

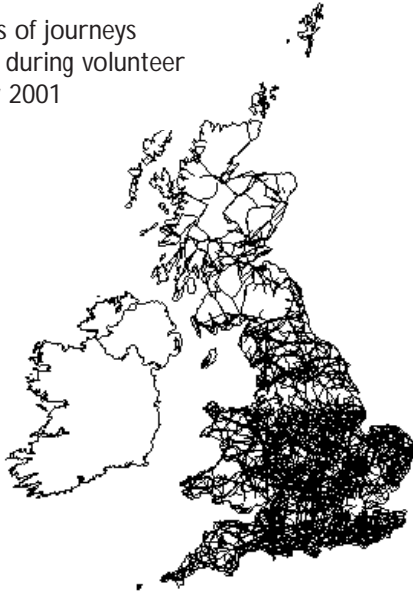
Mammals on Roads Survey Incorporating the National Hedgehog Survey. Report for 2001

Funded jointly by the Joint Nature Conservation Committee and Mammals Trust UK

Thank you for helping

Thank you very much for helping with the survey last year. Over 2,200 journeys of 20 miles or more were recorded – a fantastic effort. The journeys criss-crossed most of mainland Britain, as the map below shows.

Routes of journeys
driven during volunteer
survey 2001



We now have a very good picture of the number of mammals seen along roads nationally – exactly what was needed. We do apologise for the time it has taken to prepare this report on your efforts. We had to assign national grid references to each mammal sighting and each journey waypoint (the places where a journey began, the nearest place every 10 miles along a route and the journey endpoint). This was a time-consuming task for the Project Officer Lisa George, even with the aid of computer mapping. Things will be more rapid from now on.

Why monitor mammals?

Many, perhaps most, people in Britain know that some birds are declining in numbers – the blackbird and house sparrow for instance. We know this thanks to annual bird monitoring programmes that were set up decades ago. Similar monitoring for mammals is only just taking shape. Without adequate monitoring we can have no clear idea which mammals need our help. The hedgehog provides a good example of why we need mammal monitoring. The decline of farmland birds, some of which have similar needs to the hedgehog, suggests that hedgehogs may be declining too. However, until the Mammals on Roads Survey last year, we had no idea whether

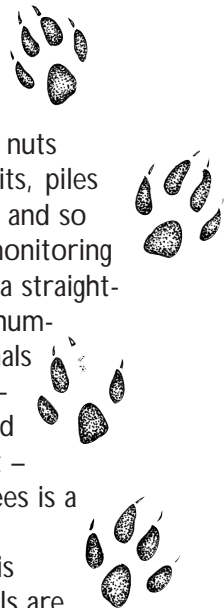
hedgehog numbers were changing. And without evidence of a problem we cannot compile a case to help hedgehogs, should they need it.

Why monitor mammals on roads?

Most mammals are much harder to find than most birds. You cannot go out and readily count squirrels in woodland for instance, though it is possible to count woodland birds.

This is why many mammal surveys are based on finding signs of mammal presence – hazel nuts opened by dormice, badger setts and dung pits, piles of chewed rushes left by feeding water voles and so on. One problem with using such signs for monitoring mammals, however, is that there may not be a straightforward link between numbers of signs and numbers of mammals. What's more, some mammals leave few signs – the hedgehog for instance – while other mammal signs can be hard to find in some places even though they are present – squirrel dreys (nests) in dense coniferous trees is a case in point.

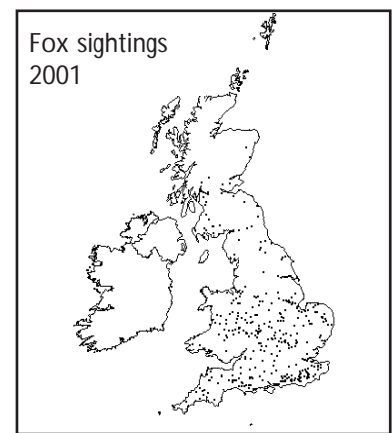
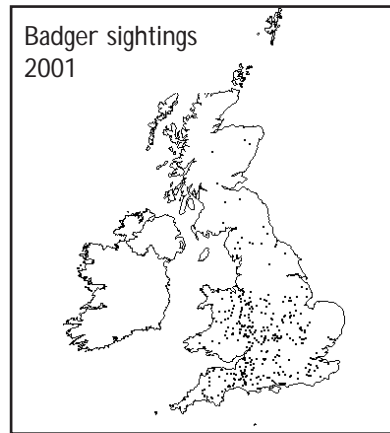
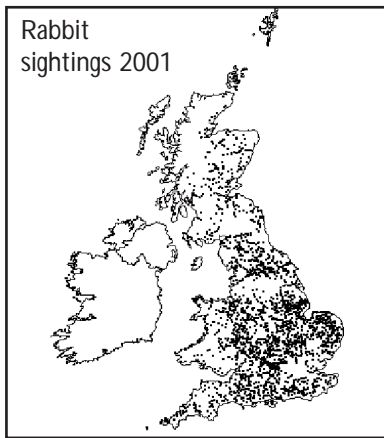
One place where lots of mammals are seen is along roads. Very sadly road casualty mammals are common. Because many of us drive thousands of miles each year, collectively we must pass hundreds of thousands of mammals. So, roads offer one way of readily counting mammals. As with counting mammal signs, however, counting mammals along roads may have some limitations. The numbers of mammals seen may not only be linked to the numbers in the countryside, but to the amount of traffic and road width too. We are currently investigating all these issues and will report back what we find. However, it is already clear that sightings of mammals along roads do reflect real differences in mammal abundance in different parts of the country.



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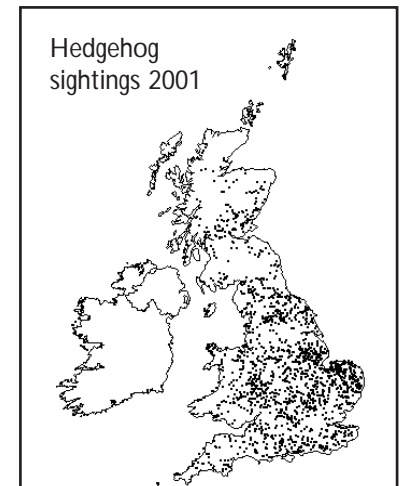
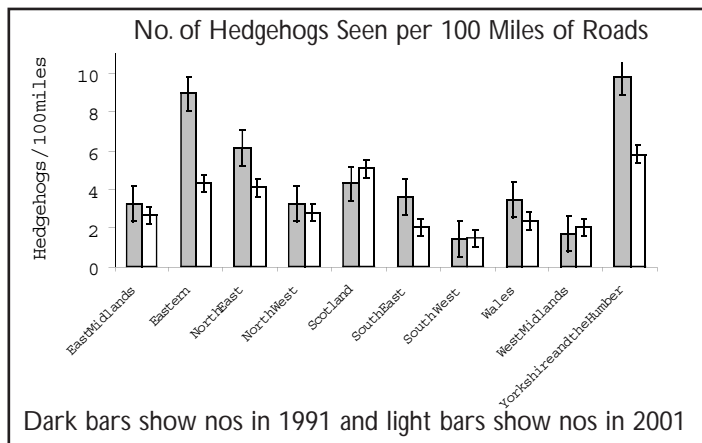
What was seen where

During the 2001 survey there were over 10,000 sightings of mammals. This included 5000 rabbits, 2571 hedgehogs, 606 squirrels, 414 badgers and 399 foxes. The accompanying maps show where these mammals were seen. Notice that rather few rabbits were seen in Wales, where their numbers have never reached high levels after the first outbreaks of myxomatosis in the 1950s. Note too that few badgers were seen in East Anglia, where they are known from other surveys still to be rather uncommon. Mammal sightings along roads do thus clearly reflect broad patterns of mammal abundance.



Declining hedgehogs?

Pat Morris organised counts of hedgehogs along roads in 1991. The chart below compares the numbers of hedgehogs counted in 1991 with those recorded during last year's survey in different regions of England and in Wales and Scotland. In Eastern and South East England and in Yorkshire and Humberside the numbers of hedgehogs seen per 100 miles of road were lower in 2001 than in 1991. In no part of the country were numbers significantly higher in 2001 than in 1991.



At face value this suggests that hedgehogs may well have declined in some regions.

Agricultural intensification and increased development in the South East and East Anglia are unlikely to have benefited the hedgehog. A decline in these regions is probably to be expected. Numbers of hedgehogs seen along roads in Eastern England have halved in the ten years to 2001. Clearly, this may represent a huge decline in hedgehog numbers.

Crucially, however, we need to determine whether these changes in numbers represent a 'blip', 2001 perhaps being a bad year for hedgehogs in Eastern England. We need to know whether the lower numbers in 2001 are part of a trend of lower numbers in successive years. So counts from 2002 and beyond are needed before we can be certain that hedgehog numbers have declined. **This is why annual counts of mammals are so important.** Unless we count mammals each year it is very difficult to distinguish trends from, for example, changes in a single year which could just be due to especially good or bad weather.

The way forward - Your continued support is essential

With your invaluable help we have made an excellent start on monitoring mammals along roads. It's now really important to keep up the counts in 2002, not least so we can assess whether hedgehogs really are declining rapidly. **So please do participate in the survey again if you possibly can.** If you are able to drive the same route that you took in 2001, then so much the better – it will enhance what we can deduce from your mammal counts. We are also rather short of data from Scotland, so volunteers from there would be particularly welcome.

Once again, very many thanks for help with the survey. We look forward to seeing your results for 2002.

Lisa George and Paul Bright, Royal Holloway, University of London