

Have BatNav, still travelling.

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This is an update on the driven transect survey project first published in Volume 1 of Northern Bats (Wiffen, 2016). The methodology has remained the same, an Anabat SD2 with the microphone pointing out of the car window connected to a BatNav GSP logger with bats recorded when driving at less than 40mph. The project is not a systematic survey of bat distribution and does not follow set transects, rather it is opportunistic, recording bats during night time journeys, usually on the way home. The last two years has seen gaps in the data filled and includes forays into Cumbria and North Yorkshire too, with a total of 9984 individual bat records now collected (Figure 1).

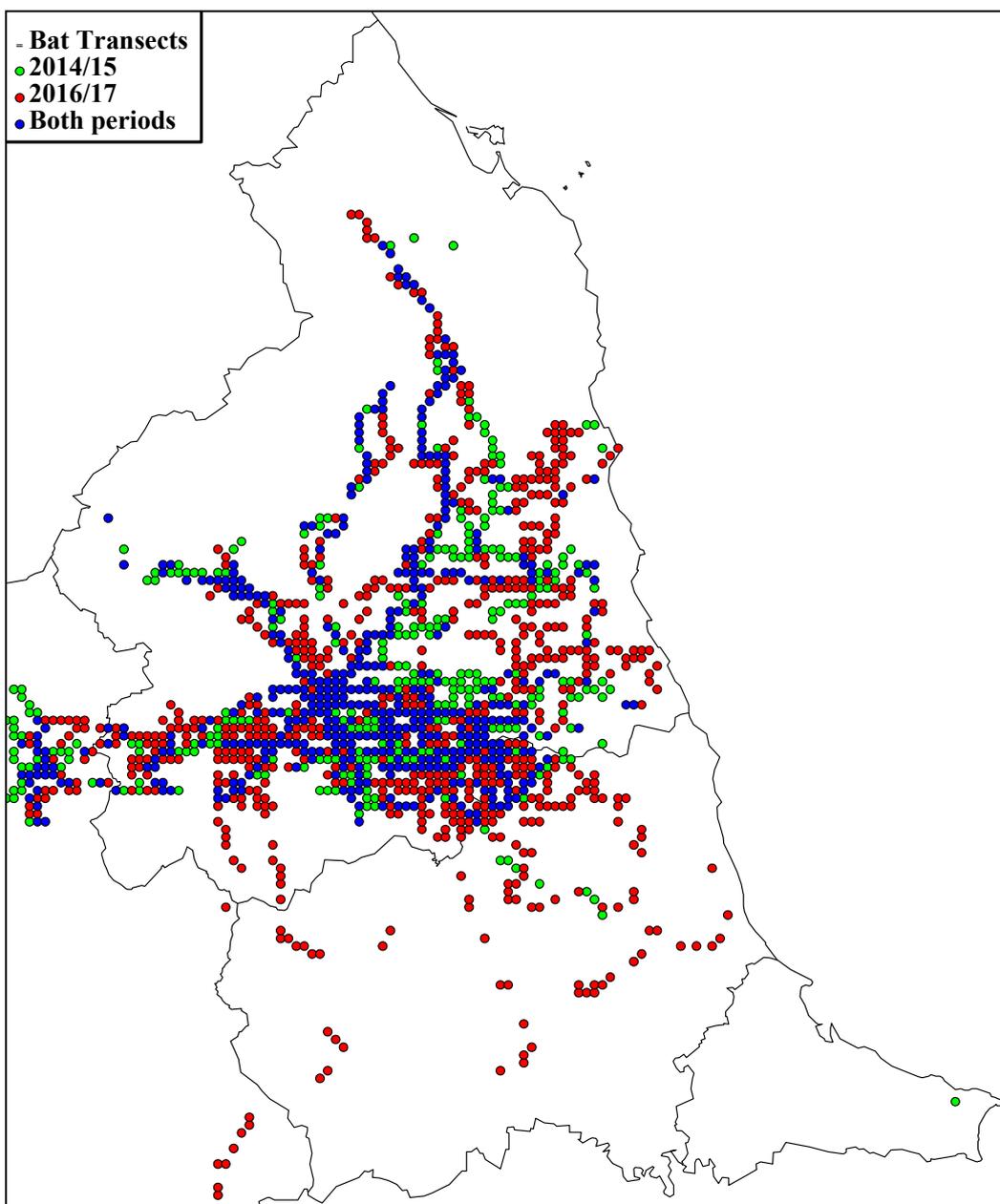


Figure 1: All bat distribution map.

As discussed before the majority of the calls recorded are *Pipistrellus* species bats, 9316 out of the 9984 calls recorded. *Nyctalus* species calls accounted for 2.5% of the calls and 3.6% are *Myotis* species calls. These figures show a close correlation to the data gathered over two years; after two years 2.6% of calls were *Nyctalus* species and 3.7% were *Myotis* species. Nine brown long-eared bat *Plecotus auritus* calls have been recorded over four years, with four in 2014-5. These figures demonstrate that the data collected for individual species/species groups has been consistent over the project.

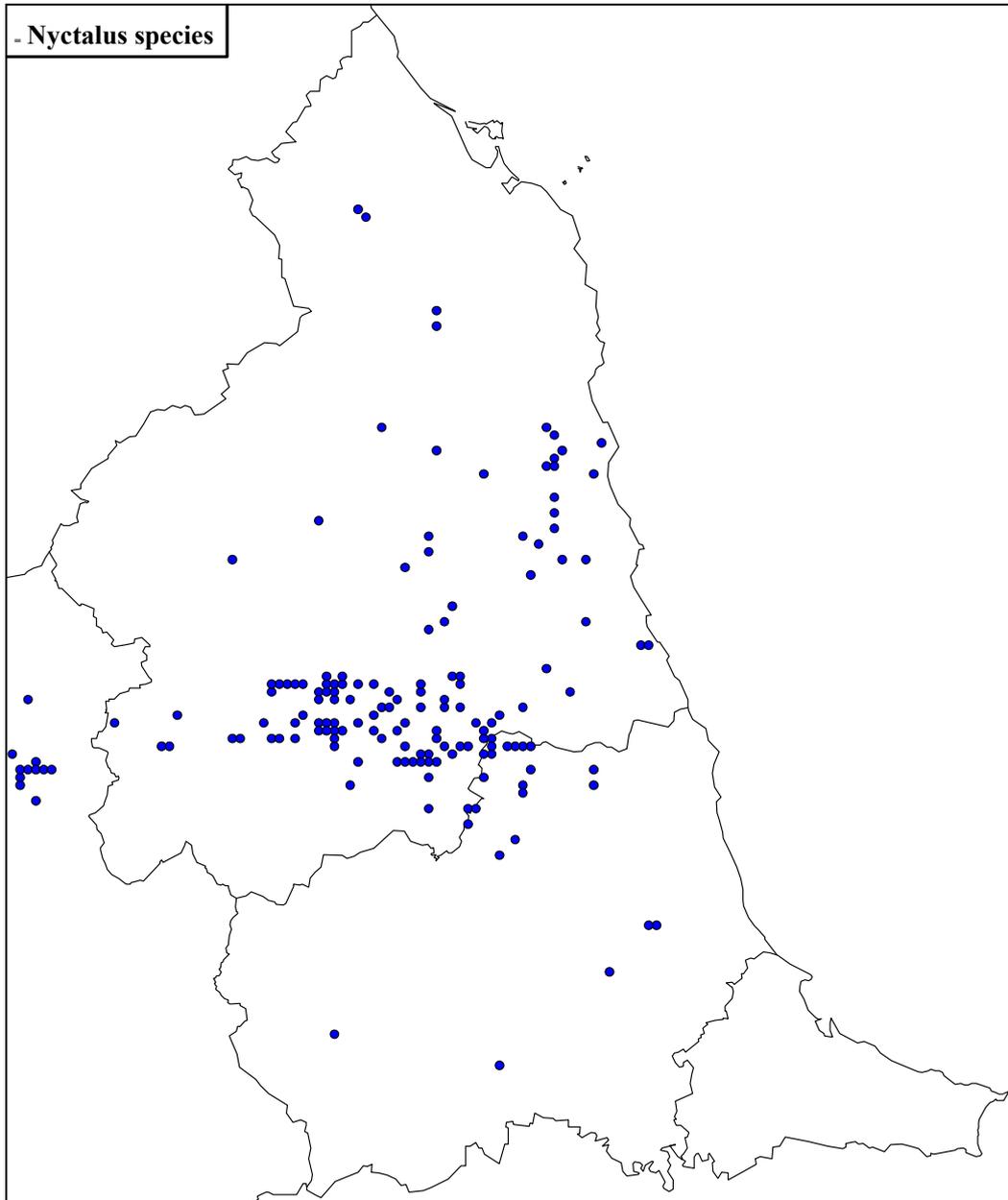


Figure 2: *Nyctalus* species bat distribution map.

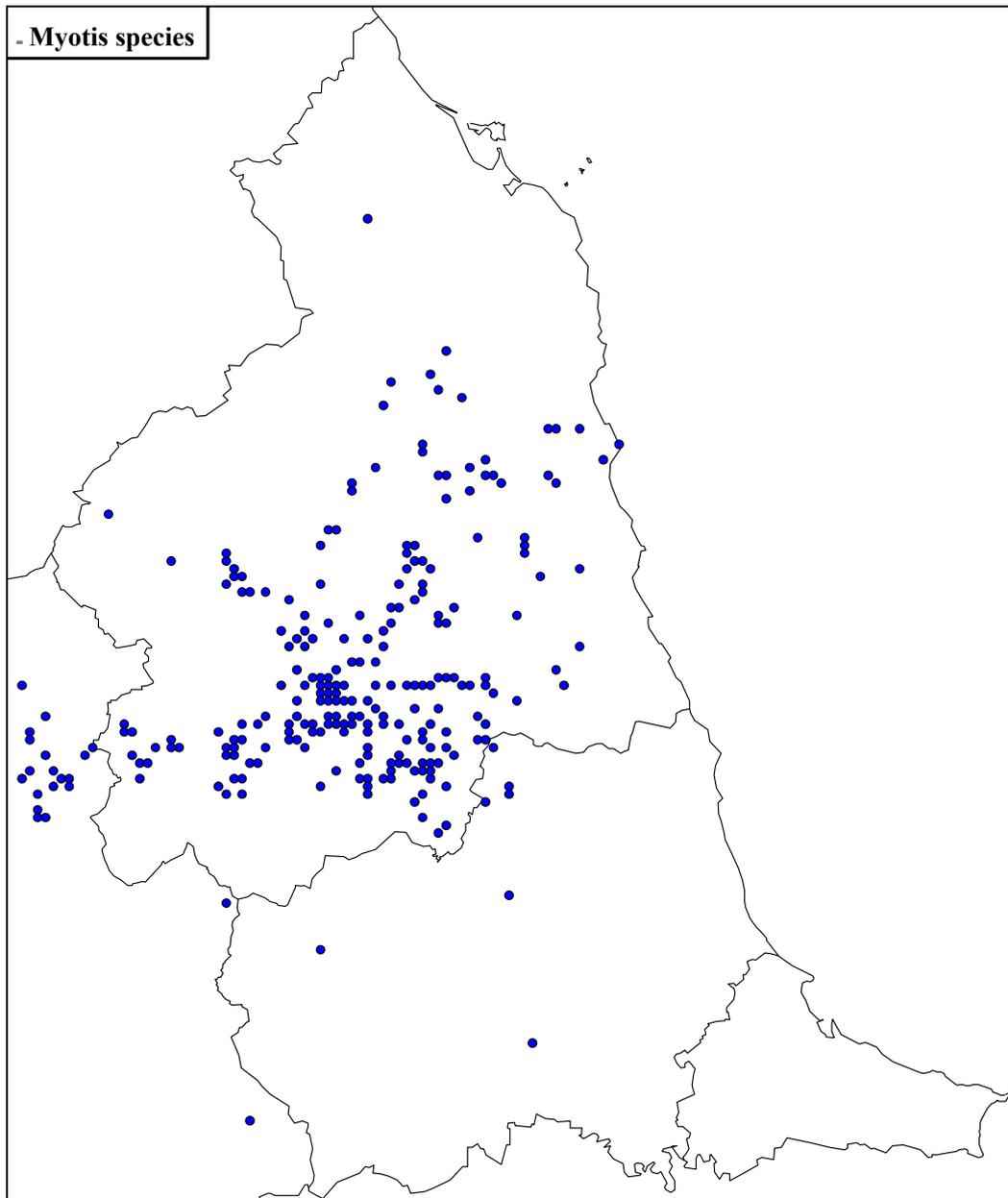


Figure 3: *Myotis* species bat distribution map.

A study in the Everglades National Park comparing mobile with static acoustic monitoring (Braun de Torrez *et al.*, 2017) found that driven transects underrepresented bat species richness and, in their study, failed to detect three rare bat species which were known to be present. This shows the limits of this technique for producing distribution maps for wider areas but this method does, within these caveats, provide up to date records for wider areas with the minimum of extra survey effort.

This data has been shared with ERIC North East and Cumbria Biodiversity Data Centre, the two local record centres and with Cumberland, Durham, Northumberland and North Yorkshire bat groups. I would be interested to know if anyone else is doing this, gathering data in this way does provide distribution data and if pooled has the potential to create comprehensive maps and up to date bat distribution for the region.

References

Braun de Torrez, E.C., Wallrichs, M.A., Ober, H.K. & McCleery, R.A. (2017) Mobile acoustic transects miss rare bat species: implications of survey method and spatio-temporal sampling for monitoring bats. PeerJ 5:e3940; DOI 10.7717/peerj.3940.

Wiffen, T. (2017) Have BatNav, will travel. Northern Bats. Volume 1, available from <http://s3.spanglefish.com/s/34944/documents/volume1/have-bat-nav-will-travel.pdf>