

The state of the UK's bats

National Bat Monitoring Programme Population Trends 2012

Introduction

This is the sixth 'The State of the UK's Bats', summarising the results of the National Bat Monitoring Programme (NBMP) up to the end of 2011. The NBMP has been running since 1997, making it the longest running, purpose-built, multi-species monitoring programme for mammals in the UK. The NBMP is a partnership between the Bat Conservation Trust, Joint Nature Conservation Committee (JNCC), Defra, Countryside Council for Wales (CCW) and volunteers who conduct bat surveys across the country. All our surveys rely on the dedication and hard work of our volunteers and this report highlights the role that volunteers play in making bat monitoring a success in the UK.

Historically, severe declines in bat populations have been reported, and bats have yet to recover from these losses. NBMP data support and inform conservation action and key government biodiversity monitoring and reporting including UK and country biodiversity strategies, the Habitats Directive and the UN EUROBATS agreement. Currently, statistically robust population trends are produced for 11 of the UK's 17 breeding bat species.

The surveys

NBMP trends are produced using data collected by volunteers from three main survey methods:

- Field and Waterway Surveys using bat detectors
- Hibernation Surveys in the winter
- Colony Counts at summer maternity roosts

As a general rule, trends calculated from the Field and Waterway Survey are considered to be most robust, followed by the Hibernation Survey and then the Colony Counts.



Trends in UK bat species

In 2011, five species showed a statistically significant increase in at least one survey:

○ Greater horseshoe bat* (Colony Count)

Although the greater horseshoe bat trend shows an increase this should be treated with some caution. This is mainly due to the short duration of use of a consistent survey protocol in the Colony Count for this species, and the trend is not supported by a similar result from the Hibernation Survey.

○ Lesser horseshoe bat* (Hibernation Survey & Colony Count)

We conclude that the lesser horseshoe bat population is increasing as both sources of data are indicating the same trend.

○ Natterer's bat (Hibernation Survey)

It is unclear whether the increasing trend seen in Natterer's bat from the Hibernation survey is a real reflection of population increase or other factors as the Colony Count data do not support the increase.

○ Whiskered/Brandt's bat (Hibernation Survey)

The significant increase recorded for whiskered/Brandt's bat this year should be treated with caution as this trend comprises data from more than one species and is therefore less easy to interpret.

○ Common pipistrelle (Field Survey)

We conclude that the common pipistrelle population is increasing from the results of the Field Survey for this species. Although a contrasting significant decline was reported from the Colony Count data, Field Survey data are considered to be more robust.

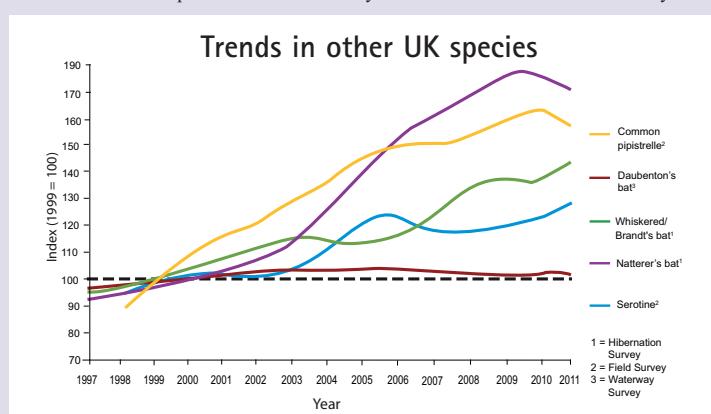
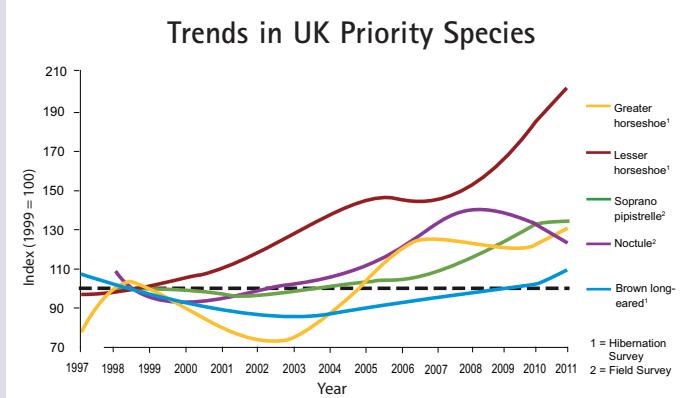
The remaining species for which we have trend information are: Daubenton's bat, soprano pipistrelle*, noctule*, serotine and brown long-eared bat*; none of these showed a significant trend in surveys in 2011.

At present, there are insufficient data available for the other six UK breeding bat species (Bechstein's bat*, Alcathoe bat, Leisler's bat, Nathusius' pipistrelle, barbastelle* and grey long-eared bat) to allow estimation of population trends.

Conclusions

Although all the species monitored appear to be either stable or increasing, these positive results should be considered in the context of reported historical severe declines in bat populations, particularly in the second half of the twentieth century. More sustained population increases would be needed to indicate recovery from this extended period of decline.

*Priority species in the UK. Note that priorities for biodiversity are now set at the individual country level.



UK long-term bat population trends to 2011 and average annual percentage change

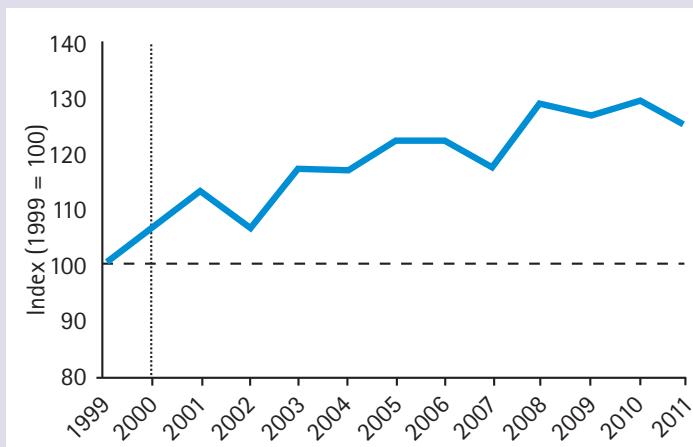
Species	Status	Survey	Trend time period	Sample size 2011	Long-term trend %	Average annual change %
Greater horseshoe bat*	Very rare, largely confined to southwest England and south Wales	Hibernation Colony	1997-2011 1997-2011	85 25	30.3 101	2.2 6.0
Lesser horseshoe bat*	Rare, largely confined to southwest England and Wales	Hibernation Colony	1997-2011 1997-2011	173 244	103 67.4	6.1 4.4
Whiskered/Brandt's bat	Common in north and west England, rare elsewhere	Hibernation	1997-2011	140	49.4	3.4
Natterer's bat	Common	Hibernation Colony	1997-2011 2000-2011	341 71	79.7 -13.6	5.0 -1.3
Daubenton's bat	Common	Hibernation Waterway	1997-2011 1997-2011	264 788	7.3 3.4	0.6 0.3
Serotine	Uncommon, restricted to south	Field Colony	1998-2011 1997-2011	367 88	32.1 -25.7	2.4 -2.5
Noctule*	Uncommon, absent from Northern Ireland	Field	1998-2011	501	23.7	1.8
Common pipistrelle	Common	Field Colony	1998-2011 1997-2011	503 412	65.3 -49.2	4.3 -5.5
Soprano pipistrelle*	Common	Field Colony	1998-2011 1997-2011	503 302	34.0 -39.4	2.5 -4.1
Brown long-eared bat*	Common	Hibernation	1997-2011	310	9.2	0.7
		Colony	2001-2011	138	14.0	1.3
Bechstein's bat*	Very rare	No trend data available; Bechstein's Bat Survey provides baseline distribution data				
Leisler's bat	Scarce in GB, common in Ireland	Recorded by iBats but more data needed to detect trends (www.ibats.org.uk)				
Nathusius' pipistrelle	Rare	Recorded by iBats but more data needed to detect trends; Nathusius' pipistrelle survey provides baseline distribution data				
Barbastelle*	Rare	Woodland Survey monitors presence at designated sites				
Grey long-eared bat	Very rare	No trend data available				
Alcathoe bat	Status unconfirmed	Presence in UK confirmed in 2010, distribution unknown				
(Greater mouse-eared bat)	Status unconfirmed	Only one individual known in the UK at present				

* Priority species in the UK. Figures in **bold** are statistically significant trends.

UK bat indicator

Since 2008, a bat indicator has been included among the UK Biodiversity Indicators <http://jncc.defra.gov.uk/page-4233> which aim to show changes in the status of species, the level of pressure or threat to biodiversity and the scale of the response to these pressures.

It is encouraging that the indicator shows an overall increase in populations of widespread bat species (17% since 2000), although the indicator has dipped slightly in 2011 and this overall increase must be seen in the context of previous declines.



Notes: The headline measure is a composite index of six species: Daubenton's bat, noctule, serotine, lesser horseshoe bat, common pipistrelle and soprano pipistrelle.

Source: Bat Conservation Trust

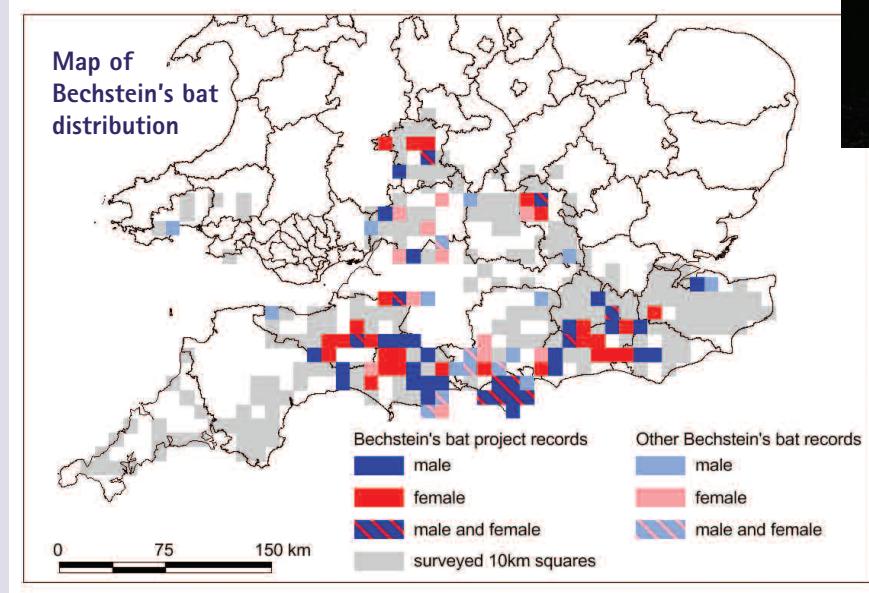


Notes: Estimate for combined (common and soprano) pipistrelle, 1978-1992. Although based on limited data, this places the more recent trends in a longer-term context.

Source: Bat Conservation Trust (data from Harris, S., Morris, P., Wray, S., & Yalden, D. (1995). *A review of British mammals: population estimates and conservation status of British mammals other than cetaceans*. JNCC, Peterborough).

Bechstein's Bat Survey

The Bechstein's Bat Survey was a four year project which aimed to map the UK distribution of the rare and elusive Bechstein's bat, a woodland specialist. To be certain of its presence in woodlands, it is necessary to catch this species, and a method using harp traps and an acoustic lure placed in specific areas of selected woodlands was developed by woodland bat experts. A key feature of this project was the involvement of ten local bat groups, who were provided with the specialist training and equipment needed to complete the surveys.



© Surrey Bat Group

The groups then organised the surveys in woodlands in their counties allowing systematic survey of woodlands over a large area within the time period of the project and development of skills across the bat group network. In total 199 woodlands were surveyed and 57 Bechstein's bats (29 female and 28 male) were caught at 37 sites. New records for Bechstein's bats were obtained for sites in Buckinghamshire, Dorset, Gloucestershire, Kent, Somerset, Surrey and Worcestershire and the known range of the species within the UK has been extended.

More on the project can be found here:
www.bats.org.uk/pages/bechsteins_bat_project.html

NBMP Volunteers

The success of bat monitoring in the UK is due to the hard work of our dedicated volunteers who take part in surveys every year and a very big thank you must go to all those who get involved with the NBMP. To date almost 2500 volunteers have undertaken surveys at over 5000 sites. The number of volunteers taking part has increased almost year on year since the start of the programme (except for a significant dip in 2001 coinciding with Foot and Mouth outbreaks in the UK). In 2011, a total of 2024 sites were monitored by 1135 NBMP volunteers.

In 2011 we conducted an online survey to try to gain a better understanding of who our existing and potential volunteers are and to gather information about their experiences of taking part in the NBMP. The aim was to better understand the needs and motivations of NBMP volunteers to enable us to improve participation in the programme and satisfaction gained from participating.

We invited 4000 people who had either taken part or expressed an interest in the NBMP to answer questions about themselves, their involvement in the NBMP, skills and training received, and their opinion of information received from us. We received responses from 684 people from across the UK, three-quarters of whom were already signed up to take part in the programme. The respondents covered the full range of NBMP participation, including volunteers who had not yet taken part, some who had only tried out the Sunset/Sunrise Survey through to volunteers who take part regularly in all the NBMP surveys. Overall there was a very positive feeling about being involved in the NBMP.

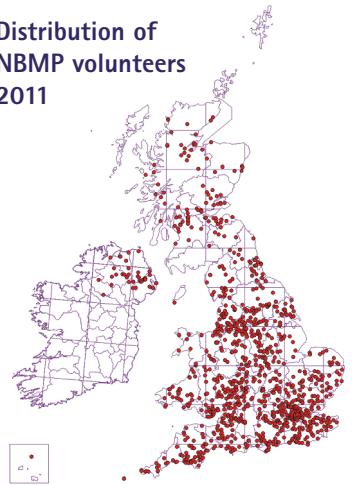
Why do people take part?

The most common reason stated for getting involved with the NBMP was an interest in bats or wildlife (a third of respondents) with many participants simply saying 'I love bats!' A further quarter took part because they have bats in their property and an additional fifth in order to contribute to bat population monitoring.

Who takes part?

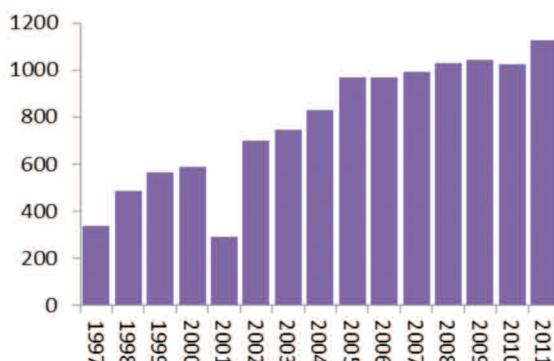
Our volunteers are spread across the UK, although there are many more volunteers in the southern half of England than in the rest of the UK. Almost half the volunteers responding to the survey were also BCT members and a similar proportion were members of their local bat group. Volunteers come from all age ranges from 20 to over 70, with about half between 40 and 60 years old.

Distribution of NBMP volunteers 2011



We still need more volunteers to take part in our surveys and help us monitor bat populations in the UK. For more information on the NBMP and how to get involved, visit
www.bats.org.uk/pages/take_part_in_surveys.html

Number of volunteers taking part in the NBMP annually



What skills do volunteers have or gain?

Our volunteers have a wide range of skill levels with 59% describing themselves as being beyond beginner skill level, and 41% as beginner or absolute beginner. The relatively high proportion of beginner level volunteers is reflected in the significant proportion of respondents (about a third) who take part in the beginner level Sunset/Sunrise Survey; the volunteers taking part in the more advanced surveys generally had more experience.

Around a third of respondents had attended an NBMP workshop (mainly Using Your Ears, our long-running general bat detector training workshop). Of those volunteers who had used NBMP training resources, a third felt they had the skills to go on and complete an NBMP bat detector survey following completion of the training. The remaining volunteers would like more training or support from local groups or experts before taking on their own surveys. In response to this we are developing bat group co-ordinator resources to promote more assistance at a local level for less experienced volunteers.

NBMP workshop attendees



© Gareth Jones
Greater horseshoe bats

The future

Looking ahead, the NBMP will continue to build on its strong foundation of reporting on population change. In the longer-term, aspirations for the programme's improvement and expansion include:

- Continue with the development of online data entry systems, which has begun in 2012, to improve efficiency, usability for volunteers and reduce delays in reporting of results and trends.
- Continue to increase survey coverage so that we can deliver country level trends.
- Implement improvements to our training strategy and programme to ensure volunteers have the skills, knowledge and confidence to complete and enjoy participating in the surveys for many years to come.
- Work to improve our understanding of the drivers of population trends through partnership research projects and bat distribution modelling.

Further reading (available at www.bats.org.uk)

- Bat Conservation Trust. 2001. *The UK's National Bat Monitoring Programme – Final report 2001*. Bat Conservation Trust, London. DEFRA Publications, PB 5958A
- For the full 2011 NBMP report, visit www.bats.org.uk/pages/nbmp_annual_report.html

The National Bat Monitoring Programme is a partnership between the **Bat Conservation Trust** and **Joint Nature Conservation Committee, Defra and CCW**. Additional funding is provided by **Natural England**. It is part of the **Tracking Mammals Partnership**.



The Bat Conservation Trust

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Call the Bat Helpline today on 0845 1300 228 or visit www.bats.org.uk

The Bat Conservation Trust is a registered charity in England and Wales (1012361) and in Scotland (SC040116)

