

Ask your grandparents and their friends how often they see bats. Then ask whether they remember seeing them when they were your age. Sadly most people will say they don't see as many bats as they used to. How do we find out if that is true? Is it the same for all species, in all parts of the country?

In order to plan how best to help them, we must first find out where our bats are, if their numbers are really dropping, and try to work out why. We do this by surveying and monitoring, but what is the difference?

A **Survey** is a snapshot of what is present in one place at a point of time. Like **surveillance**, repeated surveys over a period of time, surveys are designed to catalogue what is present without any preconceived ideas of what is present or should be present. These provide valuable base line data, and information can be collected by individuals in different ways. Every record is really important as it helps us to find out just which bat species are living in a particular place.



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A group surveys a country park using bat detectors

Why do we need to survey?

Catalogue. We need to know what we have – you cannot manage for species unless you know what we have.

Inform decision making. We need to know what the impact is likely to be for particular land use decisions such as planning applications. This can be a simple survey report or a bigger Environmental Impact Assessment.

What to think about when planning a survey

- What plants, animals or habitats are you surveying? In what sort of habitats do they occur or might they occur?
- Are there any laws protecting your target species?
- How often to survey – there is a minimum number of samples that will give you the maximum amount of data so the more sampling you do does not always result in more information
- When to survey – day time? Winter? Summer? Check BCT guidelines calendar.
- Equipment – are you catching, recording their presence by acoustics, or simple observation? (See *Echolocation – seeing with sound*)
- What method – transects or sample points?
- Personal safety and access permissions.

Mapping and Abundance – to bear in mind

There are various ways of describing or showing how common or widespread a species is. Species that are easier to record may be recorded more frequently.

But, common species are not always recorded because they *are* common.

Distribution maps will show how widespread something is although this doesn't tell us how common it might be. They may tell us more about where people are recording rather than where the bats are.

Also consider the time scale over which data has been collected.

Plan a bat survey of a local area you know well

List all the things that need to be considered, not forgetting details like permission of the landowner, car parking arrangements and health and safety.



Monitoring is a step on from surveying. By repeating a survey in exactly the same way a number of times, in the same place at the same time of year, it is possible to estimate a trend – that is, whether populations are increasing, decreasing or stable. There are a number of monitoring schemes covering most of the taxonomic groups; some are well known and used by many people, others are used by only a few. Most are run by private organisations such as charities, but the majority rely on volunteers to help gather data and this is referred to as Citizen Science.

The National Bat Monitoring Programme (NBMP)

The NBMP has been running since 1997, which makes it the longest running, purpose built, multi-species monitoring programme for mammals in the UK. Data is collected by three main survey methods: hibernation surveys in winter and in the summer field and waterways surveys and roost counts. Some can be done without special equipment but others are more advanced. The NBMP is run by the Bat Conservation Trust (BCT) in partnership with the Joint Nature Conservation Committee (JNCC).



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From the NBMP data

Population trends for 11 of the UK's 17 breeding species are produced.

Data from selected species are used to report on progress towards meeting goals and targets for the conservation of biological diversity.

An NBMP hibernation count

Known hibernacula are monitored each January and February for the species that hibernate underground. Only bat workers with special licenses can monitor hibernating bats as it is especially important not to disturb them at this time.

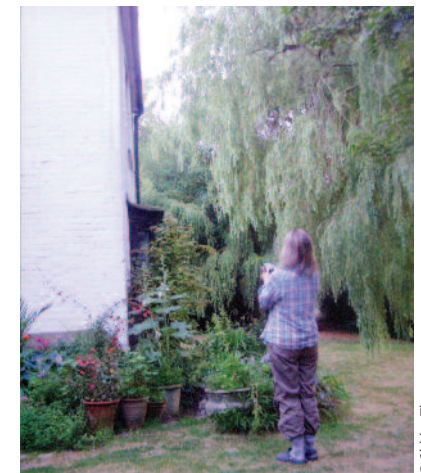
In 2013 for the first time BCT was able to produce population trends for seven species in Wales. This data can help inform Welsh Government of the effectiveness of its nature conservation policies and strategies. Longer term monitoring and increased survey coverage are needed to give us more robust trends for more species in Wales.



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On rivers and canals

Daubenton's bats rarely use buildings as maternity roosts, so summer counts are made as they fly along waterways. The same stretches of water are monitored at the same time each year.



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Summer maternity colony counts

Each June in the UK hundreds of volunteers all over Britain count bats as they emerge from their summer roosts. Several species are counted at this time. This large soprano roost has been monitored for the NBMP every year since 1996. Results give us a much clearer picture than a single count can do.

Species monitored by the NBMP

Brown long-eared bat, common pipistrelle, soprano pipistrelle, greater horseshoe bat, lesser horseshoe bat, Natterer's bat, Daubenton's bat, serotine and noctule. Two methods are used for each species. A small number of roosts of other species are also monitored by volunteers.

BCT's monitoring programmes are also used in Europe and other countries giving organisations and governments the information needed to help make bat conservation work.