Spatial and temporal distribution of bats (Chiroptera) in bright summer nights

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Supplementary Material

Table S1.

Automated and manual analysis of ultrasound. Identification to species suggested by SonoChiro using standard settings and results after manual analysis of rare species, species not found at northern latitudes and possible noise files. ISp is a confidence index presented for each ID made by SonoChiro. This index range from 0 (low confidence) to 10 (high confidence). During manual analysis, no bats in the *Myotis* genus were determined to species, but *Myotis dasycneme* and *Myotis nattereri* are unlikely species at these latitudes and thus is presented in brackets. Species/genera previously confirmed at 62° north in western Norway, through trapping or through ultrasound analysis carried out by experts in this field, is marked with a star (*). In the *Pipistrellus* genus, only the soprano pipistrelle *P. pygmaeus* has been conformed through mtDNA analysis and captures. Results after manual analysis were used when modelling bat distribution in this study.

Species	SonoChiro ID	Mean ISp	After manual ID
<i>Nyctalus noctula</i> *	4	3.3	0
<i>Pipistrellus nathusii</i> *	109	3.8	0
<i>Plecotus auritus</i> *	5	5.9	0
<i>Vespertillio murinus</i> *	1	0.0	0
[<i>Myotis dasycneme</i>]	1441	3.2	NA
[<i>Myotis nattereri</i>]	6	1.3	NA
<i>Myotis daubentonii</i> *	453	1.5	NA
<i>Myotis mystacinus</i> *	62	2.2	NA
<i>Myotis brandtii</i> *	9	0.8	NA
Sum <i>Myotis</i> sp.	1971	NA	1260
<i>Eptesicus nilssonii</i> *	5577	6.5	6703
<i>Pipistrellus sp</i> *	7299	9.4	7379
Noise files /undetermined or empty	886	1.4	510

Figure S1. Distribution of frequencies of maximum energy (FMAXE) taken from 1103 recordings of bats in the *Pipistrellus* genus in the study area Tafjorden in western Norway at 62° north in 2014. The recordings are from a range of habitats, including woodlands, gardens and fields. Only recordings with quality above 5 (assessed by SonoChiro), without feeding-buzzes or social calls were included when producing this figure. A normal curve has been drawn based on parameters from these 1103 recordings (FMAXE=54.3 kHz and SD=2.7) and laid over the histogram. Note that there is no peak around 45-46 kHz, and subsequently no lower tail below these frequencies, as one would expect if a population of *Pipistrellus pipistrellus* had occurred in this study area. Thus, there is no evidence of an occurrence of *P. pipistrellus* in this region of Norway and all ultrasounds of bats in the *Pipistrellus* genus included in this study is likely to have been produced by *P. pygmaeus*.