, especially in the Weald, have banks that are wooded or otherwise lined with trees. These can provide good habitat for the small flying insects (gnats, mosquitoes and other members of the order Diptera) which are the pipistrelles' main diet.
- Increased conservation grants, from DEFRA, EN, Forestry Authority and EA, enable habitat restoration, e.g.
 1. Woodland planting and management,
 2. Hedgerow and field margin restoration,
 3. Wetland and pond management.
- Large areas of land are owned or managed by organisations with a remit to conserve nature (SWT, NT, Local Authorities etc.)
- Ownership of many older buildings by organisations with a remit to conserve nature (NT, Local Authorities etc.)
- The formation of a local DWAG (Developers and Wildlife Advisory Group) to develop best practice for builders and developers.
- There are large numbers of urban green areas/parks, which could be improved for bats.
- Every house built has the potential to be a roosting site for pipistrelles, especially if designed with this in mind.

Limiting factors which may restrict the range of pipistrelles in Sussex in the future:

- There has been a large amount of urban development in Sussex. Plans exist for substantial new areas to be developed for housing and industry. The majority of this new development is likely to be on arable or grazing land, and may also involve the clearance of some smaller woodland areas. The movement of population to the southeast of England is expected to continue for the foreseeable future, unless significant changes in government policy are made.
- Continuing high levels of water extraction are likely to increase further as development progresses. This will result in low water tables for significant periods (as demonstrated during the water shortages of the late 1990s.)
- The impact of climate change is not predictable, yet clearly will affect the pipistrelles' habitat. Should the impact create further downward pressure on population levels, this will have substantial consequences. The impact may be offset if vital habitats are linked together to allow species such as the pipistrelle to manoeuvre, i.e. allow them the possibility of shifting from an unfavourable climate zone to a favourable one.

8. Action Plan

This Species Action Plan has now been archived

9. Monitoring/Review

Some reporting has been described in activities included in the plan, above.

This action plan will be monitored annually by the Sussex Bat Group and its partners in association with the Sussex Biodiversity Partnership, and reviewed every five years.

10. References

Guidelines for the production of local species action plans (Sussex Biodiversity Partnership).

National Species Action Plan for *Pipistrellus* species.

Various county SBAPS for pipistrelles and other bat species (including Essex, Devon, Nottinghamshire, Suffolk) to which reference was made during the production of this document.

Biodiversity: UK Action Plan.

The UK's National Bat Monitoring Programme. Final Report 2001. DEFRA, Bat Conservation Trust. DETR contract reference No. CR018.

11. Consultation

BCT	Bat Conservation Trust (represented by Tony Hutson)
CCs	County Councils
Developers	Building development industry
DWAG	Developers and Wildlife Advisory Group
EA	Environment Agency
EN	English Nature (Anna Bulbrook)
FWAG	Farming and Wildlife Advisory Group
LAs	Local Authorities/District Councils
DEFRA	Department for Environment, Food and Rural Affairs
RT	Railtrack
SBG	Sussex Bat Group (Peter Etheridge, Sheila Wright, David King, Tony Hutson, Paul Singleton)
SWT	Sussex Wildlife Trust
SBP	Sussex Biodiversity Partnership
SxBRC	Sussex Biodiversity Record Centre
Universities	University of Sussex, and Brighton University

12. . Appendix

List of abbreviations used in section 3. National Species Action Plan:

CCW	Countryside Commission for Wales
DEFRA	Department for Environment, Food and Rural Affairs
DoE(NI)	Department of Environment (Northern Ireland)
EA	Environment Agency
EN	English Nature
FA	Forestry Authority
JNCC	Joint Nature Conservation Committee
SEPA	Scottish Environment Protection Agency
SNH	Scottish Natural Heritage
SOAEFD	Scottish Office Agriculture, Environment and Fisheries Department
WOAD	Welsh Office Agriculture Department