

THE DEVON GREATER HORSESHOE BAT PROJECT

HELEN PARR

Community Engagement Officer, Devon Greater Horseshoe Bat Project

The Devon Greater Horseshoe Bat Project (DGHBP) is a 5-year partnership project of 19 organisations led by Devon Wildlife Trust and is supported by the National Lottery through the Heritage Lottery Fund, as well as other funders. The project runs from 2015-2020. This short article gives an overview of the project.

GREATER HORSESHOE BATS

The population of greater horseshoe bats (*Rhinolophus ferrumequinum*; Fig. 1) has declined by as much as 90% in the UK during the last century, with an associated 50% reduction in range. This has been mirrored across northern Europe with Devon now a stronghold for the species in the region (Fig. 2). Devon's deep valleys with their mosaics of woodland, orchards, cattle pastures and extensive hedgerows have for centuries been perfect 'bat country' Fig. 3). Recent changes to the way that our countryside is managed have led to fragmentation and loss of the bats' feeding grounds and roosts.



FIGURE 1. The greater horseshoe bats (*Rhinolophus ferrumequinum*). (Photos: Hugh Clark (left), Frank Greenaway (right)).

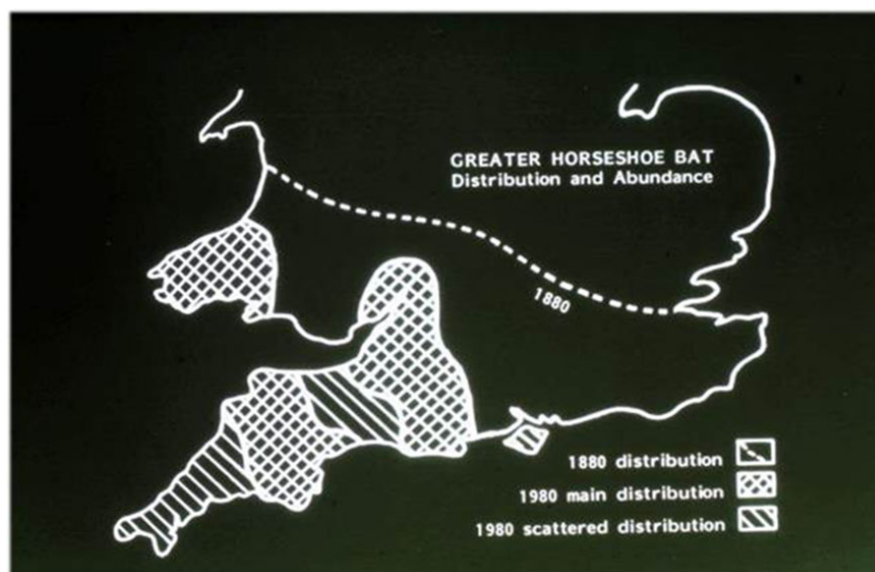


FIGURE 2. Distribution of greater horseshoe bats (*Rhinolophus ferrumequinum*) 1880-1980. (Source: The Mammal Society)

Greater horseshoes have thrived alongside humans for centuries, using our hedgerows to find their way around the landscape and feasting on dung beetles in fields grazed by our livestock. All of their Devon maternity roosts are in man-made structures: old barns, mines or quarry caves. These bats are extremely loyal to their maternity roosts, returning each year to the places where they were born and raised. Unfortunately, this means that damage to a roost site or the feeding grounds around it puts the entire colony's survival at risk. Often these sites are so isolated that if one roost dies out, we lose a whole local population of bats. Greater horseshoe pups can only fly a few hundred metres, but must feed themselves up to adult size in just two months to survive their first winter. Half of the pups starve during their first winter because they cannot find enough food before hibernating. Clearly, insect-rich habitat close to roosts is vital.



FIGURE 3. Ideal bat landscape in North Devon. (Photo: DGHBP)

THE PROJECT

The project's vision is to secure the future of the greater horseshoe bat in Devon; the northern European stronghold of this highly threatened mammal. The project is focused on the 11 greater horseshoe bat maternity roosts across the county in the following locations: Avon Valley, Berry Head, Bovey Tracey, Branscombe, Braunton, Buckfastleigh, Chudleigh, Dartmouth, Harbertonford, Southleigh, Tamar Valley. There are three main areas of work within the project:

- working with landowners to secure habitats for bats in coherent networks across landscapes;
- working with the people of Devon to raise the profile of greater horseshoes as a flagship species for the county;
- improving our knowledge of greater horseshoe bats and how they use Devon's landscapes.

Working with Landowners

Through our farm advisory work, free visits are offered to give farmers and landowners an understanding of bats, wildlife and the environment in relation to their land and wider local landscapes, so they are able to use this knowledge in the long term and pass it on to others. In 2016 over 147 farm visits were made to 107 landowners. This helped to build relations with farmers, and included workshops exploring topics such as the use of anthelmintic worming treatment for livestock on intensive dairy/beef farms. Healthy cow dung is a great source of dung beetles a vital prey item for greater horseshoe bats (Fig. 4),

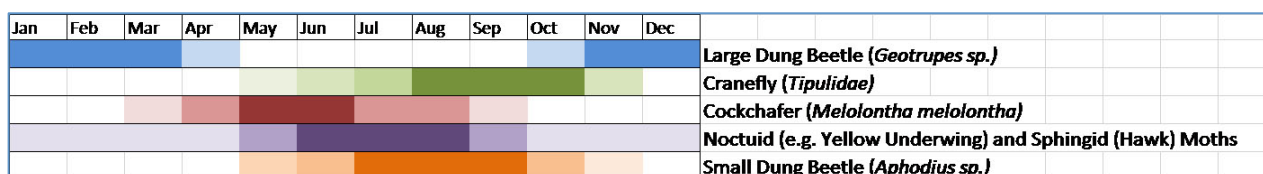


FIGURE 4. Prey chart for the greater horseshoe bat.

The DGHBP has a small-grant scheme called BatWorks to offer landowners the opportunity to carry out projects which will improve bat habitats, such as planting orchards, creating a new roost, creating flowering meadows, bringing back grazing to neglected pastures, creating new hedges and restoring existing ones. By enabling farmers and landowners to secure funding and support, we can help to ensure that bat habitats are managed, restored and created across whole landscapes.

Working with people

Our community engagement work will provide communities across Devon with a thorough knowledge of greater horseshoe bats, aiming to enthuse and inspire people about this species and its relevance to their lives. When the project comes to an end, we want those communities to have a deep understanding of how special these bats are and to pass that message on to future generations. Anyone can get involved in bat conservation, from individuals, groups and schools to whole communities, in a range of ways including spreading the word, to volunteering for practical tasks and surveys. Our 'Bat Buddy School' award offers a fun way for younger people to get involved. Whole communities can work towards our 'Bat Friendly Community' accreditation.

Volunteers are an integral part of the project, bringing a range of ideas, knowledge, expertise and enthusiasm which will greatly enhance our work. This volunteer participation provides opportunities for communities to come together as part of the project, to learn more about natural heritage and develop new skills. In Year 1 of the project over 5,000 people were reached through a diverse programme of community events and over 1,000 schoolchildren through educational activities (Fig. 4),



FIGURE 4. Community events include farm walks and session with local schools. (Photo: DGHBP)

Improving our knowledge

Working with specialists, academics and Devon's communities we will develop a better understanding of how greater horseshoe bats use the landscapes of Devon. Citizen science is a vital part of this – in 2016 168 volunteers took part in the new Devon Bat Survey. Each person borrowed a SM4 bat detector from one of 10 monitoring centres and placed it out in their local area to collect bat data during September and October (Fig. 5). In 2017 this will rise to 20 monitoring centres with over 1,000 booking slots available from April to October.



FIGURE 5. Devon Bat Survey: SM4 bat detectors (left) were placed in local areas by volunteers (right). (Photo: DGHBP)

Volunteers also took part in 10 targeted research surveys linked to the project as part of a PhD project at the University of Exeter entitled 'Informing landscape scale management of the greater horseshoe bat *Rhinolophus ferrumequinum*'. 1,002 detector nights of data across 5 project areas were collected using SM2 bat detectors. This will provide us with an enormous amount of bat data, which will also feed in to the National Bat Monitoring Programme (NBMP) run by the Bat Conservation Trust.

Using the learning gained throughout the project, activities on the ground will have maximum positive impact on greater horseshoe populations. By challenging current thinking and systems, the project can ensure that greater horseshoes are given adequate protection and support in the long term.

For further information about the project or to contact the team, please visit www.devonbatproject.org

ACKNOWLEDGEMENTS

