REPORTS FROM SPECIALIST GROUPS

SOMERSET BAT GROUP

Bat records in Britain prior to 1978 were sparse and consisted largely of a few known populations of particular species and a few isolated mentions in general natural history works. A large survey of bats in houses in 1978–80 suggested a decline in numbers of over 50% in two years (Stebbings and Arnold 1982) and these results played their part in ensuring that all Britain's fifteen native species are now protected under Section 9 of the Wildlife and Countryside Act 1981.

The advent of statutory protection has had two major effects on our knowledge of bat numbers and distribution. Firstly, any roost owner contemplating action which might injure or disturb the bats has been obliged to contact English Nature (formerly the Nature Conservancy Council). Secondly, in order to help English Nature discharge their statutory obligations, a large number of voluntary bat wardens have been licensed, engendering a degree of interest in these animals which contrasts greatly with their previous neglect.

Based on the roost reports submitted to English Nature and the independent observations of bat enthusiasts throughout the county, a database of known roosts in Somerset has been compiled containing over 580 records. These roost sites have been plotted on to tetrad (2 km square) and the resulting patterns of distribution give the first really reliable data for the county.

Because the greater part of the data used emanates from English Nature reports submitted under the 1981 Act, the records are biased in favour of those species which use houses or other man-made roosts. Species which are under-recorded as a result are the Noctule *Nyctalus noctula* which is rarely found in buildings but appears to be reasonably abundant in Somerset as a tree-roosting species, and Daubenton's Bat *Myotis daubentonii* for which more feeding sites are known than roosts. For the same reasons, the number of known roosts containing Brown Long-eared Bats *Plecotus auritus* and Greater and Lesser Horseshoe Bats *Rhinolophus ferrumequinum* and *R. hipposideros* probably represent a higher percentage of the total roosts for most other species because these are animals which often hang conspicuously in the open roof spaces of the buildings they frequent. Species which require minute examination to identify them are likely to be under-represented, for example the *Myotis* species which amateur roost visitors find difficult to distinguish.

Although this data shows known distribution, it does not give any opportunity to judge how this compares with actual distribution. Nor can the maps be used to assess the comparative rarity of any species. A roost containing a single bat of a rare species is shown in the same way as a roost of several common ones in the same tetrad. This is illustrated by comparing the map for Long-eared Bat (Fig. 1) with that for the

Long-eared Bat

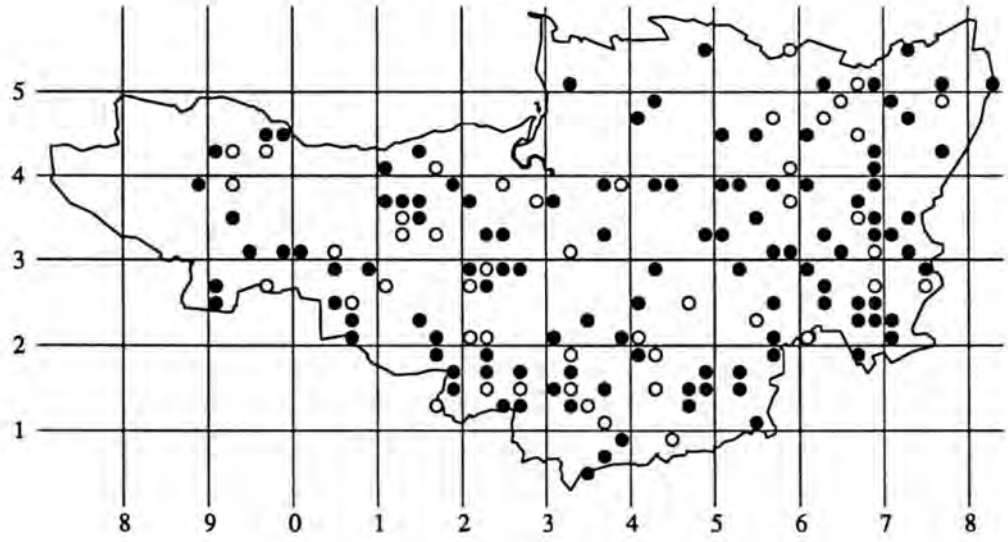

Fig. 1

Pipistrelle Bat

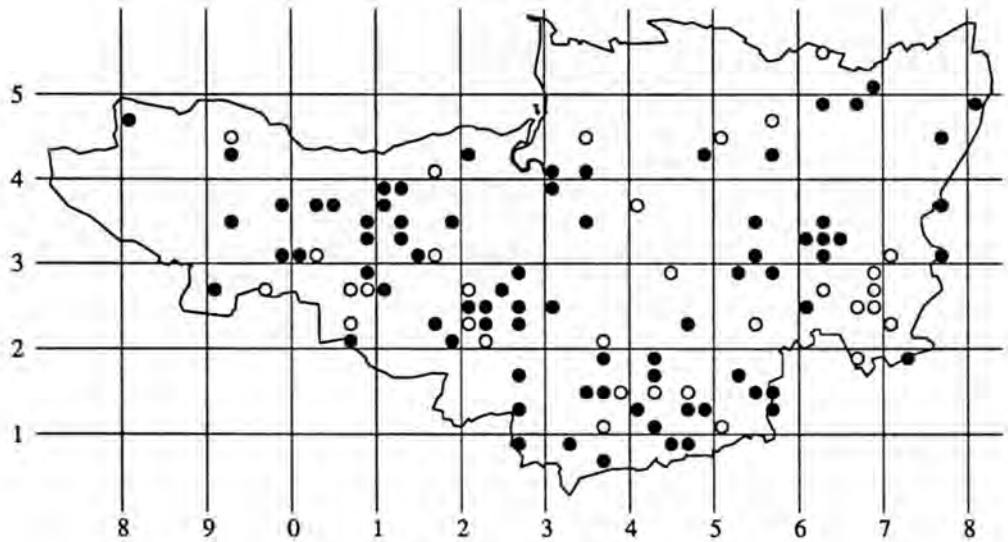

Fig. 2

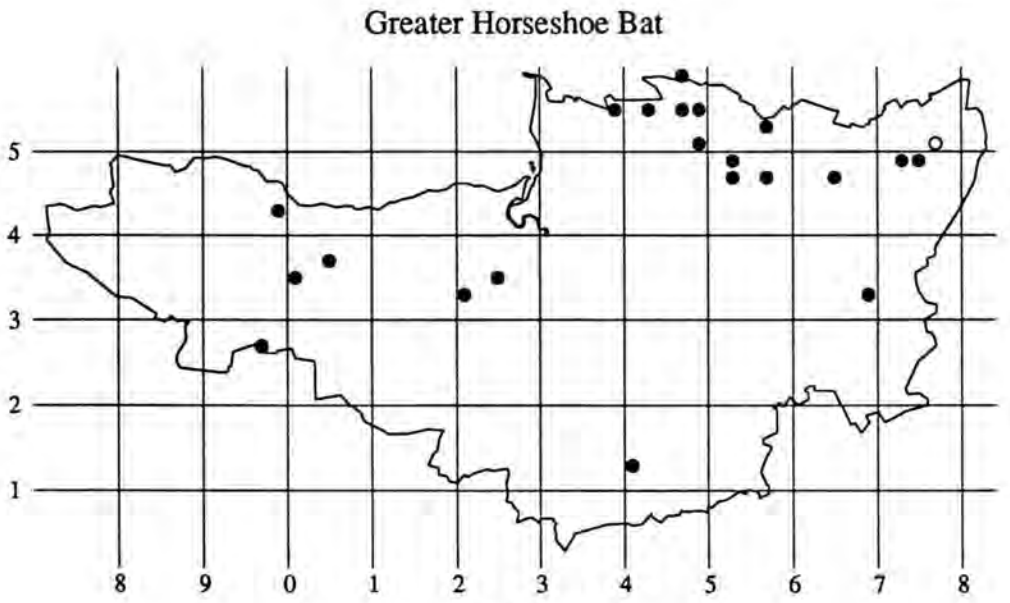

Fig. 3

commonest of our bats, the Pipistrelle *Pipistrellus pipistrellus* (Fig. 2). Long-eared Bats are recorded from more tetrads but in none of these roosts have more than 30 individuals been counted and many are roosts of one or two bats only. Conversely, many of the Pipistrelle roosts are of over 100 individuals and one has had 393 recorded emerging from it.

Subject to all these limitations we can say that Pipistrelles and Brown Long-eared Bats are found throughout the county with no obvious geographical preference. Greater Horseshoe Bats (Fig. 3) are nowhere common but they are much less rare in the Mendips than elsewhere. This may well reflect their particular need for spacious hibernacula such as caves and mines and unimproved grassland for summer feeding. The distribution of the Lesser Horseshoe Bat (Fig. 4) appears more random but a study of the roost details shows predisposition for breeding roosts in buildings associated with larger houses with their own parkland. This is a tendency also noted by observers in other counties and in Ireland. Their winter requirements are less specific than their larger relations and they have been found in quite small crevices.

Perhaps the most interesting map of all is that for the Serotine *Eptesicus serotinius* (Fig. 5). There is evidence that this species may be extending its range westwards across southern England and its national distribution is predominantly south-eastern. The Somerset records mirror this national picture almost exactly with the majority of records in an area from Frome and Shepton Mallet through the Yeovil area and along the southern edge of the county to Chard. It may be that Somerset represents the present front-line of this species' supposed advance. Some caution is needed, however. The Institute of Terrestrial Ecology's records show the reported number of new Serotine roosts increasing as follows:

Lesser Horseshoe Bat

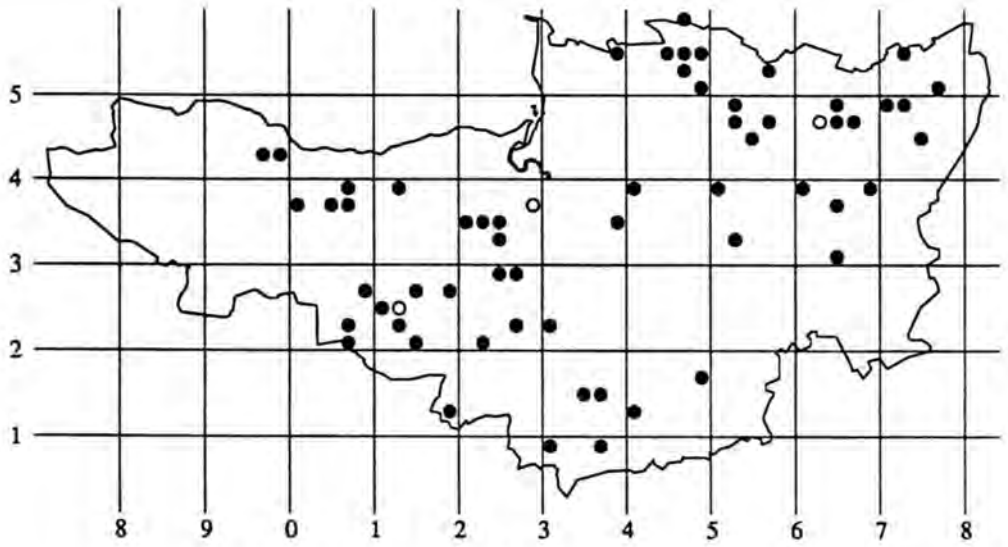

Fig. 4

Serotine Bat

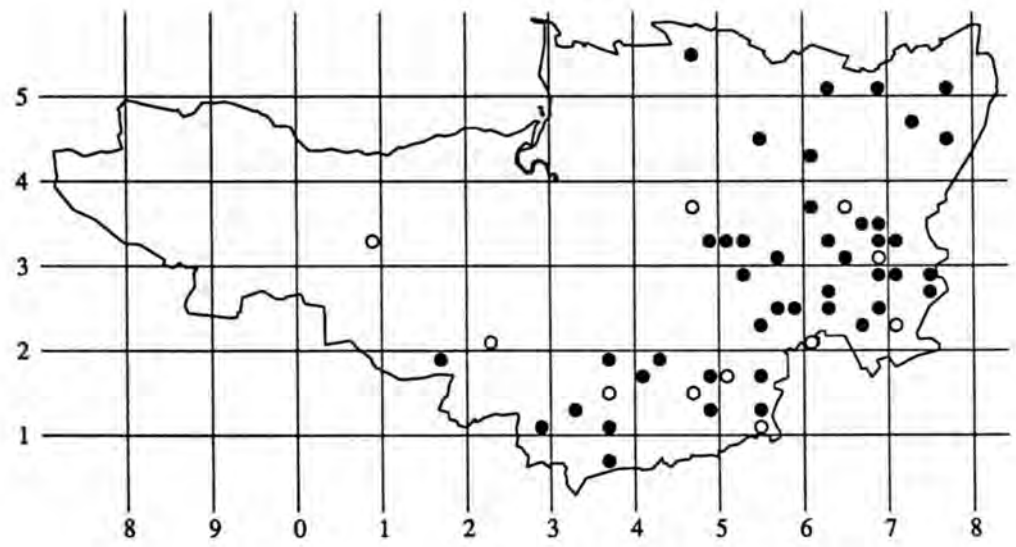

Fig. 5

1800–1900	13
1901–1950	about 16
1951–1970	over 47
1970–1990	509

This does not imply a massive increase in Serotine Bats but a massive increase in bat enthusiasts prepared to give a positive identification to one of our more readily recognised species.

These records and maps represent a starting-point only but one which may make it possible to detect major population changes in bats in houses. The Somerset Bat Group is now starting to record bats in flight, when the roost may not be known, to try to get some sort of assessment of the status of woodland species such as the Noctule as well as gaining further knowledge of the nature and importance of fly-ways and feeding areas. Very much more is now recorded about the distribution of Somerset's thirteen species of bat than was known even ten years ago. Quite clearly, though, there is more still to learn.

ACKNOWLEDGEMENT

Our thanks to Alan Morton (author of DMAP, reviewed in this issue) for producing the distribution maps.

REFERENCE

Stebbings, R.G., and Arnold, H.R., 1982. *Bats – an insecticide under threat?* Nature in Devon.

EDWARD A. WELLS *and* HELEN WELLS