



Issue 140

Summer 2026

ISSN 0269 8501

Bat News

Do bats have wingprints?

**Looking back at the
Nocturnal Garden**

**Offshore wind turbines
and bats**



Bat Conservation Trust



**Let bats in the
night sky be
your legacy**

Write your Will for free today

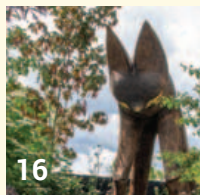
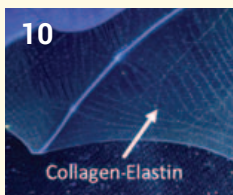


Scan or visit
will.octopuslegacy.com/BCTFREE
for more information

Contents

Summer 2026

- 4 Welcome from Kit Stoner
- 6 Spotlight on bat groups
- 10 Feature: Do bats have wing-prints
- 14 Feature: Climbers for bat conservation at Colorado State University
- 16 Looking back at the Nocturnal Garden for RHS Chelsea
- 22 Research feature: Offshore wind turbines and bats
- 26 International conservation: Dahari – protecting the Livingstone's fruit bat in the Comoros
- 28 Bats and you: Jess Dikken, Whispers of the Woodlands: saving the brown long-eared bat
- 30 Bat Chat: Updates from across the bat world



Cover From left to right: Kit Stoner (CEO) and Carol Williams (BCT's former Director of Conservation) with a Chelsea pensioner at our Nocturnal Garden. © Bennet Smith

Our supporters

BCT is grateful for the support of more than 80 local bat groups; over 5,000 members; 35 corporate members; Esmeé Fairbairn Foundation; National Lottery Heritage Fund; Joint Nature Conservation Committee; Natural England; NatureScot; Natural Resources Wales, Garfield Weston Foundation and John Ellerman Foundation and all our other supporters.

Editorial committee: Andreia Correia da Costa, Shirley Thompson, Phoebe Ford and Dan Bryant.

Design: Matthew Ward

Advertising and sponsorship: comms@bats.org.uk

Copy deadline for next issue: **October 2026**

Please email contributions to comms@bats.org.uk

Next issue will be published in **November 2026**

© The Bat Conservation Trust ISSN 0269 8501

Bat News is the magazine of the Bat Conservation Trust, Studio 15, Cloisters House, Cloisters Business Centre, 8 Battersea Park Road, London SW8 4BG. www.bats.org.uk

BCT Memberships (per year):

- Individual £39
- Family £48
- Young Batworker's Club £15
- Teacher £30
- Benefactor £84
- Life £900 (one-off)
- Corporate £400

For more information, email members@bats.org.uk



Welcome

From Kit Stoner, Chief Executive



I started my last editorial talking about our Nocturnal Garden at RHS Chelsea Flower Show and I am going to do the same again! We were blown away by the response we received at the show – a silver medal and perhaps even more importantly, the People's Choice Award. We spoke to thousands of people across the six days and were inspired by the number of people who wanted to do more for 'their bats' and were also delighted to hear that many people were already growing some of the plants showcased in the Nocturnal Garden. The garden

demonstrated how simple it is to encourage nighttime insects that our bats rely on for food, as well as daytime pollinators (page 17). We know that our bats need all the help that they can get, and gardeners can play a big part in supporting them.

Our National Bat Monitoring Programme Annual Report 2025 was published in May and illustrates a complex picture for UK bat species (page 31). While longer term trends since 1999 show slow signs of recovery for six species after severe historic declines, only two of the 11 species have increased in Great Britain over the last five years (the lesser horseshoe bat and the soprano pipistrelle). There have also been recent declines in brown long eared bat populations in Wales, and our new Whispers in the Woodland project was established in response to this. You can read more about the aims of the project and our new Project Officer, Jess Dikken on page 28.

A potential threat to bat species that migrate is offshore wind farms. A recent study suggests that balancing climate action with biodiversity protection will require a more detailed understanding of how bats use aerial marine environments. There is strong evidence for *Nathusius' pipistrelle* moving between mainland Europe and the British Isles, and growing evidence that larger, fast-flying bats, such as *noctule* and *Leisler's bats*, may undertake similar journeys. Potential impacts on bats can be direct collision and barotrauma (sudden drops in air pressure as turbine blades spin can cause fatal injuries for bats flying through these zones). The good news is that the study suggests that solutions are possible. You can read more about these on page 22.

Moving away from Europe, on page 26 you can hear about the fantastic work of Dahari, an organisation which is working in partnership with landowners and farmers to protect the endangered *Livingstone's fruit bat* on the Comoros islands.

Other fascinating articles in this issue include looking at whether bat wings can be used as unique identifiers (wingprints) (page 10) and how recreational climbers in the US are helping bat biologists learn about bats roosting at great heights (page 14).

Kit Stoner Chief Executive



The brown long-eared bat has decreased by over 50% in Wales between 2016 and 2024. BCT's Sibrydion y Coedwigoedd (Whispers of the Woodlands) project aims to better understand the causes of this decline and provide support for the recovery of this much-loved species across Wales.

SPOTLIGHT on bat groups

Bat groups, made up of many dedicated volunteers, are the mainstay of bat conservation in the UK, undertaking vital front-line conservation work.

Emergence survey and bat protection at greater horseshoe bat roost

By Colleen Hope, Hampshire Bat Group

Hampshire Bat Group undertook an emergence survey of the county's largest greater horseshoe roost this spring. As a transitional roost, numbers range from an average winter count of nine, to up to forty bats in spring (2025 figures). Radio tracking in 2025 determined that the females move off to maternity roosts in Dorset in early May.

The roost is in a cellar, and bats emerge just above ground level; some hang on the underside of a timber cover for a few moments before they exit. On 10 April this year a cat arrived a few minutes into our spring emergence survey and climbed right into the roost entrance (see photo right). It was chaperoned off by one of our members as clearly it was there to predate the bats. We asked locally and found that it is a feral cat that is fed at a local yard. There was no scenario where the cat/s would be kept in during the evenings and so bat group volunteers had no choice but to rapidly organise an emergency 'Cat Watch.' We have kept this up for over a month at the time of writing and all but two or three of the bats have now departed.

Thirty nightly (videoed) counts documented roost numbers steadily declining over a 16-day period between 25 April to 10 May. The cat appeared on four occasions, initially every four nights but seemed to give up halfway through (we have no idea on the impact that it had before we commenced our 'Cat Watch', as the initial count was 10 fewer bats than last year). Clearly it knew exactly what to do and where to go, and if left unchecked it could have wiped out the colony over a few nights.

19 people have helped with the surveys for which we are enormously grateful, and for some this was their first chance to watch greater horseshoe bats emerge.

With thanks to:

Naomi Addleton, Ian Baker, Ian Barker, Laura Gravestock, Chris & Charlotte Hodgson, Colleen &

Paul Hope, Nik Knight, Holly McIndoe, Bridget Parslow, Emily Parsons, Jon Poland, Nicola Pyle, Jo Richmond, Crispin Sampson, Abigail Tebb, Catherine & Steve Whitmarsh

Cat hunting at bat emergence point



Bat emergence point

Photos © Nik Knight and Ian Baker

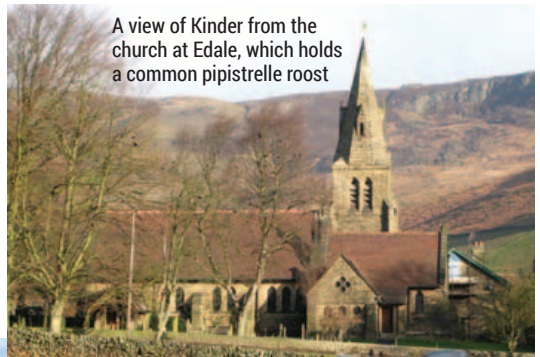
Bats on the Roof of Derbyshire

By **Alan Roe**, Derbyshire Bat Group and Tom Spencer, Moors for the Future Partnership

Since 2019, Derbyshire Bat Group and the Moors for the Future Partnership (MFFP) have monitored bats on some of Derbyshire's high moorlands, with early findings reported in the Winter 2020 issue of *Bat News*. For the past two seasons we have focused on investigating bat activity on Kinder Scout, a 636-metre moorland plateau marking the highest point in the East Midlands, with views over the post-industrial cities of Manchester and Sheffield. As a National Nature Reserve, the area is home to wildlife such as mountain hare, curlew and golden plover. As recently as 2011 this was a bare and barren landscape, damaged by past industrial pollution and wildfires. However, thanks to the efforts of the MFFP a transformation is taking place on this and other moors in the Derbyshire Peak District. The upland blanket bog has been restored, and rich vegetation such as cotton grass and sphagnum moss now carpets areas of previously exposed peat, supporting a diverse insect community and a thriving ecosystem.

We deployed two detectors at separate sites across the eight square kilometre plateau, recording bats on a remarkable 52% of nights between May and September in 2024 and 2025. At least seven species were involved with common pipistrelle being the most frequent. Also recorded were soprano pipistrelles, noctules, Leisler's bats, brown long-eared bats, one of the *Myotis* species, and even a single pass by a barbastelle, a rare species in Derbyshire. The bats appear to be using the many steep-sided ravines, known as cloughs, as corridors to reach higher ground, where they feed on the now-abundant insect life. As expected, bat activity on the plateau was most likely in mild, calm weather conditions. Activity increased with higher sunset temperatures and decreased as wind speed rose. Both relationships were statistically highly significant, enabling us to build a model to predict the likelihood of recording bats on the plateau on any given night.

The project has highlighted yet another compelling reason to protect and restore our moorland landscapes, alongside the wider benefits such as reduced flood risk, carbon storage, improved water quality and enhanced wildlife habitats.



A view of Kinder from the church at Edale, which holds a common pipistrelle roost

© Alan Roe



◀ One of the monitoring sites on Kinder, with static bat detector visible

▼ The same site in 2011 when it was just bare, eroded peat



© Tim Allott

© Moors for the Future Partnership

Partner Group Support Fund Grant Award 2026

By **Dan Bryant**, BCT Bat Groups Officer

The Partner Group Support Fund (PGSF) was established by the Bat Conservation Trust (BCT) to support small-scale bat conservation projects across the UK and British Islands. Each year, the grant element of the PGSF awards small grants to bat groups to help fund projects which align with BCT's strategic objectives. There is also the opportunity for bat groups to apply for dedicated work time from BCT staff to help with getting projects off the ground, and also a separate bursary award to assist bat group members with attending the National Bat Conference.

Applications for the PGSF grant open in January each year and are accepted from all partner bat groups. The decision to award support from the fund is made by a panel of experienced bat group volunteers, with support from BCT's Bat Groups Officer.

This year, we were delighted to be able to support four bat groups with projects through the PGSF:

- **East Lancashire Bat Group – Friends of Ball Grove Country Park bat habitat improvements and monitoring.** This two-year project will deliver targeted bat habitat improvements at Ball Grove Country Park, Colne, Lancashire. The project will also include guided bat walks and public engagement events to raise awareness of bats, their ecological importance, and the value of the park for wildlife.
- **Dumfries and Galloway Bat Group – Are breeding bats using bat boxes in our region?** A thermal imager purchased with help from the grant will assist the group to determine which boxes are in use during the breeding season, and also help to detect roosts in rock faces and pinpoint emergence points. It can also be used for public engagement to let people on bat walks view bats, such as Daubenton's bats foraging over local rivers.
- **Merseyside & West Lancashire Bat Group – Mere Sands Wood bat roost creation.** Through the process of veteranisation (increasing roost potential in living trees by way of making crevice situations and hollow chambers) this project will create much needed roost opportunities for multiple species in a location that is predominately agriculturally orientated with fragmented pockets of woodland.



Ringed Natterer's bat captured as part of MWLBG's Local Wildlife Sites monitoring project

© Steve Parker

- **Loch Lomond Bat Group – (Pass the) Bat-on.** A project to purchase bat care/transport equipment and provide training for bat group members in Argyll, in order to provide suitable support to injured/grounded bats in remote areas where historically bats have had to be transported long distances to receive appropriate care.

Update on 2025 PGSF Projects

As a condition of the grant, bat groups that have been successful in their applications report back to BCT with updates on how the grant funds were utilised. We are pleased to share the following updates from last year's PGSF round:

- **Norfolk and Norwich Bat Group** purchased a gazebo to use for education and outreach at outdoor events, as part of their Connecting Norfolk project. The gazebo has been very useful in providing shelter from both the rain and the sun at events across Norfolk, including the "Apple Day" at Gressenhall Farm and Workhouse last October which was attended by over 2,000 people.



NNBG volunteer with the gazebo purchased with a grant from the PGSF

© Stacie Farnham

- **Isle of Wight Bat Group** received a grant from the PGSF to buy a tablet and power bank to run an AT100 acoustic lure for catching bats for research purposes. This has been used so far for trapping *Nathusius pipistrelle* bats (under licence) as part of their survey work, and will be utilised in future to study grey long-eared bats on the island.
- **Somerset Bat Group** also used their grant funds to study grey long-eared bats, purchasing tags used to radio track captured bats as part of this project.
- **Merseyside and West Lancashire's** North Merseyside Local Wildlife Sites monitoring results have just been published – the group used monitoring equipment that was partially funded with a PGSF grant as part of an ongoing project to monitor the bat populations at local wildlife sites.

The PGSF is funded through donations, sponsorship and raffle ticket sales at regional bat conferences. Thank you to all who support BCT with helping to fund this important frontline conservation work.

To find details of a bat group near you, please check the BCT website: www.bats.org.uk/support-bats/bat-groups or contact: batgroups@bats.org.uk / 020 7820 7193.

Do bats have wingprints?

By **Shane Seheult**, **Joshua Cherney**, and **Paul Faure**

from McMaster University, Canada

While reviewing the literature on marking bats, we were struck by the diversity of methods that biologists have used to identify individual animals – from fur bleaching and tattooing flight membranes to collar necklaces and forearm bands.

Despite the great variety of methods, no single marking technique is superior to others as each comes with their own strengths and weaknesses. Wouldn't it be wonderful if we could identify individual bats using features that are distinctive and intrinsic to them, like how fingerprints are used to identify people? What if bats had wingprints? These and similar questions are what drove our research in the McMaster University Bat Lab.

Marking methods in bats

One of the most common methods for marking bats are forearm bands – called bat rings in the UK. The rings are circular and split so they can be expanded with a tool and placed over the bat's forearm. Bat rings are made of metal or plastic, are often coloured, and etched with a code to give the bat a unique identity. Due to its early adoption, relatively low cost, and ease of application, ringing is widespread and has helped to provide information on species longevity and spatial movement patterns. Like any marking method, bat rings can have adverse effects. For example, rings can cause injuries if not fitted correctly, decreasing foraging success and (more rarely) even leading to death.



A plastic split-ring band (ID: White210) placed on the end of a banding tool

© Shane Seheult

A contemporary method for marking bats that is gaining popularity is the use of passive integrated transponder (PIT) tags. Similar to how pet owners get their dog or cat microchipped by a vet, PIT tags are injected under the bat's skin and are read using a scanner. Some advantages of using PIT tags are that they are long-lasting, relatively easy to use, and have not been shown to directly affect the bats' behaviour. Of course, PIT tags have some pitfalls. For example, PIT tag placement is invasive, and if performed incorrectly can cause serious harm. Newly implanted PIT tags are also known to occasionally exit from the animal via the injection site, which is a consequence of using a large diameter injection needle.

Another new marking method, called the p-Chip, uses technology similar to PIT tags but at a fraction of the size. The p-Chip is a tag that is also implanted under the skin and read using an associated hand-held wand. The tiny size of p-Chips means they can be implanted with a much smaller diameter needle. However, unlike PIT tag readers, the wand must be in very close proximity to the p-Chip for a successful read; the tag must be placed more superficially so it's more visible to the naked eye.

We conducted a study with captive bats to evaluate the p-Chip as a potential marking method. We implanted p-Chips in the wings and legs of big brown bats (*Eptesicus fuscus*) and found the wing to be the better location due to better tag visibility, decreased bat handling times and more consistent tag activation. In short, because p-Chips in the wing remained visible for longer, they were easier to relocate and read.

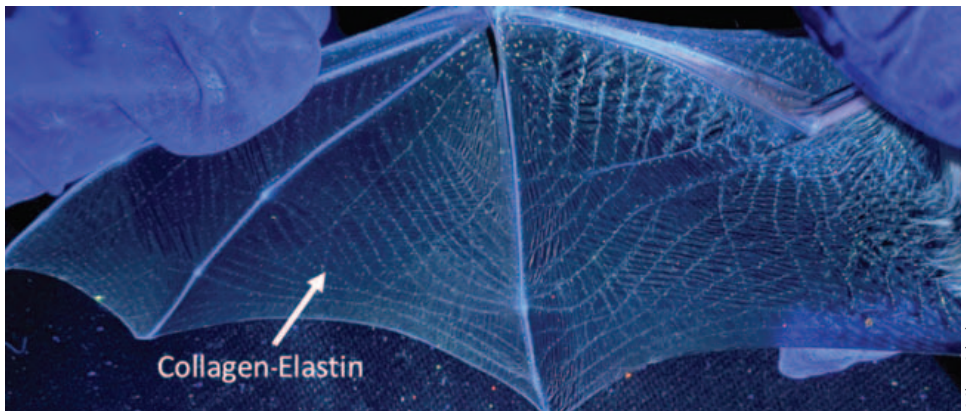
Biologists will likely need to agree on a standard location for tag placement before p-Chips become widely adopted as a marker for bats in the field.

Do bats have wingprints?

Both PIT tags and p-Chips require injecting bats with an external tag for identification. But what if we could use features intrinsic to bats to identify individuals? Recently, a group of researchers demonstrated that bat wings possess distinctive patterns. These are the result of an accumulation of collagen fibres and give the wing membrane its tensile strength and flexibility. These patterns look like a unique wingprint and can indeed be used to identify individuals.

Researchers photographed the wings of wild caught bats (illuminated by ultraviolet light to emphasise the pattern of the wingprint) and manually compared these photos to photos taken on different occasions. They were able to identify individual bats with nearly 100% accuracy!

While this finding is an important advancement in bat identification, a clear drawback of the method is that visually comparing photos is both time consuming and labour intensive. This led us to ask: what if the comparison of bat wing images could be automated?



Big brown bat wing illuminated with ultraviolet (UV) light showing the collagen-elastin bundles in the flight membrane.

The use of a pattern recognition software

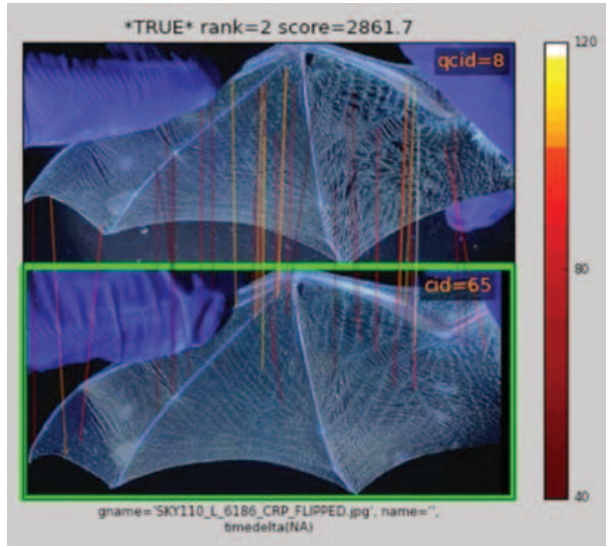
Artificial intelligence has come a long way, and we wanted to know if this technology could be used to automatically compare photos of wingprints and match them to specific individuals.

Luckily, we had a readily available population of bats to test our theory. McMaster University is home to Canada's only captive colony of insectivorous big brown bats and each bat is identified with both a PIT tag and forearm band. Working with captive bats also meant we had detailed information about every animal, including its age (adult/juvenile), sex

(male/female), and which wing was photographed (left/right). We also had information about genetic relatedness which allowed us to assess whether the wingprints of bat mothers and their pups were more similar compared to unrelated individuals.

An important consideration at the outset was to use tools readily available to bat field researchers. For a light source we purchased an UV flashlight, and for imaging we used a cellphone camera. Preliminary testing with these tools allowed us to optimize the angle of the light source and how best to to hold bats when photographing their wingprint patterns so that the images would be comparable between individuals and on different occasions..

The entire set of photos were then uploaded into a database. We chose a pattern recognition software that is free, user-friendly, and had been successfully used to individually identify many other animals (e.g. zebras, jaguars, leopards, margays, giraffes, lionfish, toads, frogs, ocelots, beetles, tigers, seals, sea turtles, snow leopards, snakes, and whales!). Once the images are processed, the software runs comparisons for all images in the database. After selecting a reference image, the software is able to compare images and provide a similarity score for each other image in the database.



Pattern-recognition software correctly matching two images of the same individual bat (Sky110)



p-Chip tag implanted in the wing of a big brown bat

What did we discover?

Overall, our research showed that pattern recognition software can correctly match wing images from the same bat. Nearly half of the adult bat wing photos and one fifth of the juvenile bat wing photos correctly matched to other photos of the same



A flying big brown bat (*Eptesicus fuscus*)

© Sherri and Brock Fenton

animal and the same wing. Although the automated results did not achieve the same level of accuracy as manual photo comparisons, the match rates were well above chance performance. At the very least, the use of pattern recognition software greatly reduced the number of images requiring visual inspection and human verification of a match.

While automated identification of bat wingprints is not quite ready for deployment in the field, our work shows there is great potential for pattern recognition software as a useful tool for bat identification. Recently, colleagues from Germany at the Friedrich-Alexander-Universität and Nuremberg Zoo conducted a similar study but used infrared light (IR), instead of ultraviolet, to image the unique patterns of bat wings. Their software correctly identified individuals with 80% accuracy. Perhaps the future of wingprinting in bats lies with IR instead of UV light? Altogether, these studies indicate that biologists may be on the brink of identifying and reidentifying individual bats based on a unique intrinsic feature, the wingprint!

How recreational climbers are teaching bat biologists about bats

By **Robert Schorr** and **Shawn Davis**, Climbers for Bat Conservation

For nearly 200 years, bat biologists have surveyed and studied bats to understand their physiology and ecology, and understand how to conserve them. Most of those studies have searched for bats in places humans can access, such as caves, mines and buildings. However, we have long known that bats roost at heights more difficult to reach in locations like trees and cliffs. Perhaps, bat biologists can rely on unlikely partners to learn about bats roosting at great heights.

Rob Schorr, a bat biologist at Colorado State University, and Shawn Davis, an ecology professor and rock climber at Slippery Rock University (Pennsylvania), ventured into such a collaboration with the recreational rock-climbing community in 2014. Schorr and Davis speculated that rock climbers may see bats and have knowledge of where bats roost.

Knowing where bats roost and in what numbers became vitally important in North America in the early 2000s, as white-nose syndrome (WNS) decimated bat populations. Eastern US bat populations were declining by the millions as the disease killed >90% of bats at some hibernacula. As WNS moved westward, Schorr and Davis gambled that engaging with recreational rock climbers would illuminate new or previously unknown bat roosting locations and populations.

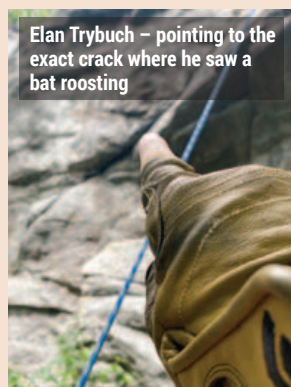
They developed Climbers for Bat Conservation, a grassroots organisation which grew from facilitated conversations with local climbers, bat biologists and land managers in northern Colorado. Those early conversations addressed simple, but important, discussions about what climbers and biologists value in the natural world, the importance of conservation, and how partnerships are essential to effective conservation.

As an avid climber and social scientist, Davis knew that requesting data from climbers needed to be done in an open exchange of ideas and motives. For example, raptor conservation periodically requires reducing disturbance around active nests, which sometimes involves closures of climbing routes. Though climbers were instrumental in early raptor conservation efforts, climbing closures were, at times, contentious. Davis and Schorr were fully aware of this history, and so advocated for collaborative, sit-down conversations with climbers.

If you have not heard of CBC yet, that is partly by design. Davis and Schorr knew that climbers sharing the project via



© Bill Barham



Elan Trybuch – pointing to the exact crack where he saw a bat roosting

© Elan Trybuch

Canaan Lineberry – pointing to a pocket where a bat was roosting



© Canaan Lineberry



© Stanmira Deliva

word-of-mouth would be a better approach than a broadscale solicitation of climbers' observations. We wanted climbers to tell other climbers about CBC not only to build trust, but also to empower climbers to contribute to bat conservation. That approach has paid off. Now in its 12th year, CBC has over 420 climber-submitted bat observations from USA, Canada, Cuba, Norway, Bulgaria, Italy, Mexico and Kenya. These records have come from recreational climbers as they passively observe bats in cracks and crevices.

However, CBC also conducts active surveys, climbing in Colorado, Red River Gorge (Kentucky) and New River Gorge (West Virginia) to look for bat roosts that can then be monitored. From the climber data and active surveys, CBC has identified what they believe to be maternity colonies behind south-facing thin crevices, called flakes. Cracks typically go into the rock face, where flakes are thin slices along the face of a wall, like the peel of an orange. The air temperature behind these flakes gets hot, and may be ideal to raise young bats. One such flake along a route in Colorado has observations of bats spanning over 20 years.

Davis and Schorr are proud of the growing CBC community that celebrates bat conservation, but they are equally proud to be climbers themselves and to be partners with climbing advocacy groups, such as The Access Fund and American Alpine Club. They routinely collaborate on conservation projects, and recently published bat management guidelines with The Access Fund. Additionally, they work with the climbing community to understand how better to engage with climbers, for example, the seminal work by graduate student Emily Gross looking at the barriers and benefits of rock climbers participating in citizen science for bat conservation.

Although CBC is growing, it has only scratched the (vertical) surface. Davis and Schorr would like to increase data collection by engaging with international climbing groups and bat biologists. One method of increasing these conversations is by celebrating the gamut of cliff ecology. In 2024, CBC co-sponsored the first Cliff Ecology Conference in Yosemite National Park, California. They hope to expand this into an international conference to understand cliff dwelling bats, other animals, plants, fungi, and invertebrates.

If you are a climber, and you have happened to see a bat in a crack, crevice or pocket, please let CBC know. They have an online data submission portal on their website, and you can view the other climber-submitted data from around the world.

"A strange thing about climbing in the dark is that all these creatures come out. Bugs, mice, bats, even frogs that live in the cracks" Alex Honnold, *Alone on the Wall*.



Looking back at the Nocturnal Garden: how Chelsea put bats in the spotlight

When Bat Conservation Trust set out to create its first garden at RHS Chelsea Flower Show, our ambition was to show how beautiful and easy a 'bat garden' can be.

Over one remarkable week, the Nocturnal Garden introduced thousands of visitors to the world of wildlife after dark. It sparked conversations with gardeners, designers and journalists. It inspired people to think differently about their own outdoor spaces and how small changes can help wildlife.

The garden also reached millions more people beyond the Chelsea gates through national media, social media and television.

For a small charity, it was a big achievement. Now, we're looking back at what the Nocturnal Garden achieved and the legacy it leaves behind.



© Bennet Smith



© Bennet Smith

▲ A path into the garden, made from Welsh slate, leads you to Black Amber, the sculpture created by Tach Pollard

◀ A wide shot of the garden where you can see a variety of plant heights, colours and shapes

Two awards and millions of people reached

The Nocturnal Garden received two major awards in the All About Plants category during RHS Chelsea Flower Show. It was awarded an **RHS Silver Medal**, recognising the quality of its design, planting and construction. It also won the **People's Choice Award**, voted for by the public. Winning the People's Choice Award was especially meaningful. It showed that the garden's message resonated with visitors as well as judges.



From left to right: Melanie Hick (garden designer), Kirsty Barnes (project manager) and Cecilia Sandrini (planting consultant) holding the People's Choice Award (All about plants category)

The project also achieved an extraordinary level of public engagement.

Over the course of the campaign, the garden reached around **55 million people** through television, newspapers, magazines, radio, websites and social media.



BBC filming Nicki Chapman (left) and Angellica Bell (right)



Tom Allen, comedian, in the Nocturnal Garden



Monty Don, gardener and presenter, visits the Nocturnal Garden



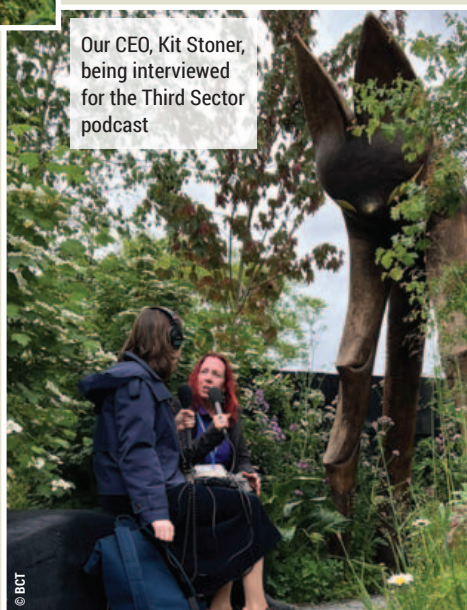
Reece Shearsmith, actor and comedian, with Kirsty, Cecilia and Melanie holding the People's Choice Award (All about plants category)



Will Young, singer-songwriter and actor, in the Nocturnal Garden



BBC filming Toby Buckland, gardener and presenter, in the Nocturnal Garden



Our CEO, Kit Stoner, being interviewed for the Third Sector podcast

Carol Klein (left),
gardener and
presenter, with
our Honorary
Education Officer
Shirley Thompson



Changing the conversation about bats

The Nocturnal Garden was the first Chelsea garden dedicated to bat conservation. Rather than focusing only on how a garden looks during the day, it celebrated what designer Melanie Hick called the 'second act' of the garden – the hours after sunset.

Dark planting tones, night-scented flowers and wildlife-friendly planting encouraged visitors to think about moths, insects and the bats that depend on them. Sustainable features, including low-level lighting and water-conscious planting, showed that beautiful gardens can also support nature.

Find out more about the garden and download a plant list.

www.bats.org.uk/our-work/nocturnal-garden-rhs-chelsea-flower-show-2026



The Nocturnal Garden showcased a variety of plant heights, flower colours and shapes. From the tall foxgloves in the back to ox-eye daisies in the front

One of the most common reactions we heard was surprise. Many visitors had never thought about bats using their gardens, or realised how easy it is to make outdoor spaces welcoming for wildlife after dark.

Every conversation helped challenge misconceptions about bats and showed that even small changes can make a real difference.



The back border of the garden featured unique bat boxes



A water feature is a great addition to encourage insects in your garden



Artificial lighting should be avoided. If you must have it, it should have a gentle, warm glow and be close to the ground, pointing down (*lighting from Hudson Lighting*)

Photos © Bennet Smith

Conversations that will last beyond Chelsea

While the media coverage was exciting, some of the most rewarding moments happened inside the garden itself.

Throughout the week, our staff and volunteers welcomed a constant stream of visitors. They answered questions about bats, shared gardening tips and talked about simple ways people can support wildlife at home.

For our team, Chelsea was an opportunity to meet people face to face, listen to their questions and help them see bats in a new light.

Did you see BCT's Nocturnal Garden at RHS Chelsea Flower Show 2026?

We'd love to hear from you to find out if you visited the garden in person, or saw it on the TV or heard about it elsewhere. Please let us know by answering a few brief questions:

www.bats.org.uk/did-you-see-the-nocturnal-garden (takes less than two minutes)



One lucky person will get the chance to win a full set of pin badges (6 different bat species) and a tote bag! Simply add your details at the end to enter the draw.

We're grateful to designer Melanie Hick, Project Giving Back, our volunteers, partners and everyone who helped bring this ambitious project to life.

Chelsea gave us the chance to tell a new story about bats. Thanks to the Nocturnal Garden, that story is only just beginning.

Offshore wind farms could pose unexpected threat to migratory bats

By Jack Hooker, BCT's Research Scientist

A study by BCT staff has revealed that offshore wind farms in British waters, widely viewed as a cornerstone of climate-friendly energy, may pose a significant but largely unrecognised risk to our beloved bats. The research, published in *Global Ecology and Conservation*, brings together emerging evidence highlighting the dangers that bats face in open seas around the British Isles as the footprint of offshore wind developments rapidly expands.

The findings do not argue against renewable energy. Instead, they highlight a growing conservation challenge, dubbed a green-green dilemma, whereby objectives underlying both crises may be equally as important, yet conflicting.

As nations accelerate efforts to decarbonise electricity production to combat the global climate crisis, wildlife is encountering new kinds of conflict with human infrastructure causing ongoing negative impacts on biodiversity. The study suggests that balancing climate action with biodiversity protection will require a more detailed understanding of how bats use aerial marine environments; an ecological dimension that has historically been overlooked.

Bats over the open ocean

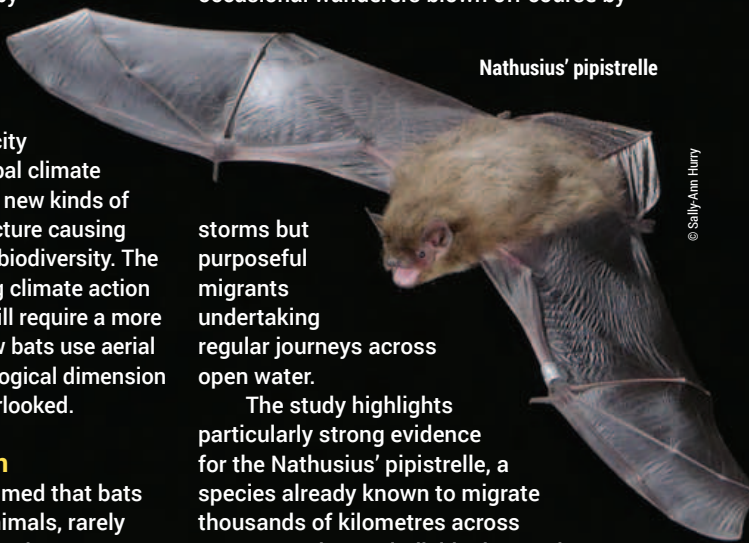
For decades, ecologists assumed that bats were primarily land-bound animals, rarely venturing far from coastlines. The sea was considered a natural barrier, preventing large-

scale movement between land masses.

However, technological advances in acoustic monitoring, tracking, and offshore surveys have begun to overturn this assumption.

Researchers have increasingly detected bat echolocation calls from ships, oil platforms, and offshore research installations many kilometres from land. Meanwhile, concerted efforts to ring and monitor bats across Europe (including BCT's National Nathusius' Pipistrelle Project) have found distinct annual patterns and geographic distributions. These observations demonstrate that some bats are not occasional wanderers blown off course by

Nathusius' pipistrelle



storms but purposeful migrants undertaking regular journeys across open water.

The study highlights particularly strong evidence for the Nathusius' pipistrelle, a species already known to migrate thousands of kilometres across Europe. Each year, individuals travel between breeding and wintering grounds,

moving between mainland Europe and the British Isles. Observations suggest these bats follow coastlines before committing to long crossings over the North Sea, where they sometimes travel tens or even hundreds of kilometres without stopping.

There is also growing evidence that larger, fast-flying bats, such as noctules and Leisler's bats, may undertake similar journeys between Britain and Europe, including Scandinavia. If confirmed, this would mean that several species routinely cross waters where offshore wind development is expanding most rapidly.

The research therefore reframes the marine environment surrounding the UK as part of a connected landscape, rather than being an ecological boundary. For migratory bats, it functions as a corridor linking populations across Europe, with the North Sea in particular operating much like a terrestrial migration route used by other animals.

Why wind turbines affect bats

Wind turbines are designed to harness energy from moving air, but the same airspace is used by flying wildlife. While birds are already recognised as being at risk from turbine collisions, bats present a different and more complex case.

The most obvious threats to bats from turbines is collision, whereby rotating blades can strike bats directly, particularly during low-visibility nighttime conditions when migration occurs. However, there is also some evidence that barotrauma could also play a role in bat mortality. When turbine blades spin, they create sudden drops in air pressure and bats flying through these zones can experience fatal internal injuries, particularly lung damage, even if they do not physically touch the blades.

Whilst scientists have not been able to conclusively prove how or why bats may be getting killed at offshore wind turbines, there

have been several reasons proposed to explain this phenomenon following studies at onshore wind farms. As well as accidental encounters with turbines (especially by young bats along migratory pathways), bats may mistake turbines for tall trees, potential roosting sites, or feeding areas where insects accumulate. At sea, the risks may be amplified. Offshore turbines are often taller and more isolated than those on land, making them prominent features in otherwise open environments. For animals navigating across featureless water at night, such structures may act as navigational cues, increasing the likelihood of close approach.

Why migratory species are vulnerable

Bats reproduce slowly compared to other animals of their size, with many species giving birth to only one pup per year. This means that populations are slow to recover from losses and even relatively small increases in mortality can have long-term consequences.

Migratory bats are particularly sensitive because their journeys expose them to multiple hazards across vast distances. A mortality source in one country may affect populations that breed or overwinter in another, making their conservation a multinational issue. If offshore wind farms create mortality hotspots along migration routes, the effects could accumulate over



© Thomas on Pixabay



Leisler's bat

© Hugh Clark

time. Individual wind farms may have small impacts, but large numbers of turbines across the North Sea could collectively influence population trends.

A rapidly expanding industry

The concern arises in the context of unprecedented offshore wind expansion. The UK currently operates one of the largest offshore wind sectors in the world, and further developments are planned across the North Sea and Irish Sea as part of national climate commitments; a similar expansion is underway across northern Europe.

Historically, environmental impact assessments for offshore wind farms have focused on marine mammals, seabirds, and fish. Terrestrial mammals, including bats, were not considered relevant because they were not thought to use offshore habitats. An ever increasing evidence base is challenging that assumption and therefore demonstrating that existing assessment frameworks may be incomplete.

Gaps in current knowledge

One of the study's strongest conclusions is that knowledge of offshore bat ecology remains extremely limited. Scientists still do

not know exactly how many bats cross the sea, which exact routes they take, or how frequently they encounter turbines, not to mention how many are killed.

Many of these knowledge gaps arise because monitoring offshore is difficult and expensive. Traditional bat surveys rely on ground-based detectors or roost counts, methods that are much more complicated or irrelevant in the marine environment. As a result, much of the available information comes from opportunistic recordings on ships and offshore structures.

Researchers argue that more systematic monitoring is urgently needed. Acoustic detectors mounted on turbines, radar tracking, and thermal imaging could help reveal migration timing and flight heights as well as starting to document potential collision events. Without this information, it is difficult to estimate how many bats may be dying offshore or how to design effective protective measures.

Potential mitigation measures

The study suggests that solutions are possible. On land, some wind farms reduce bat mortality by reducing turbine operation during periods of high bat activity,

particularly on low-wind nights in late summer and early autumn when migration peaks. Similar approaches could be explored offshore.

Another possibility is incorporating wildlife considerations into site selection. If major migration corridors can be identified, developers could avoid placing turbines directly within them. Future technological solutions may also help limit impacts on bats, for example acoustic deterrents designed to discourage bats from approaching turbines are being tested, though their effectiveness offshore is not yet fully understood.

Importantly, the researchers emphasise that mitigating against a negative impact on bats does not mean abandoning renewable energy. Instead, it means refining development so that climate solutions do not unintentionally harm vulnerable species.

The bigger picture

The researchers conclude that offshore wind remains essential for achieving climate targets, but environmental planning must evolve alongside it. Considering bats in offshore assessments represents a step toward more holistic ecological management, and rather than opposing renewable energy development, the study calls for better integration of ecological science into policy and engineering. By identifying migration patterns, monitoring wildlife interactions, and implementing mitigation strategies, it is possible to reduce risks to bats significantly.

Ultimately, the findings highlight how much remains unknown about bats in the marine environment as well as their

migration ecology. Each year, countless bats cross the North Sea under darkness, largely unnoticed by humans. The expansion of offshore wind farms has brought human technology into this hidden world, revealing an ecological interaction that was previously invisible.

As countries transition to low-carbon energy systems, this research offers a reminder that sustainability involves more than reducing emissions. It requires



Noctule

© Hugh Clark

understanding and protecting the complex web of life that shares the planet with us, from ocean depths to the night skies above the waves. In doing so, society can work toward a future in which climate action and biodiversity conservation reinforce each other, ensuring that progress in one area does not come at the expense of the other.

A series exploring fantastic bat conservation organisations across the world!

Dahari: protecting the Livingstone's fruit bat in the Comoros

By **Hugh Doulton**, Co-Director, Dahari

Tucked away in the Indian Ocean, between Madagascar and the East African coast, lies the Comoros archipelago — a chain of volcanic islands that most people couldn't pinpoint on a map. But, for one extraordinary bat species, these forested mountains are the only home they have ever known. Meet the Livingstone's fruit bat (*Pteropus livingstonii*), a striking flying fox with a wingspan of up to 1.4 metres, jet-black fur and amber eyes and we have some good news to share about them!

A reclassification worth celebrating (carefully)

In May 2024, the International Union for Conservation of Nature (IUCN) reclassified the Livingstone's fruit bat from 'Critically Endangered' to 'Endangered' on its Red List. That's a meaningful step in the right direction — but the change doesn't mean the population has bounced back. Rather, it reflects the fact that we now have a much better understanding of how many bats are actually out there.

This clearer picture is the result of more than a decade of patient fieldwork by our team at Dahari, a Comorian conservation organisation working to protect biodiversity and support rural communities. Since 2013, we have been counting Livingstone's fruit bats at their roost sites — first on the island of Anjouan, in partnership with the University of the Comoros and Ntringui National Park, and later on the neighbouring island of Mohéli, working alongside Mohéli National Park.

From 2019 onwards, we teamed up with Bat Conservation International to fit GPS tags to some of the bats. The data revealed where



A Livingstone's fruit bat with a GPS tag

they fly to feed, where they rest, and even some previously unknown roost sites. Together, these efforts helped refine population estimates and showed that numbers have been broadly stable since 2012. Stable, but still small — and still vulnerable.

Why the threat is far from over

Of the 62 flying fox species on the IUCN Red List, the Livingstone's fruit bat remains one of the species most at risk of extinction. The biggest problem? Forest loss. On Anjouan alone, roughly 80% of natural forest was cut down between 1995 - 2014. The consequences ripple beyond the bats themselves: of the 50 permanent rivers that once flowed across the island, only ten still run year-round. Without forests, there is less water, and less habitat for bats and other endemic biodiversity.

This is why it is so urgent to protect what remains of the Comoros' forests — and why Dahari has been working on a creative approach that puts farmers at the heart of conservation.

Conservation agreements: a win-win for bats and people

Most of the land surrounding Livingstone's fruit bat roost sites is farmed by smallholders who depend on this land for their livelihoods. Telling them simply to stop farming wouldn't work — and wouldn't be fair. Instead, we offer something called a conservation agreement. In exchange for agricultural support such as seeds, seedlings and technical training, farmers commit to keeping the trees on their land standing. Forests get a chance to recover, farmers get better harvests, and the bats keep their homes.

So far, seven of the 26 known roost sites (20 on Anjouan and six on Mohéli) are protected through these agreements. And here's the lovely twist: the bats give back. As they feed on fruit, they scatter seeds across the landscape, helping the forest regenerate naturally — no human planting required.

Batoidine Ousseni, who farms near a roost site close to the village of Adda, sums it up nicely: "Dahari's support helps me greatly in my farming activities. Every year, I receive seeds and technical training. My activity does not disturb the fruit bats, as I farm far from the roost. Moreover, I do not cut trees and I do not set fires. Coexisting with the fruit bats also brings advantages, as trees grow naturally without me planting them."

Looking ahead

We are currently evaluating the first conservation agreements around roost sites and in the high-altitude forests where the bats spend much of their time. The goal is to extend this approach across all of Anjouan's remaining forests, working hand in hand with the National Parks, so that every roost site and feeding area is secured for the long term.

The Livingstone's fruit bat has had a small win on paper. Now we need to make sure that win becomes a reality on the ground.

If you want to see the Livingstone's fruit bat without going to the Comoros, you can visit the fabulous enclosure at Northumberland Zoo — who also fund our work along with Cartier for Nature and Bat Conservation International. Learn more and donate at www.daharicomores.org.



Forest landscape on Anjouan



Farmers receiving training in banana plant propagation



Livingstone's fruit bat at a roost site



Jess Dikken

Project Officer

Sibrydion y coetir / Whispers of the Woodlands: saving the brown long-eared bat

1. Tell us about Whispers of the Woodlands – what are the aims of the project?

Whispers of the Woodlands is a Wales-wide conservation project, funded by The National Lottery Heritage Fund, which was established in response to the significant decline of the brown long-eared bat across Wales. According to National Bat Monitoring Programme (NBMP) data, the species declined by 53.5% between 2016 and 2024, highlighting the urgent need for action.

The project has four main aims. Firstly, to improve woodland management across Wales by working with woodland owners and managers and delivering free training on bat-friendly woodland practices. Secondly, to standardise tree roost recording and increase the number of recorded brown long-eared bat roosts through the development of the Bat Tree Habitat Key app and support for survey efforts across Wales. Thirdly, to increase the number of non-tree brown long-eared bat roosts monitored through the NBMP. Finally, to connect communities with their local bats, woodlands and wildlife; helping people better understand and value the nature around them.

2. How will the Whispers of the Woodlands project work to address this decline in brown long-eared bats across Wales?

One of the biggest challenges facing brown long-eared bats is the loss and degradation of suitable habitat. They rely heavily on well-connected woodlands, mature trees and a healthy supply of insects. Through our training programme, we will work with woodland owners and managers to show how woodland can be managed productively while retaining important habitat features for bats.

We also need a better understanding of the species' population trends and habitat use. By increasing the number of tree and non-tree roosts being monitored,

we can build a clearer picture of how brown long-eared bats are faring across Wales and identify where conservation efforts are most needed.

Community engagement is also a key part of the project. By helping people connect with their local wildlife and understand the importance of bats



and woodlands, we hope to inspire long-term stewardship of these habitats.

3. What is your favourite thing about brown long-eared bats, and can you tell us why they are called the “whispering bat”?

It has to be their enormous ears, which are almost as long as their bodies and incredibly sensitive, allowing them to detect faint sounds made by insects.

They are called the “whispering bat” because their echolocation calls are exceptionally quiet compared to many other bat species; so faint that they can be difficult to detect even with specialist bat detectors. This is thought to be an adaptation that helps them hunt moths, some of which have evolved the ability to hear approaching bats and take evasive action. By “whispering”, brown long-eared bats can sneak up on their prey far more effectively.

4. What was it about this project in particular that drew you to the role of Project Officer?

The brown long-eared bat is a fascinating species and an important part of Wales’ natural heritage. When I learned about the scale of its decline, I was drawn to the opportunity to be involved in a project that could make a meaningful difference.

What particularly appealed to me was the variety of the work. The project combines practical conservation, research, training and community engagement, creating opportunities to make a positive impact both for the species itself and for the people who share the landscape with it.



5. Which other bat species or other plants and wildlife are you hoping will benefit from this work?

Although the project focuses on brown long-eared bats, many other species stand to benefit. Improvements to woodland management and habitat connectivity will support a range of bat species that rely on woodlands for roosting, commuting and foraging.

Beyond bats, healthier and better-connected woodlands can benefit birds, dormice, badgers, pine martens, invertebrates and

many plant species. Woodland ecosystems are interconnected, so protecting and enhancing habitat for one species often has positive effects across the wider landscape.

6. How will you work to involve communities, especially those who face barriers to accessing nature?

We want everyone to have the opportunity to experience and enjoy nature, regardless of their background or circumstances. A key part of the project will be identifying and reducing barriers that prevent people from engaging with wildlife and conservation activities.

This might include providing free events and training, working with community organisations, bringing activities directly into local communities and considering challenges such as transport, cost and access to information. We want to create opportunities that are welcoming, inclusive and tailored to the needs of different groups across Wales.

By making nature more accessible, we hope to help people build meaningful connections with their local environment and feel empowered to play a role in protecting it.

New research from Connecting People and Landscapes in a Changing Climate

Connecting People and Landscapes in a Changing Climate (CPL) is led by the Bat Conservation Trust and brings together conservation scientists, farmers and communities to tackle the twin crises of biodiversity loss and climate change.

Thanks to National Lottery players, CPL is investigating how climate change affects wildlife in farming landscapes. This work focuses on nine threatened nocturnal mammals, including seven bat species, hedgehogs and hazel dormice.

The new research shows that dormice in Britain are becoming lighter earlier in the year but heavier in autumn. This is a vital insight into how climate change is reshaping the lives of one of the UK's most threatened mammals. Read more: www.bats.org.uk/news/2026/03/new-research-from-connecting-people-and-landscapes-in-a-changing-climate



Nature in Sacred Places

We're delighted to share that the Bat Conservation Trust is a partner in the new Nature in Sacred Places (NiSP) project, which has been awarded nearly £550,000 of National Lottery Heritage Fund development funding to help communities connect with the wildlife in local outdoor space around places of worship.

NiSP builds on the success of the Bats in Churches project, which demonstrated just how vital churches can be for bats and other protected species, encouraging enjoyment and understanding of outdoor space around places of worship. Read more: www.bats.org.uk/news/2026/04/nature-in-sacred-places

BCT's Nocturnal Garden – from Chelsea to Wales!

Although Chelsea Flower Show has now ended, the Nocturnal Garden's story is far from over.

The garden will soon move to Clydach Community Gardens in Swansea, south Wales, where it will become the first Chelsea garden to find a permanent home in the country.

Join us for a launch event on the 12 September 2026. More details to follow soon; register here to be sent more information about this launch event:

www.bats.org.uk/nocturnal-garden-wales



NBMP annual report 2025: a complex picture for UK bat species

The latest results of the National Bat Monitoring Programme (NBMP) have been released. Run by the Bat Conservation Trust, in partnership with the Joint Nature Conservation Committee, the NBMP report includes survey results gathered by more than 700 dedicated volunteers, monitoring around 7,500 bat roosts, field and hibernation sites and waterways.

Only two of the 11 species have increased in GB over the last five years (the lesser horseshoe bat and the soprano pipistrelle). The lesser horseshoe bat is one of our smallest bat species and is particularly affected by disturbance to roosts and intensive agricultural practices. Whilst populations have been doing better in Wales, the lesser horseshoe is no longer increasing in England.

There have also been recent declines in brown long-eared bat populations in Wales, and in Daubenton's bat populations in Northern Ireland since 2019.



Read more: www.bats.org.uk/news/2026/06/nbmp-annual-report-2025-a-complex-picture-for-uk-bat-species

Government investment boosts recovery for some of England's rarest bats

The government is investing a record £60 million to help protect and restore more than 350 endangered plants and animals across England. The money will fund 130 projects to help species of bats, butterflies, crayfish, birds and plants to recover and thrive. The programme will also support farmers in creating healthier habitats for wildlife while growing food. The aim is to stop species from disappearing and to create a greener, wilder England for future generations.

We are delighted to have secured funding for two projects that will support the recovery of four bat species: grey long-eared bat, Leisler's bat, serotine and Nathusius' pipistrelle.



Nathusius' pipistrelle

National Bat Conference 2026

The next National Bat Conference will take place on
11-13 September 2026 at University of Warwick.



We are delighted to announce that the Keynote will be given by Dr Emma Stone, Reader (Associate Professor) in the Milner Centre for Evolution at the University of Bath where she leads the Bat Conservation Research Lab.



Scan the QR code or visit www.bats.org.uk/national-bat-conference for more information about the programme, workshops and how to book.

In-person booking deadline: 27 August

Virtual booking deadline: 3 September

The Bat Conservation Trust is a registered charity in England and Wales (1012361) and in Scotland (SC040116).
Company Limited by Guarantee, Registered in England No: 2712823. Registered office: 15 Cloisters House,
Cloisters Business Centre, 8 Battersea Park Road, London SW8 4BG. Vat Reg No: 877158773.