Collection of reference recordings for woodland bat species

INTRODUCTION TO THE PROJECT

The Bat Conservation Trust is collecting bat reference calls to improve our acoustic classification algorithms (used to aid our passive acoustic monitoring programmes) and to build an open-source bat library (EchoHub).

If you know of a roost of a woodland bat species and can get permission to survey it, you can greatly help us by collecting bat reference recordings. You won't need a Natural England licence, you won't need to trap bats or enter the roost, and you can borrow the recording kit from us.

By providing your audio recordings and metadata to us, you agree that the wildlife records you produce may be used by the Bat Conservation Trust, their partners and the NBN Atlas. A sample of the recordings will be made available on the EchoHub website under a CC BY licence as stated in the *Data Sharing Agreement* enclosed in your survey pack.

If you have any questions, please contact Agata Staniewicz at AStaniewicz@bats.org.uk

BEFORE YOUR SURVEY

1) Select the roost to survey

- Select a roost for a woodland bat species that you (or your local Bat Group) already know. Bats should be definitely identified to species and no cryptic species should be living together.

- Get permission from the landowner before surveying the roost.

- Please make sure that the roost and survey area are safe to access.

- Although we welcome reference calls for all UK species, our priority is collecting recordings for woodland bat species:

All *Myotis* species	All UK *Plecotus* species
Leisler's bat	Barbastelle
Noctule	Serotine
Nathusius' pipistrelle	

2) Identify flyways

- Observe the landscape structure and **identify linear elements**, such as paths and hedgerows, that bats may follow when emerging from the roost.

- Carry out an emergence survey to **identify flyways**. Locate the roost exit and observe where bats fly when leaving. Take a note of the time when bats start emerging, you will need this later.

- Identify suitable **locations along flyways to position the two detector sets** to maximise your chance of capturing call variability (e.g. position one set of detectors in a cluttered habitat and the other in an open space area).

Some roosts may be challenging to survey if, for example, the roost is very close to the vegetation and bats fly straight into the forest. If you feel that the roost is not suitable to survey, you may want to try another one.

3) Book your survey equipment

Book your survey kit here https://www.bats.org.uk/our-work/national-bat-monitoring-programme/passive-acoustic-surveys/collection-of-bat-reference-calls

We've got limited equipment, so please book as soon as you've set a date to visit your roost.

We are interested in recording calls of different qualities and with different detectors. If you have other detector brands available and are happy to use them alongside with our AudioMoth and Peersonic, you are welcome to do so. We are looking for sounds recorded in full spectrum or time expansion. Let us know if you need advice on the settings.

4) Read the safety guidance

You can find the *Safety Guidance* and the *Risk Assessment Template* in your survey kit. Please remember to complete the risk assessment ahead of the survey.
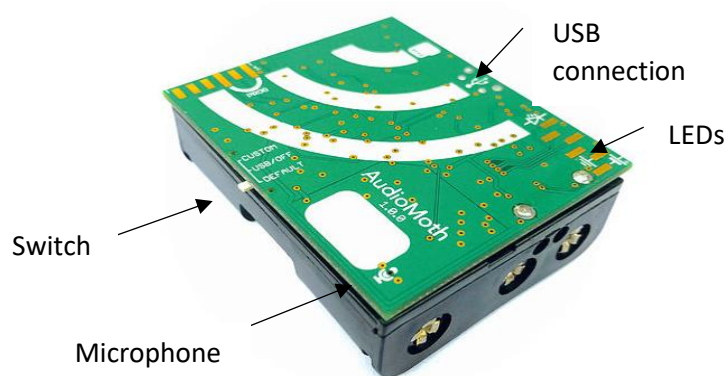
ON THE DAY OF THE SURVEY

5) Dowlad the AudioMoth App

Download and **install the AudioMoth App on your phone** before leaving for the field. You will need it to set the time on the two AudioMoth detectors.

6) Set the detectors

Please arrive at least 30 minutes before the bats emerge from the roost. This will give you enough time to set up the detectors in the locations that you have previously established.

Set up the AudioMoth:

1- Insert 3 fresh batteries in the AudioMoth. The SD card will be already plugged in the device.

2- Activate the AudioMoth: Slide the switch to CUSTOM. The red LED will show solidly, and the green LED will flash, indicating the AudioMoth is listening for the chime.

3- Open the smartphone app, turn your phone volume up high and hold the phone close to the AudioMoth microphone. Click *Play Chime*.

4- When the AudioMoth has heard and accepted the chime either the green or the red LED should light/flash (but not both) indicating that it is ready to be deployed.

5- Insert the AudioMoth into a case. Insert the AudioMoth into the lid of the case first. Press the circuit board of the AudioMoth into the gap in the foam padding, ensuring the microphone on the AudioMoth (see image) lines up with the hole in the lid. Attach the box to the lid (rather than the lid to the box). Gently press the box down onto the lid.

6- Attach your AudioMoth to one end of the mounting bar using an elastic band, vertically oriented, with the sealed side of the weather-proof mesh uppermost (so the 'OBO' logo will be upside down). The Peersonic will go on the other end of the same mounting bar.

Set up the Peersonic:

1- Insert 3 batteries in the Peersonic

2- Turn the detector on using the black switcher on the righthand side

3- Do not press anything else. The detector will show the date and, after a few seconds, it will start recording.

4- Attach the Peersonic on the other side of the mounting bar.

Repeat the steps for the other detectors and mounting bar.

7) Deploy the detectors

1- Attach a mounting bar to each tripod. Each tripod will support one AudioMoth and one Peersonic.

2- Adjust the tripod so that the Peersonic points upward at approx. 30° angle. Extend the tripod to approx. 1-1.5 meter high.

3- Position the detectors on a flyway, facing away from vegetation or other obstructions.

4- Record bats for a couple of hours.

8) Return equipment & your records

Please fill in the metadata spreadsheet that we've sent by email. These data are essential to populate the metadata fields on the NBN Atlas and EchoHub website, only some are mandatory, but try to complete all the fields, if possible.

Remove the batteries from the detector and pack the detectors and unused batteries safely into the equipment kit box. Please dispose responsibly of the used batteries.

Contact Agata Staniewicz at AStaniewicz@bats.org.uk to request a pre-paid label to return the equipment kit.

THANK YOU FOR TAKING PART