

Appendix S6 - Examples of bat calls recorded

Here we provide some spectrograms of example recordings collected in the study, showing echolocation or social calls of different species. Group 1 is composed by recordings collected by bat detector and one or more mobile device models, therefore a visual comparison can be done on the same sequence recorded by different devices. Group 2 is composed by additional example recordings collected only by mobile devices.

All recordings in WAV format can be accessed on Dryad at:

<https://doi.org/10.5061/dryad.2280gb5z4>

Group 1: Recordings collected by both bat detector and mobile devices. The device model used is reported on the bottom right of each spectrogram.

Figure S1. *Tadarida teniotis* echolocation call sequence. Bra (Italy), 03/10/2022.

Recorded by:

- a. Wildlife Acoustics Song Meter Mini Bat (SMMB)
- b. Apple iPhone XR (A2105)

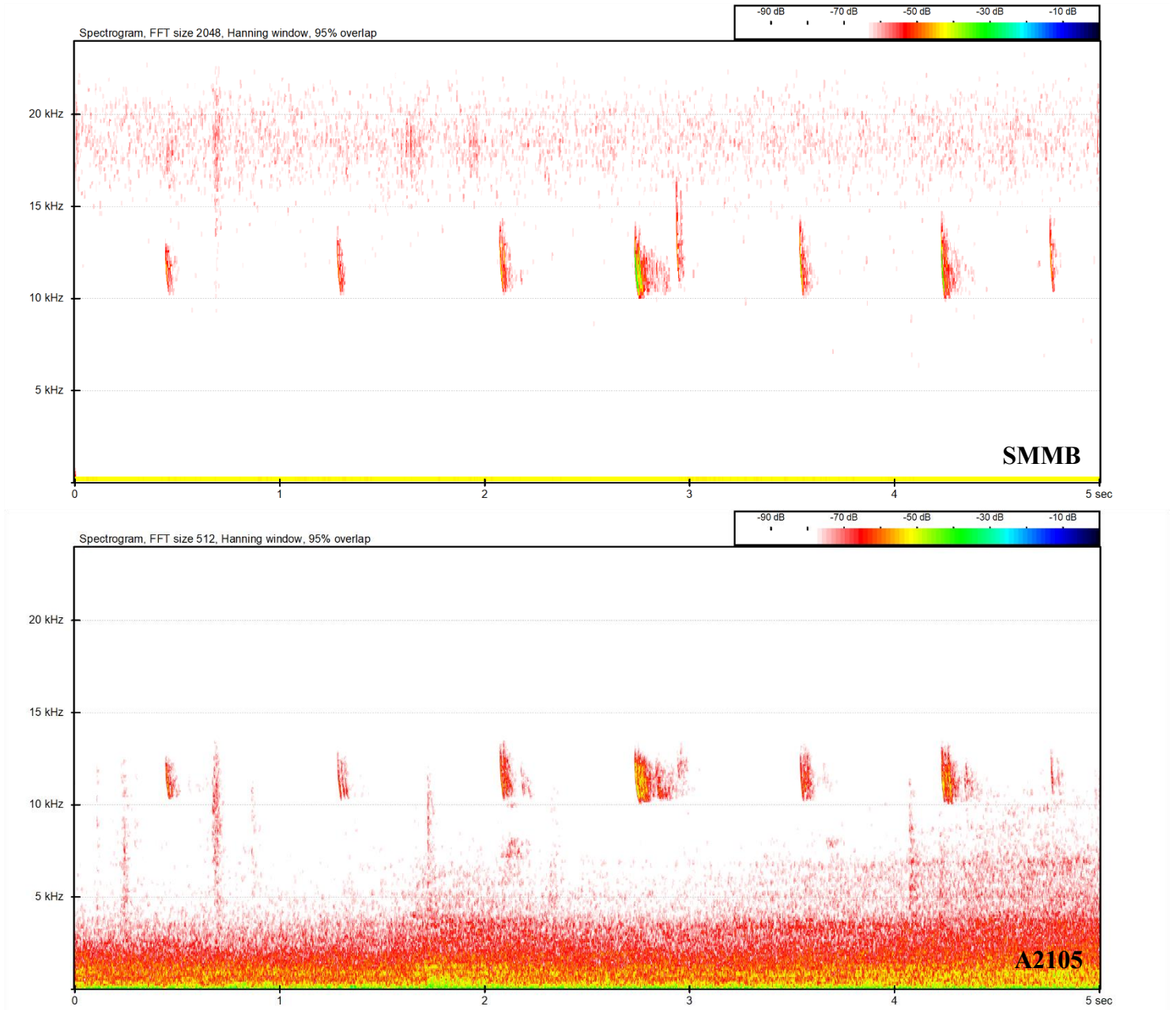
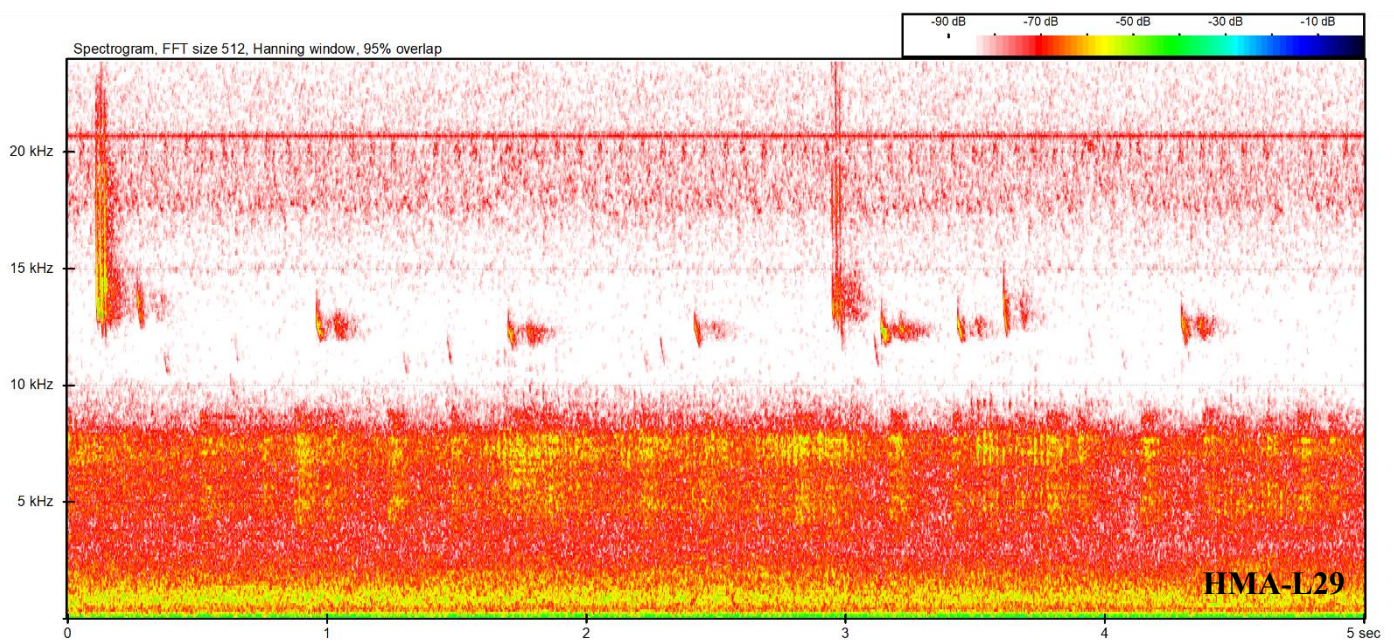
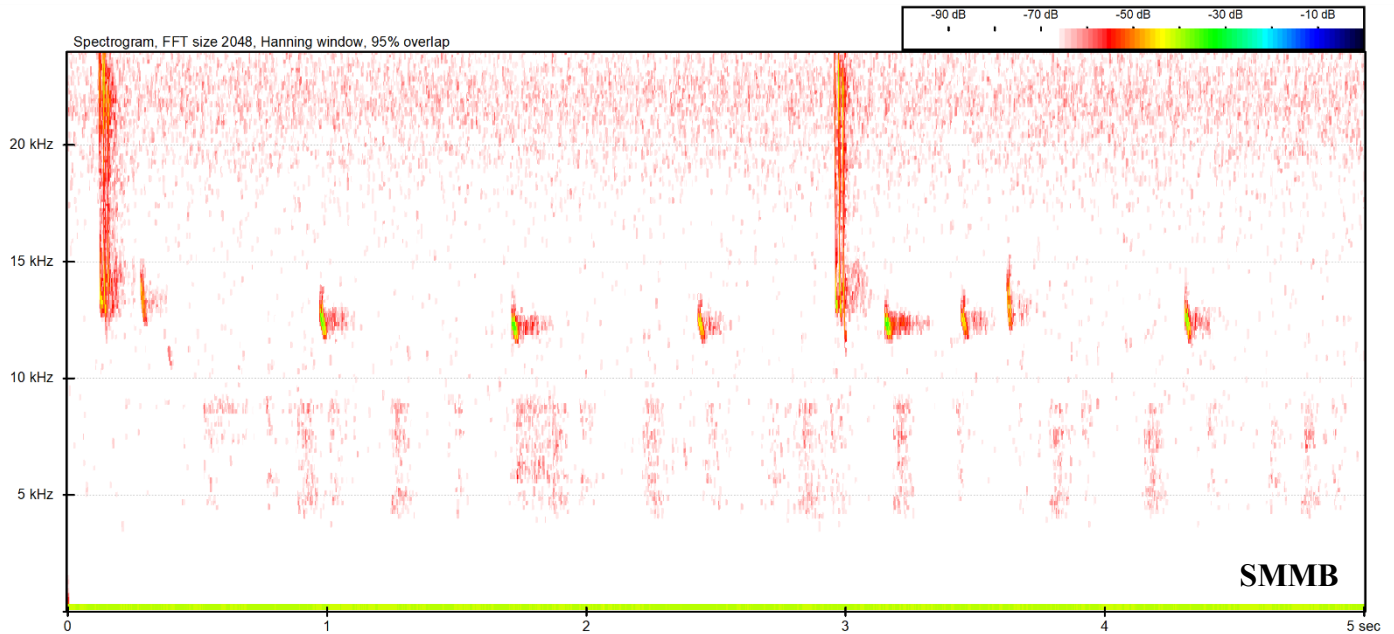


Figure S2. *Tadarida teniotis* echolocation call sequence and *Pipistrellus kuhlii* type D social calls (around 0.1 and 3.0 s). Turin (Italy), 21/10/2021.

Recorded by:

- a. Wildlife Acoustics Song Meter Mini Bat (SMMB)
- b. Huawei Mate 20 (HMA-L29)
- c. Samsung Galaxy S8 (SM-G950F)
- d. Samsung Galaxy A51 (SM-A515F)



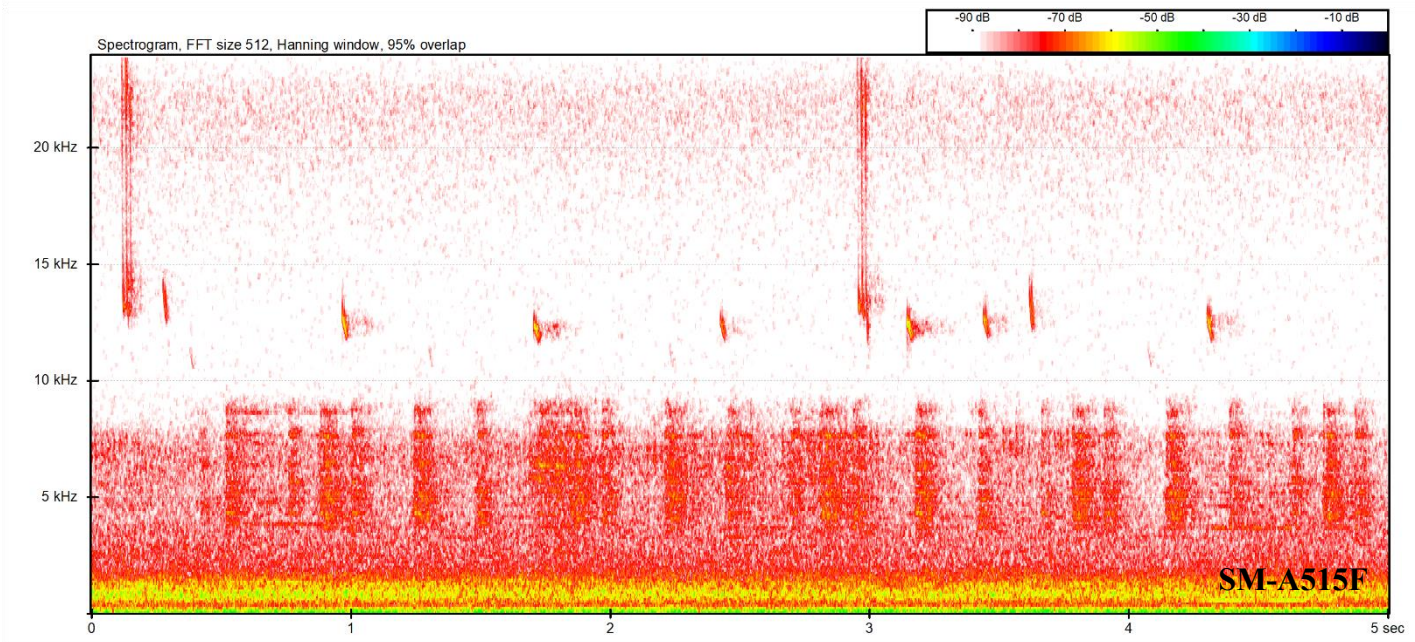
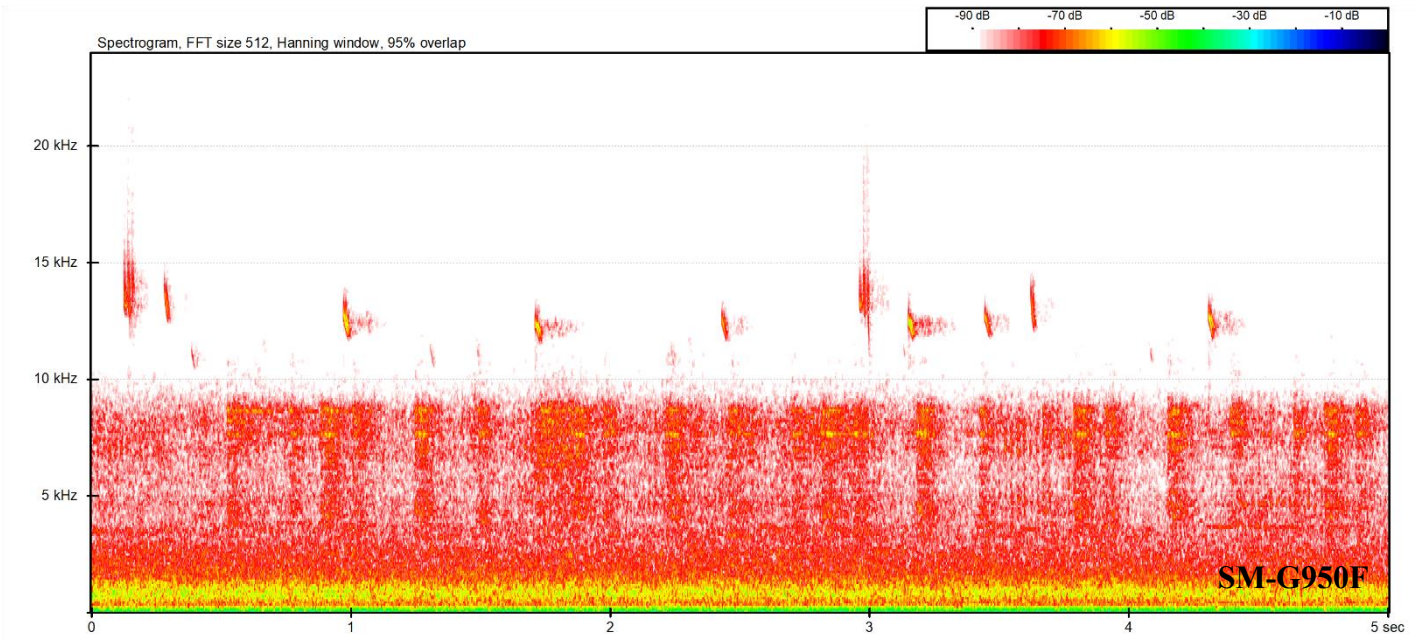
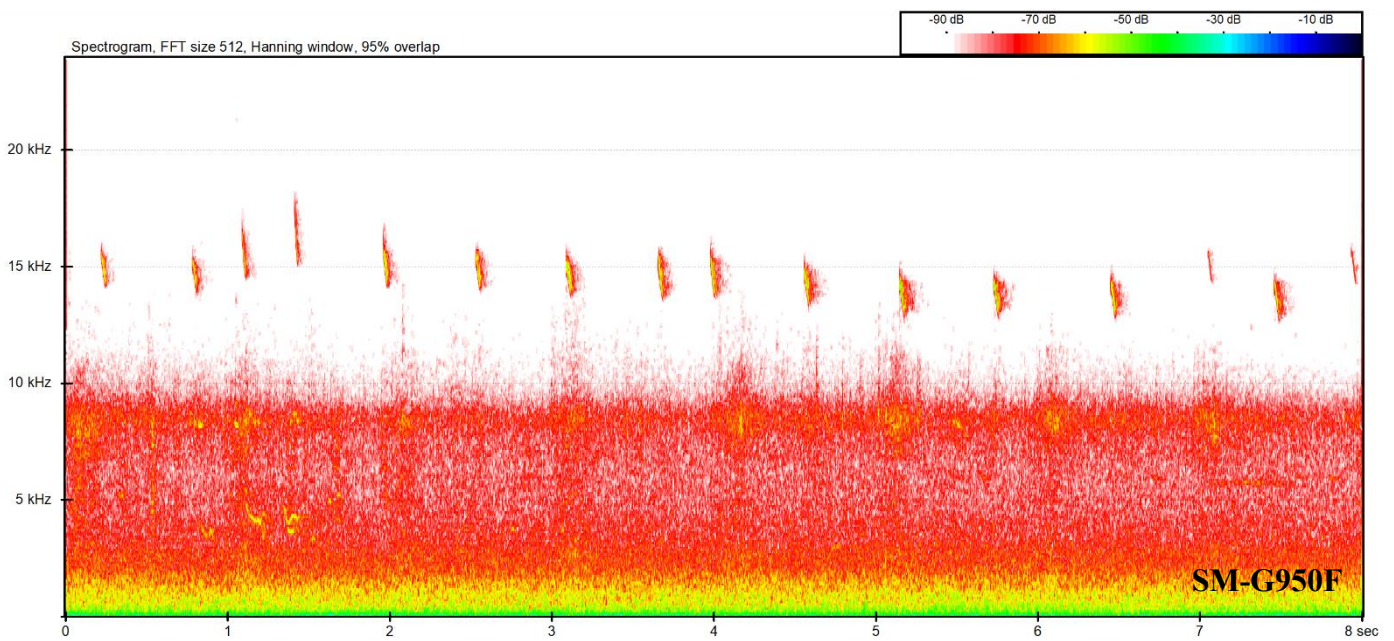
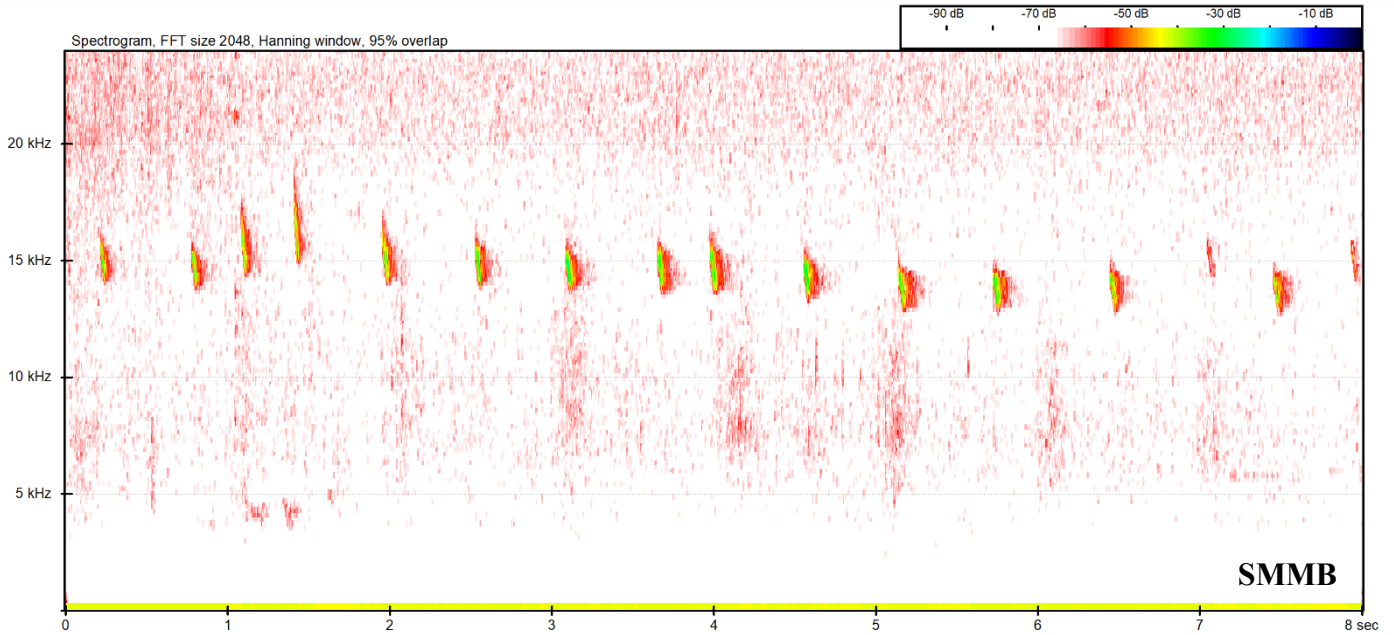


Figure S3. *Nyctalus lasiopterus* echolocation call sequence. Seville (Spain), 13/10/2021.

Recorded by:

- a. Wildlife Acoustics Song Meter Mini Bat (SMMB)
- b. Samsung Galaxy S8 (SM-G950F)
- c. Samsung Galaxy Tab S2 (SM-T819)
- d. Apple iPhone 5S (A1530)



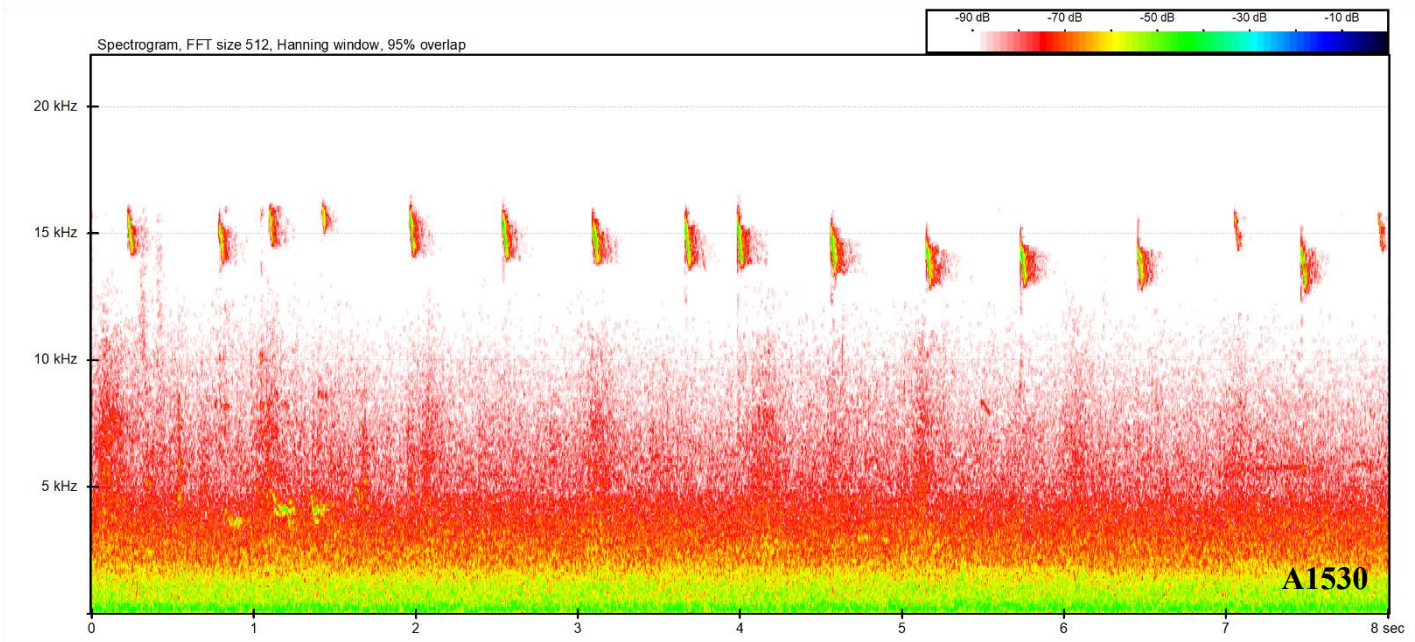
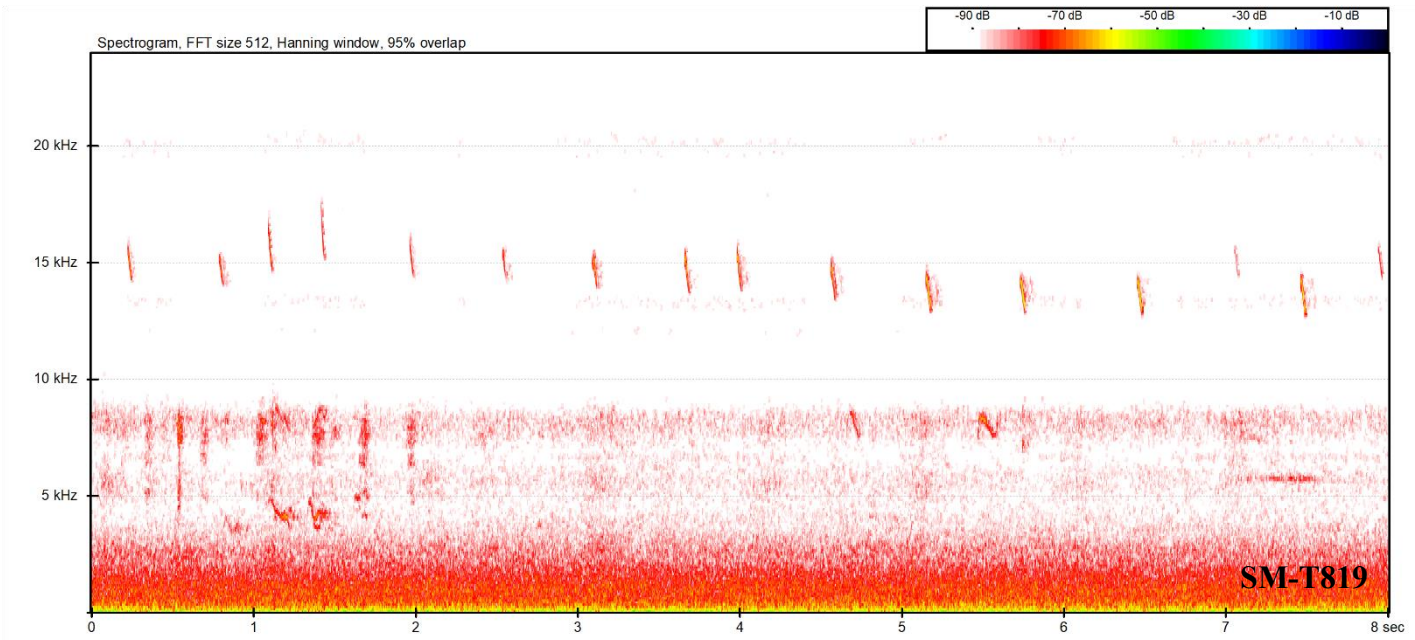


Figure S4. *Nyctalus leisleri* echolocation call sequence. Turin (Italy), 21/10/2021.

Recorded by:

a. Wildlife Acoustics Song Meter Mini Bat (SMMB)

b. Samsung Galaxy A51 (SM-A515F)

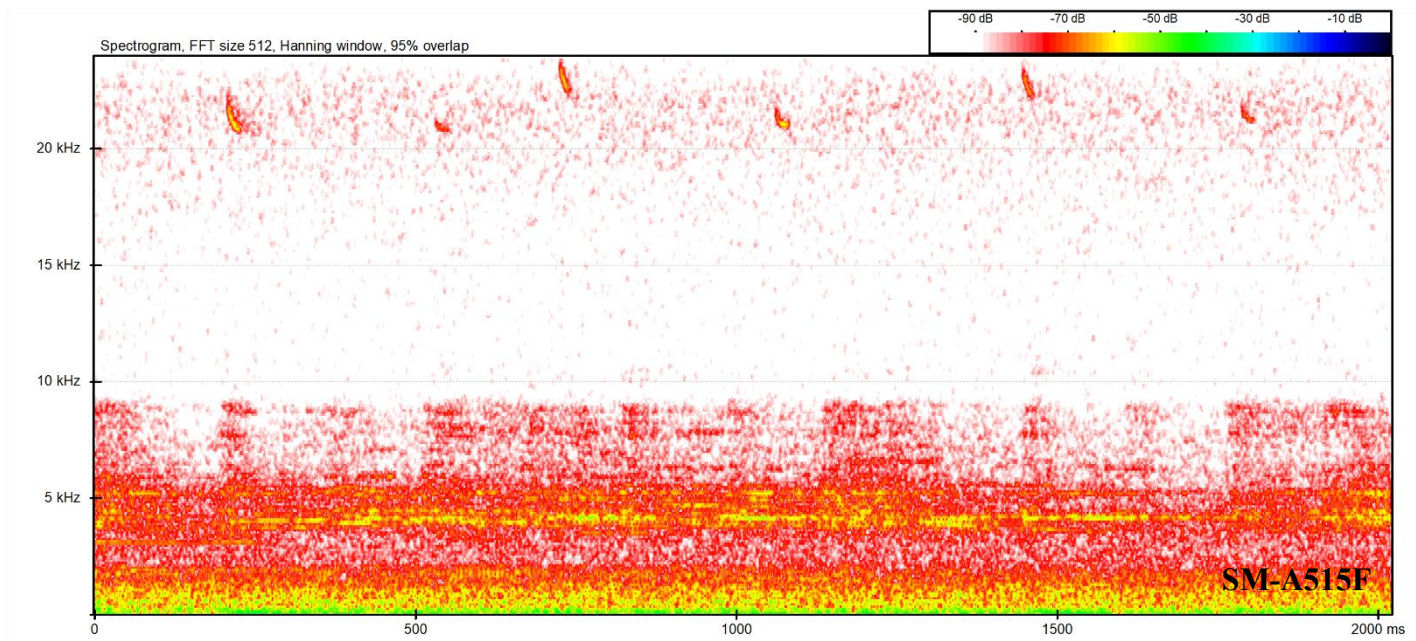
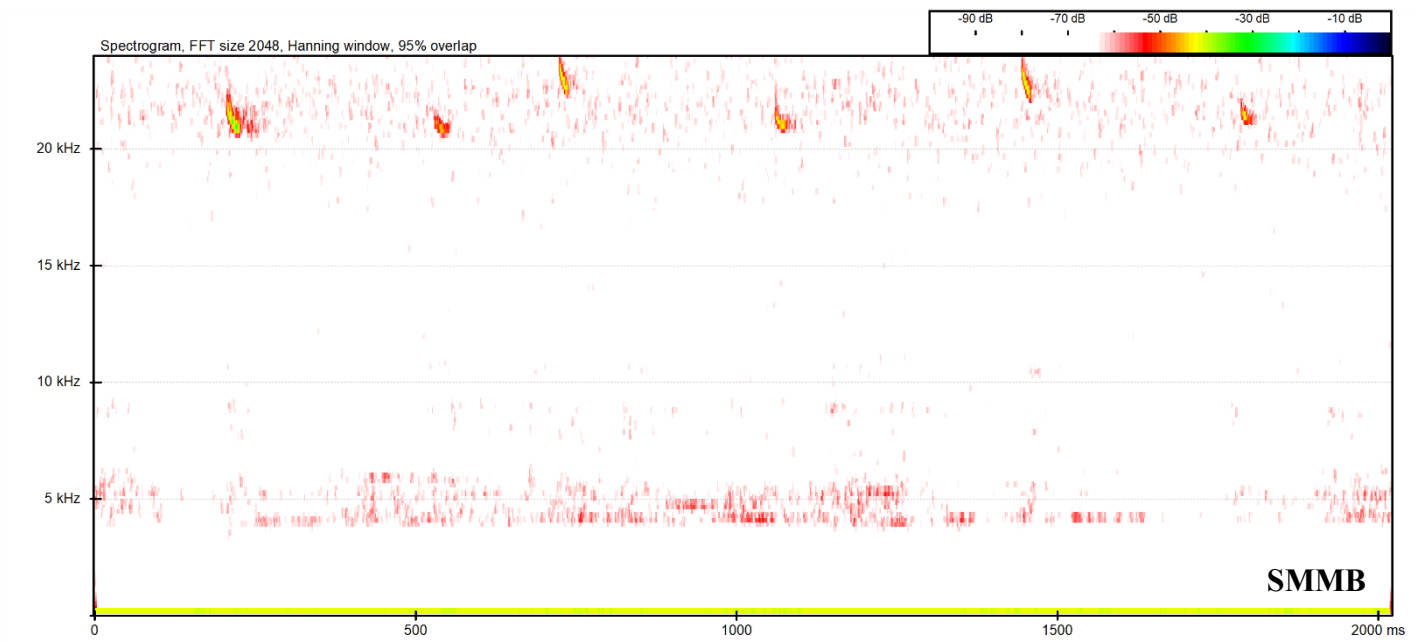


Figure S5. *Nyctalus noctula* echolocation call sequence with feeding buzz. Villastellone (Italy), 16/08/2022.

Recorded by:

- a. Wildlife Acoustics Song Meter Mini Bat (SMMB)
- b. Apple iPhone 11 Pro Max (A2218)
- c. Apple iPhone 13 (A2633)

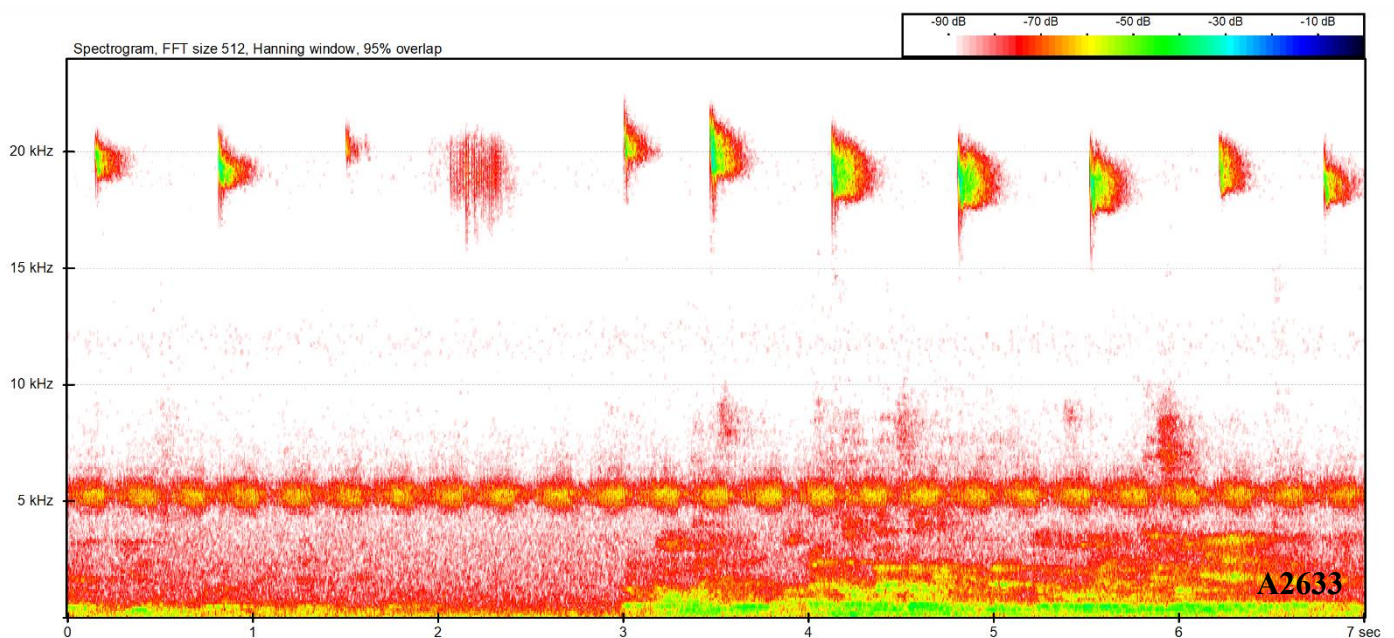
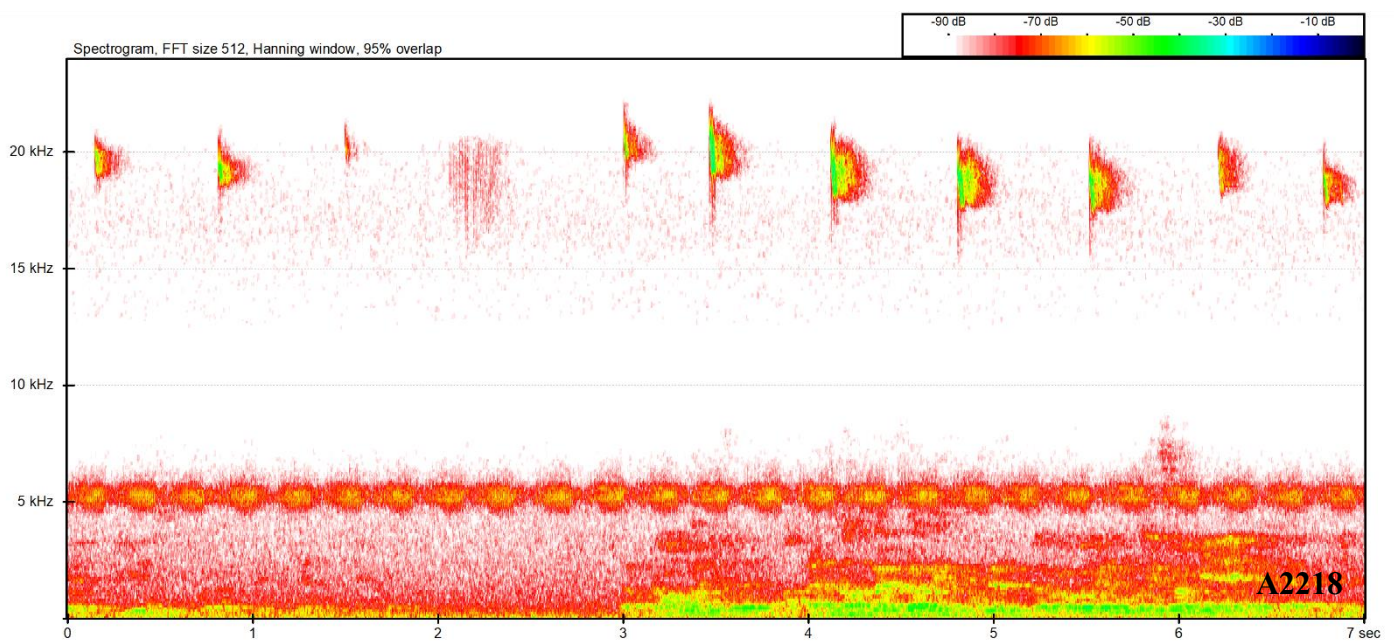
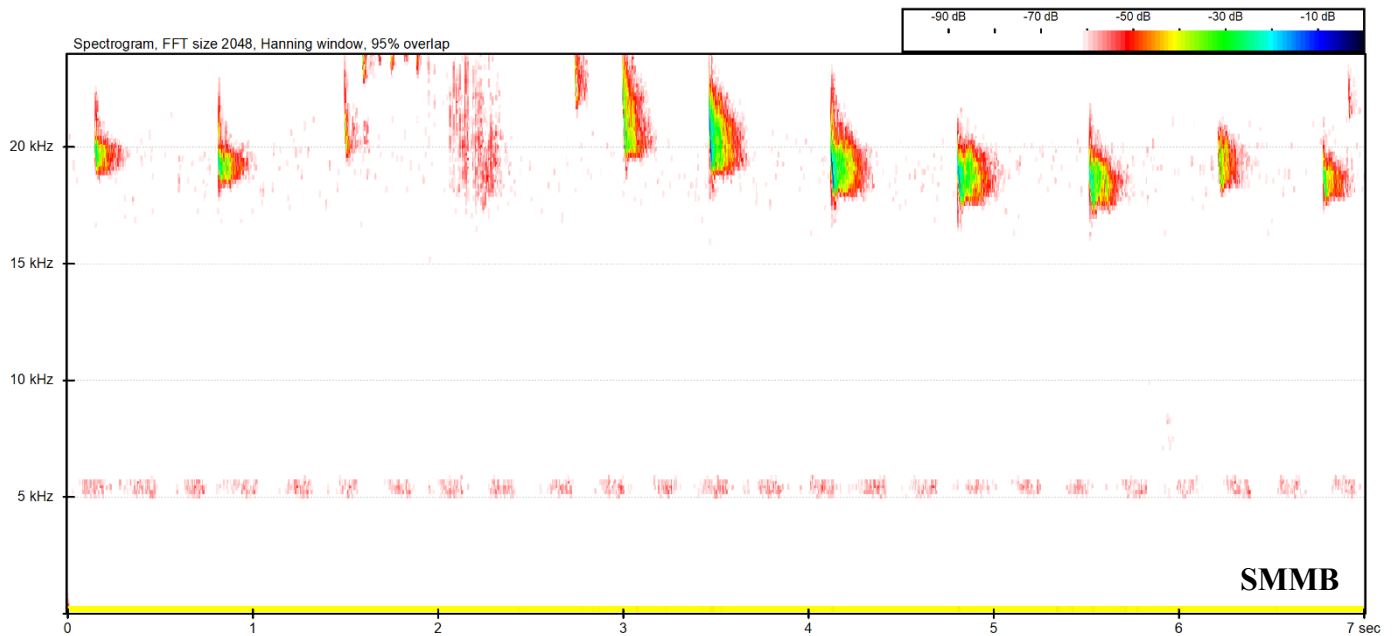


Figure S6. *Nyctalus noctula* echolocation call sequence and type D2 social call (fast trill, around 1400 ms). Villastellone (Italy), 29/09/2021.

Recorded by:

- a. Wildlife Acoustics Song Meter Mini Bat (SMMB)
- b. Samsung Galaxy Tab S2 (SM-T819)

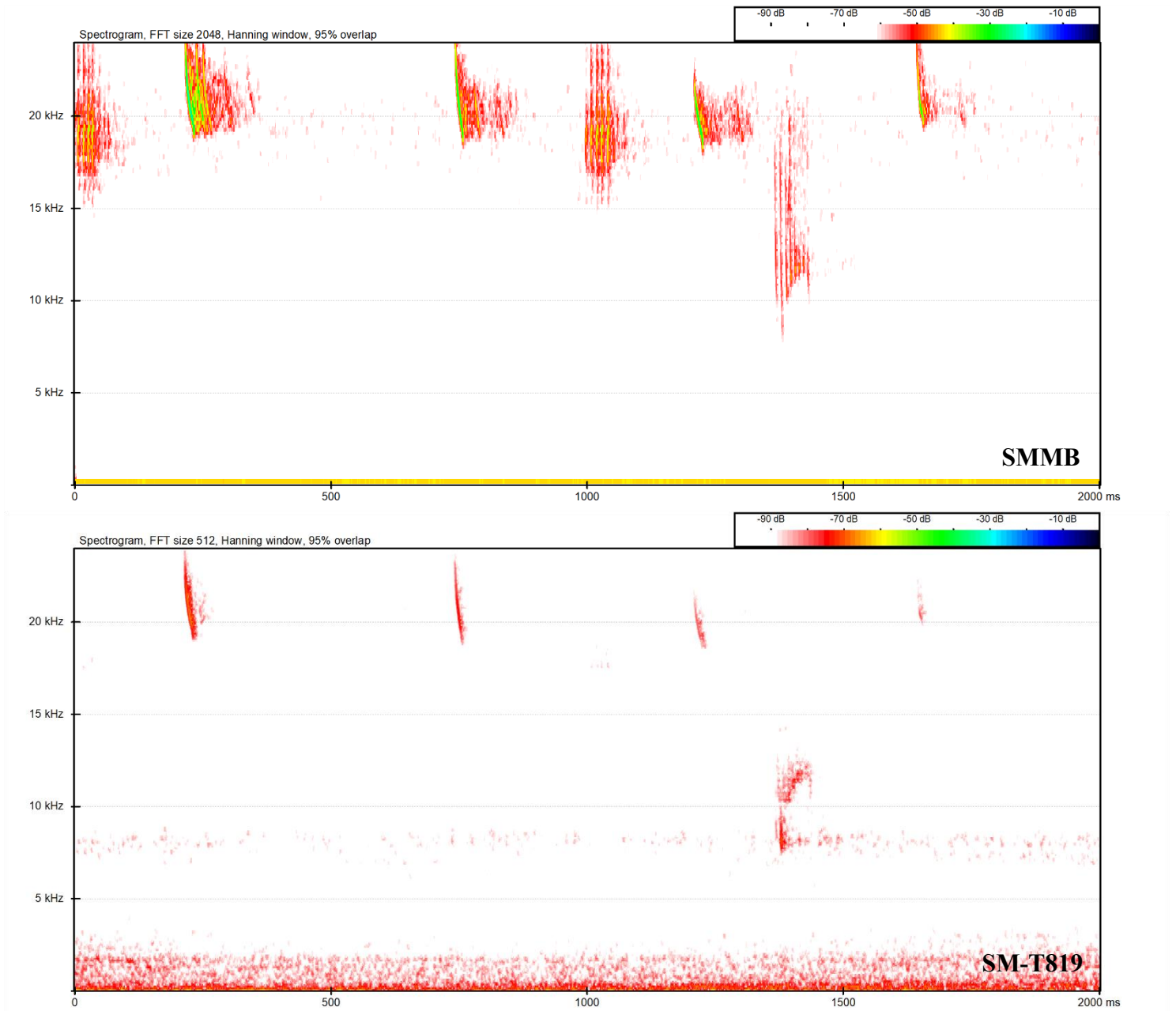
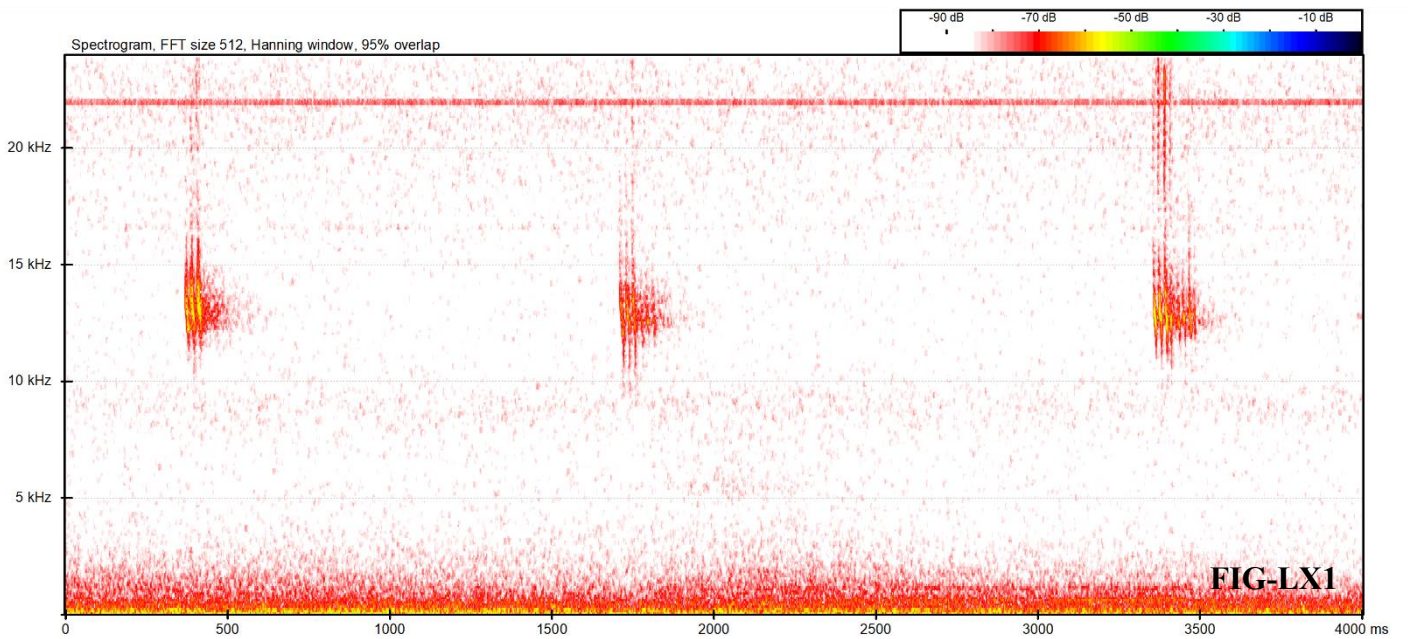
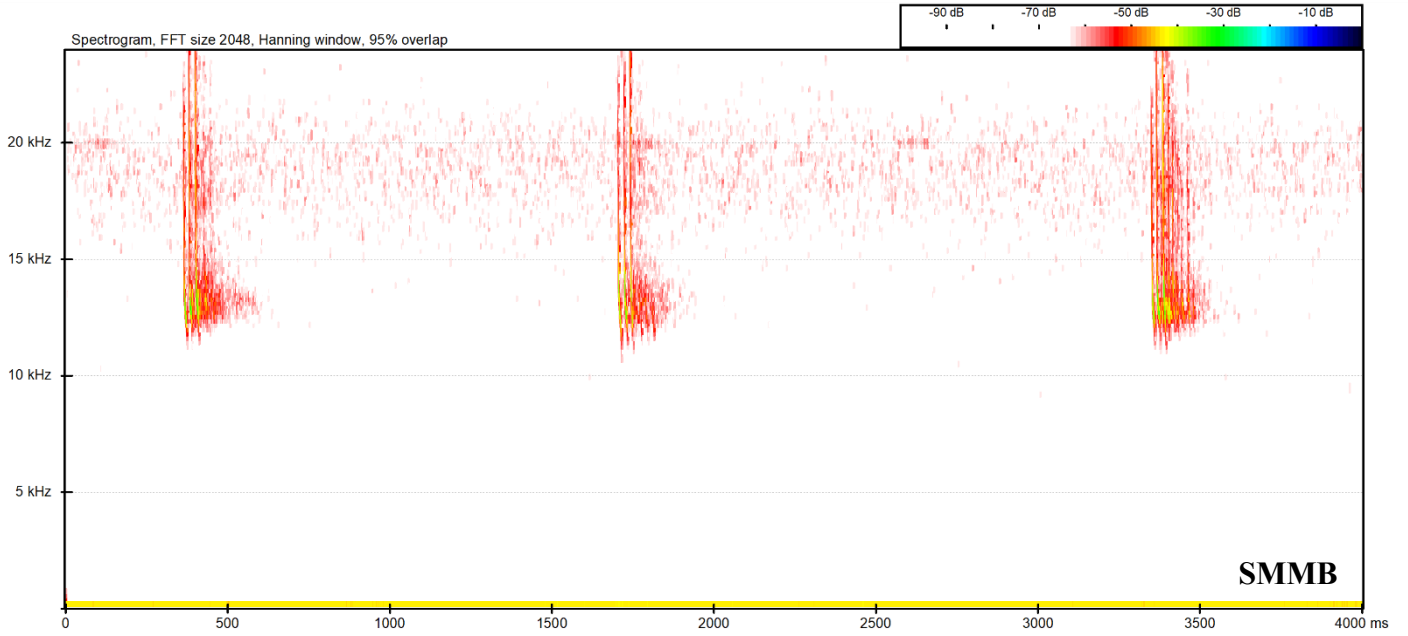


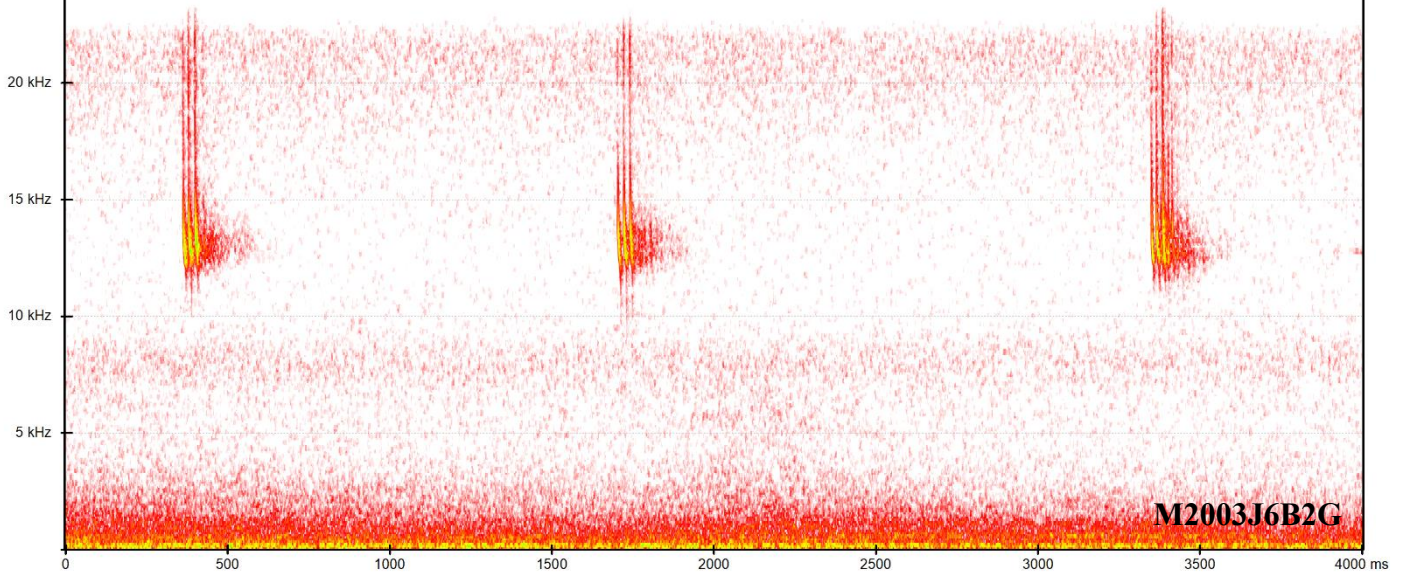
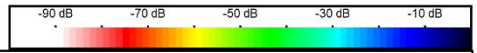
Figure S7. *Pipistrellus kuhlii* type D social calls. Turin (Italy), 15/09/2022.

Recorded by:

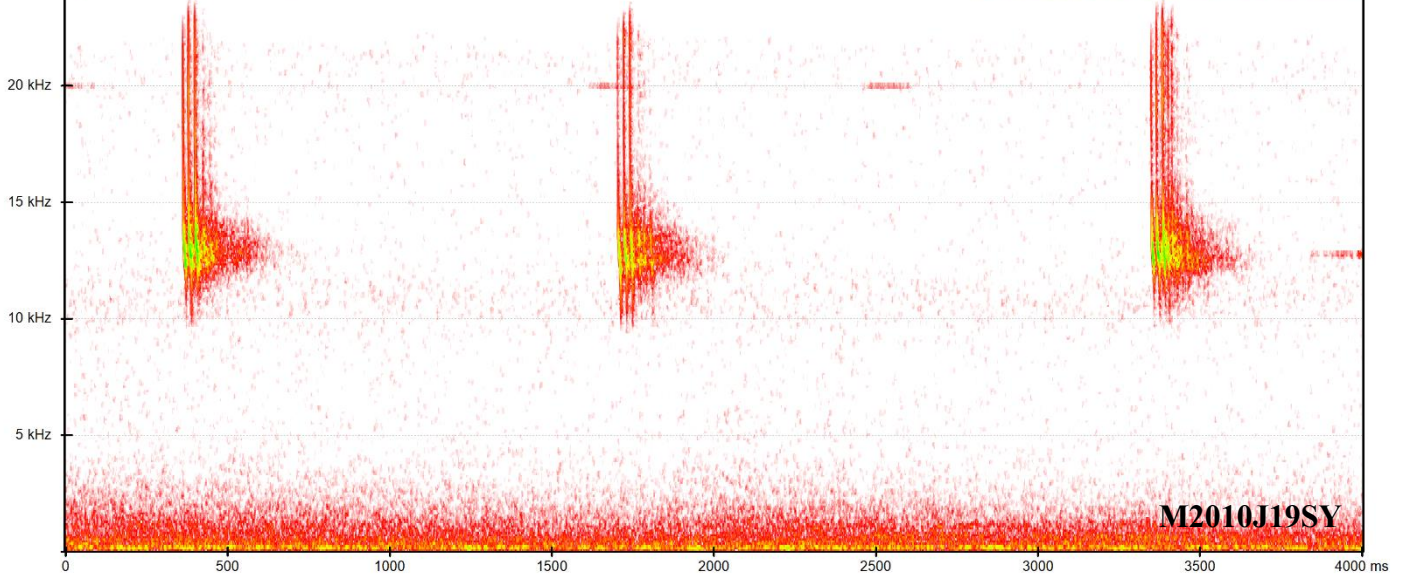
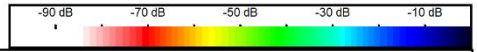
- a. Wildlife Acoustics Song Meter Mini Bat (SMMB)
- b. Huawei P smart (FIG-LX1)
- c. Xiaomi Redmi Note 9 Pro (M2003J6B2G)
- d. Xiaomi Redmi 9T (M2010J19SY)
- e. Apple iPhone SE (A2296)
- f. Apple iPhone XR (A2105)



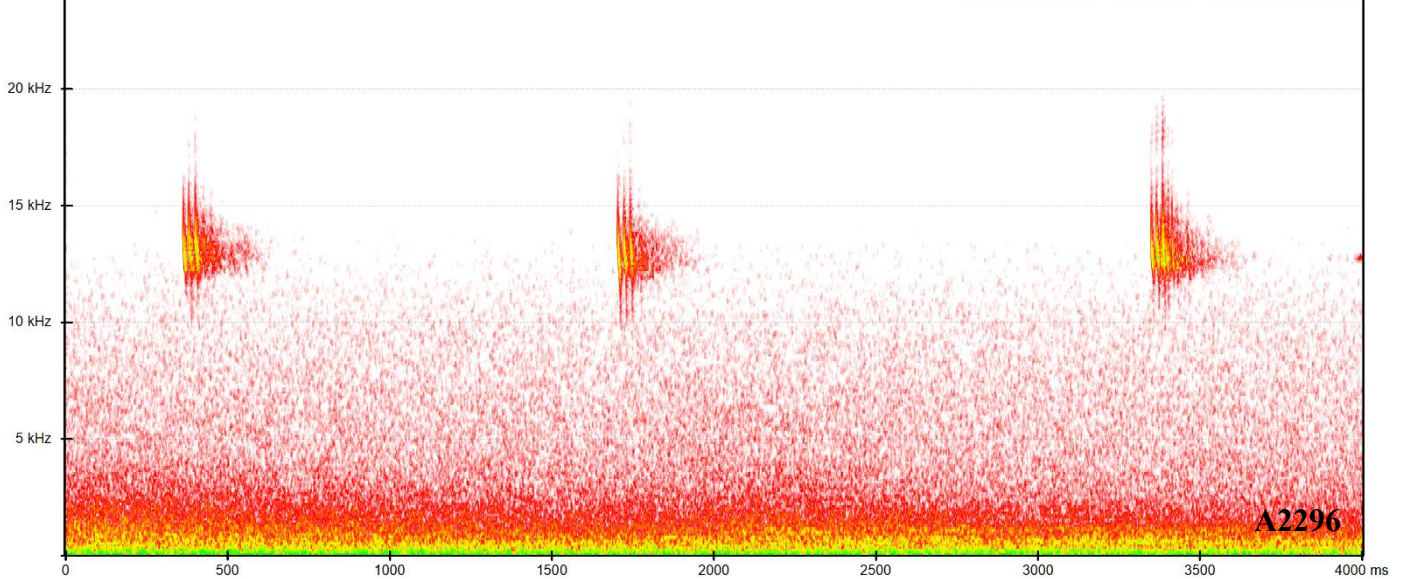
Spectrogram, FFT size 512, Hanning window, 95% overlap



Spectrogram, FFT size 512, Hanning window, 95% overlap



Spectrogram, FFT size 512, Hanning window, 95% overlap



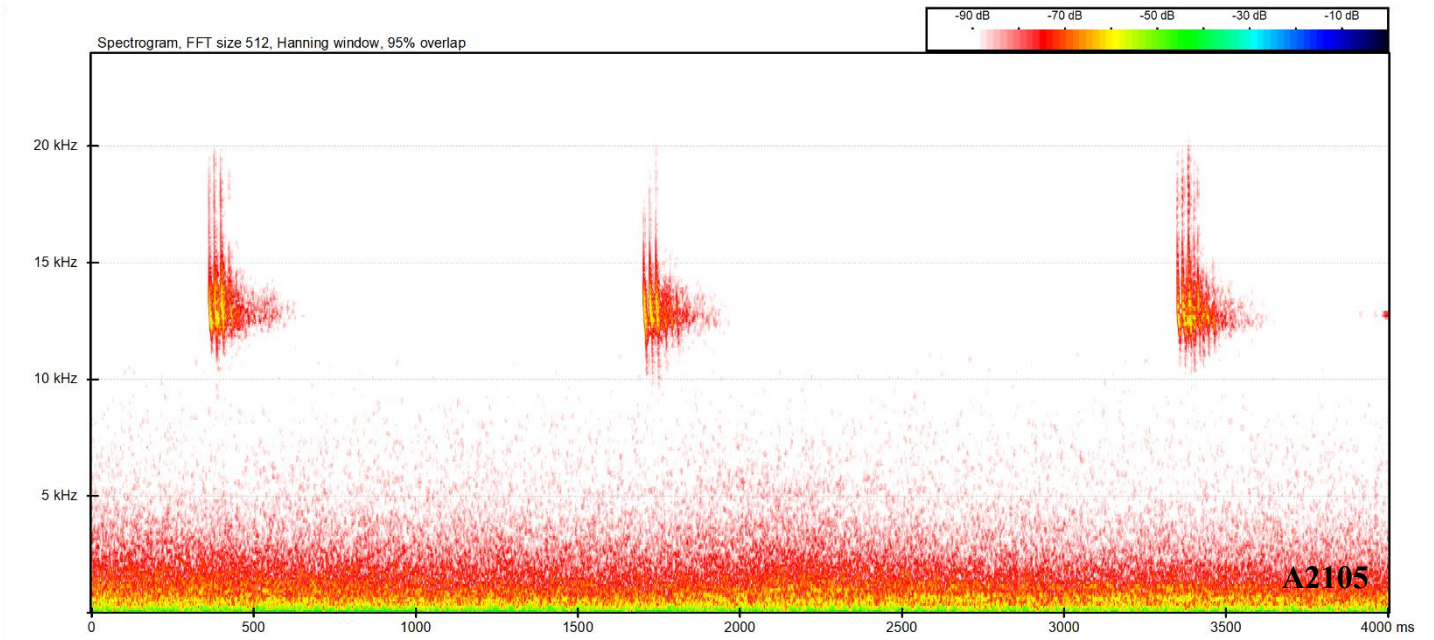
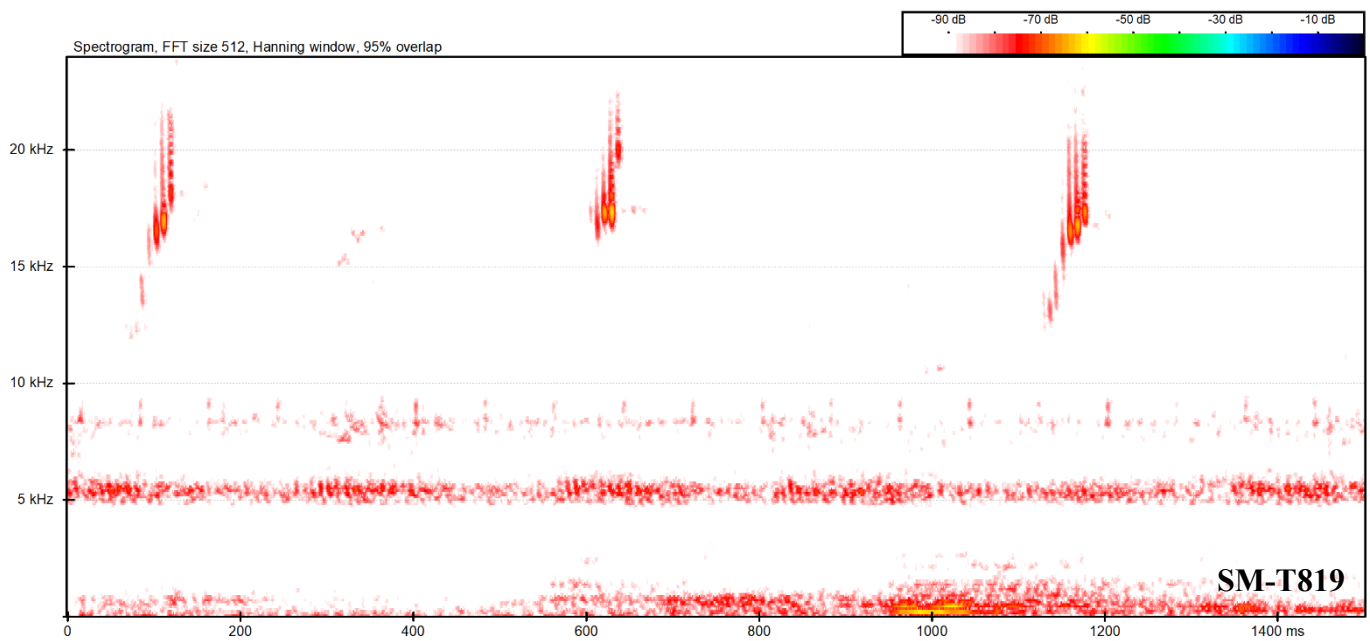
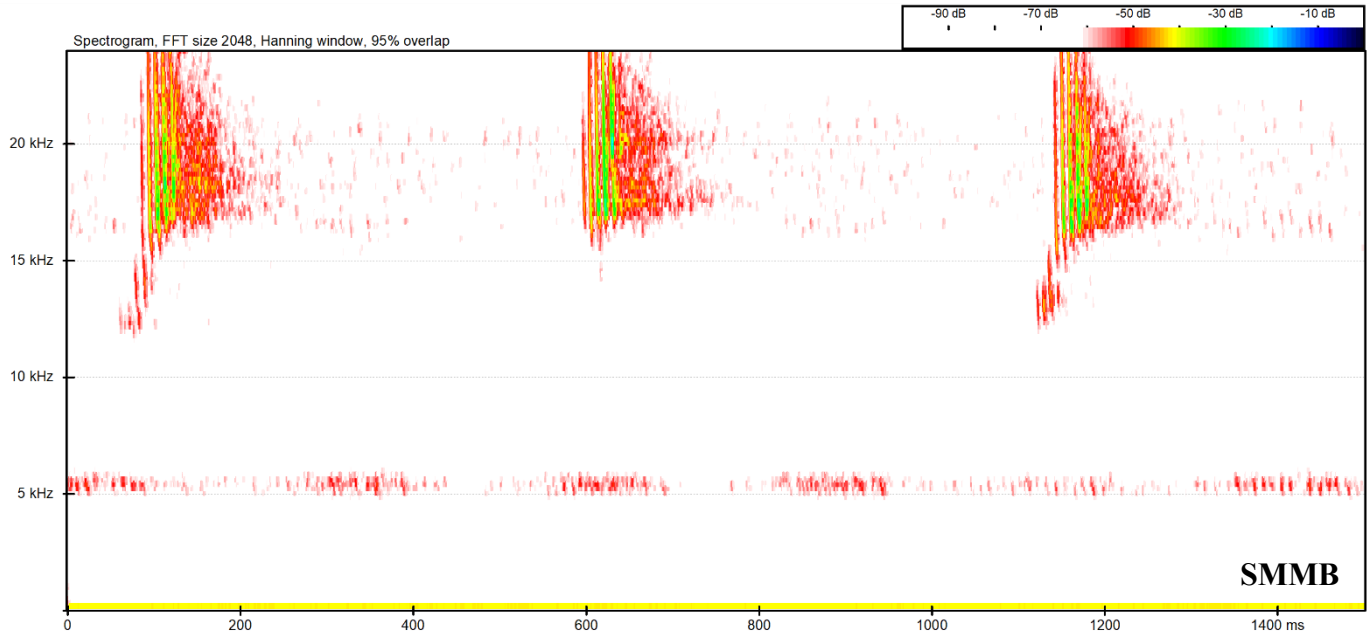


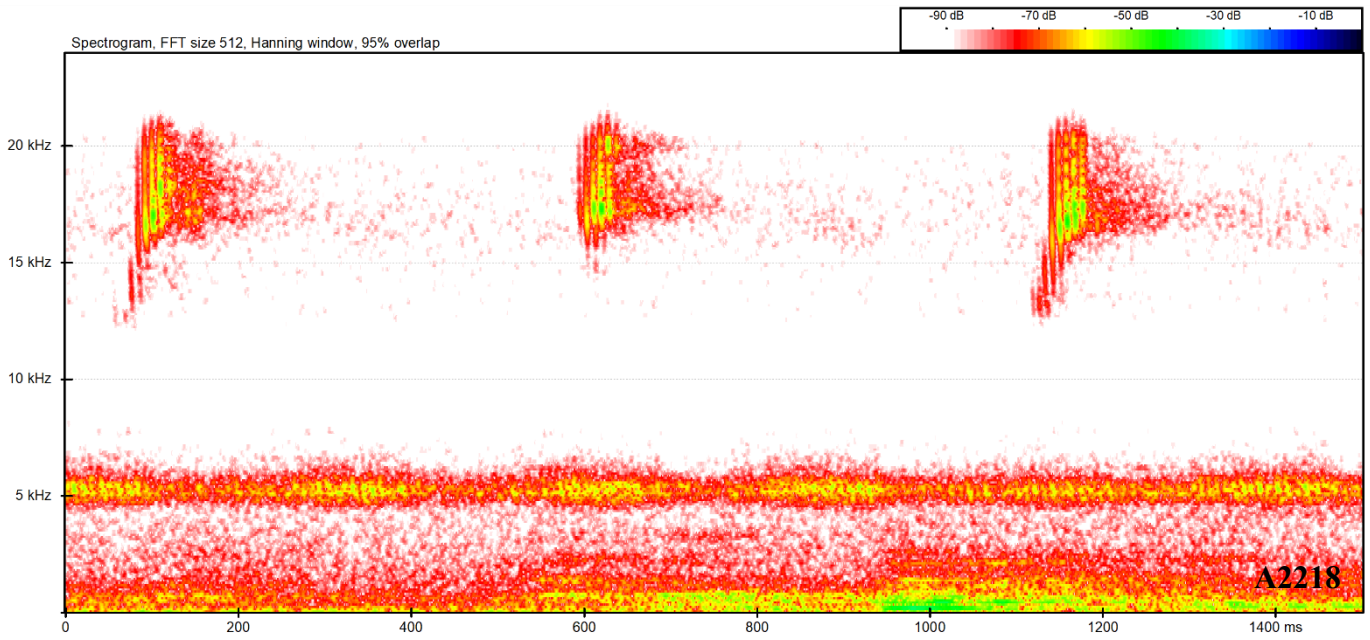
Figure S8. *Pipistrellus nathusii* type D social calls. Villastellone (Italy), 16/08/2022.

Recorded by:

- a. Wildlife Acoustics Song Meter Mini Bat (SMMB)
- b. Samsung Galaxy Tab S2 (SM-T819)
- c. Apple iPhone 11 Pro Max (A2218)
- d. Apple iPhone 13 (A2633)



Spectrogram, FFT size 512, Hanning window, 95% overlap



Spectrogram, FFT size 512, Hanning window, 95% overlap

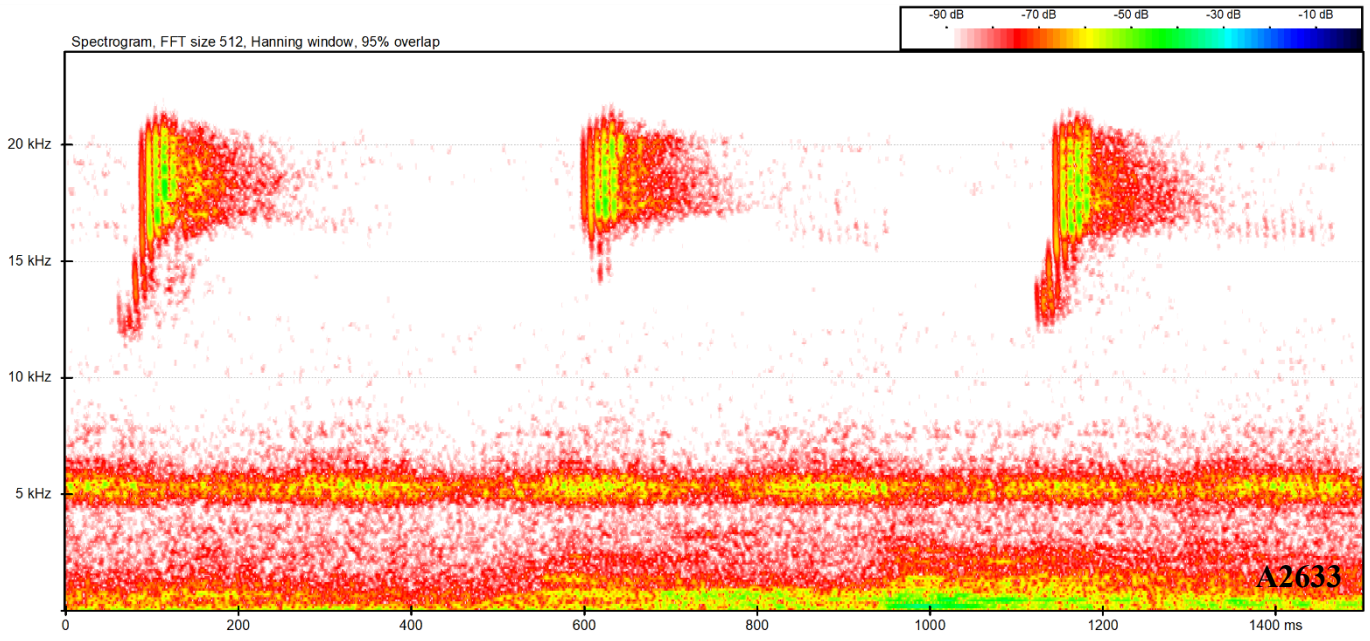
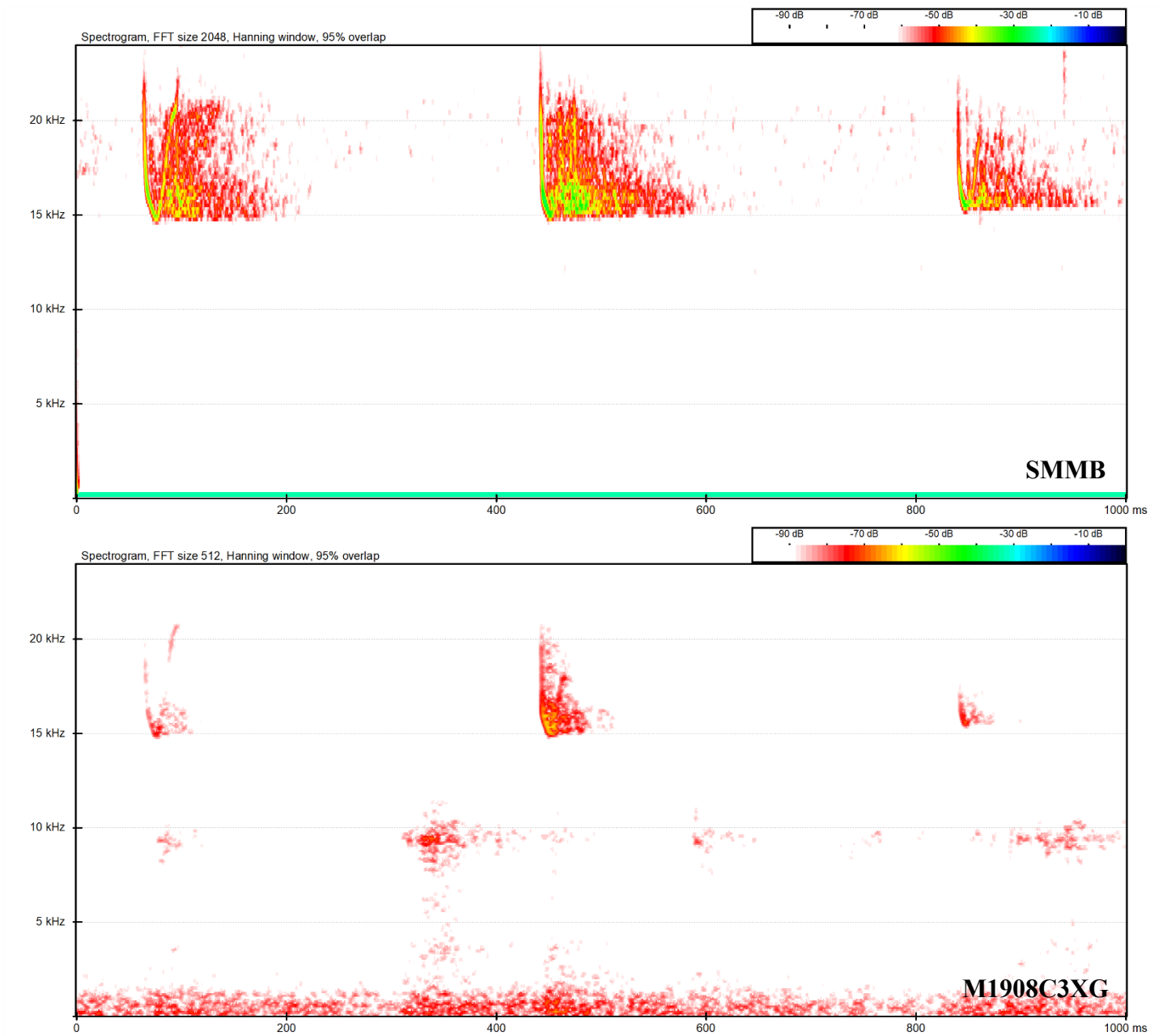


Figure S9. *Hypsugo savii* type D social calls. Turin (Italy), 12/08/2021.

Recorded by:

a. Wildlife Acoustics Song Meter Mini Bat (SMMB)

b. Xiaomi Redmi Note 8T (M1908C3XG)



Group 2: Recordings collected only by mobile devices.

Figure S10. *Tadarida teniotis* echolocation call sequence with feeding buzz. Villastellone (Italy), 05/05/2020.

Recorded by:

a. Samsung Galaxy Tab S2 (SM-T819)

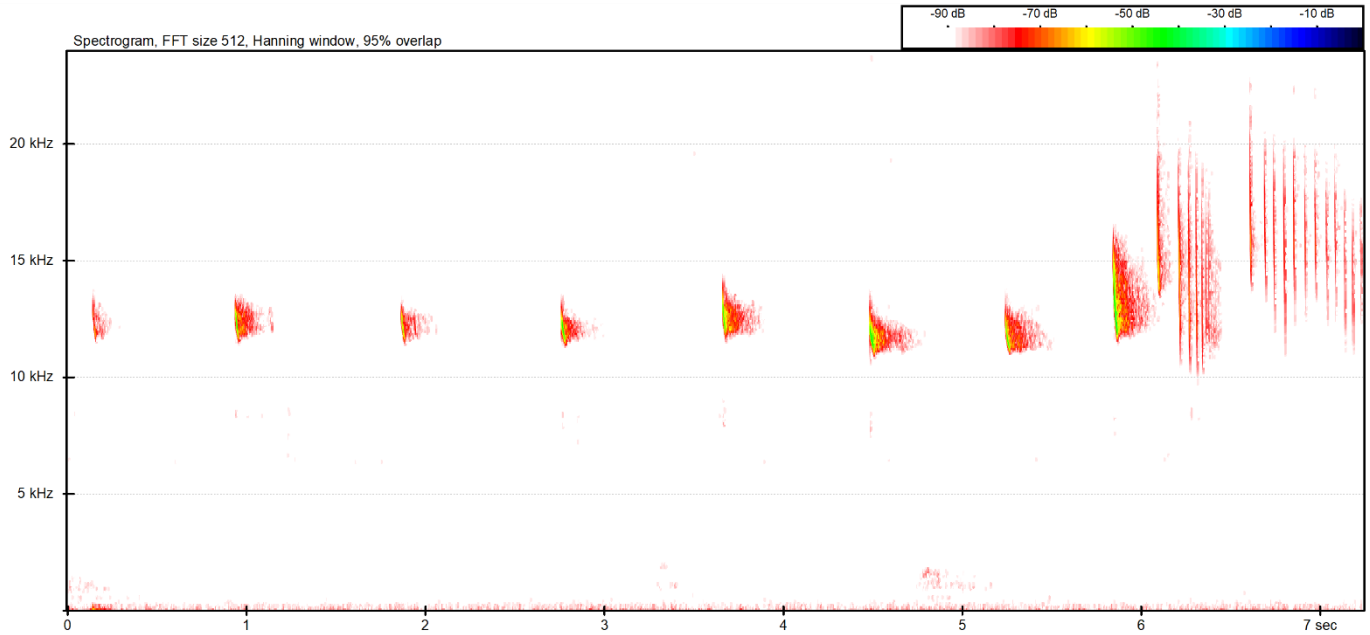


Figure S11. *Nyctalus leisleri* echolocation call sequence partially exceeding the upper limit of detectability. Gravere (Italy), 07/05/2020.

Recorded by:

b. Samsung Galaxy A50 (SM-A505FN)

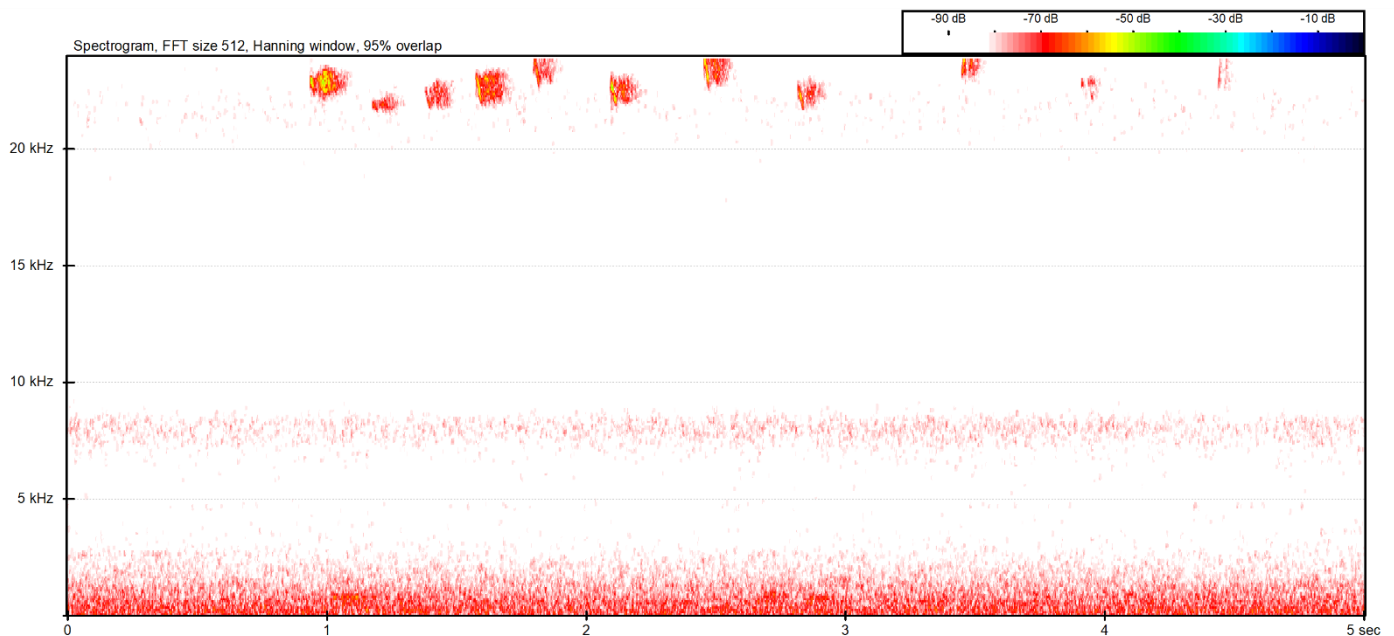


Figure S12. *Nyctalus leisleri* type C.d1 social calls (male advertisement calls). Gravere (Italy), 07/05/2020.

Recorded by:

c. Samsung Galaxy A50 (SM-A505FN)

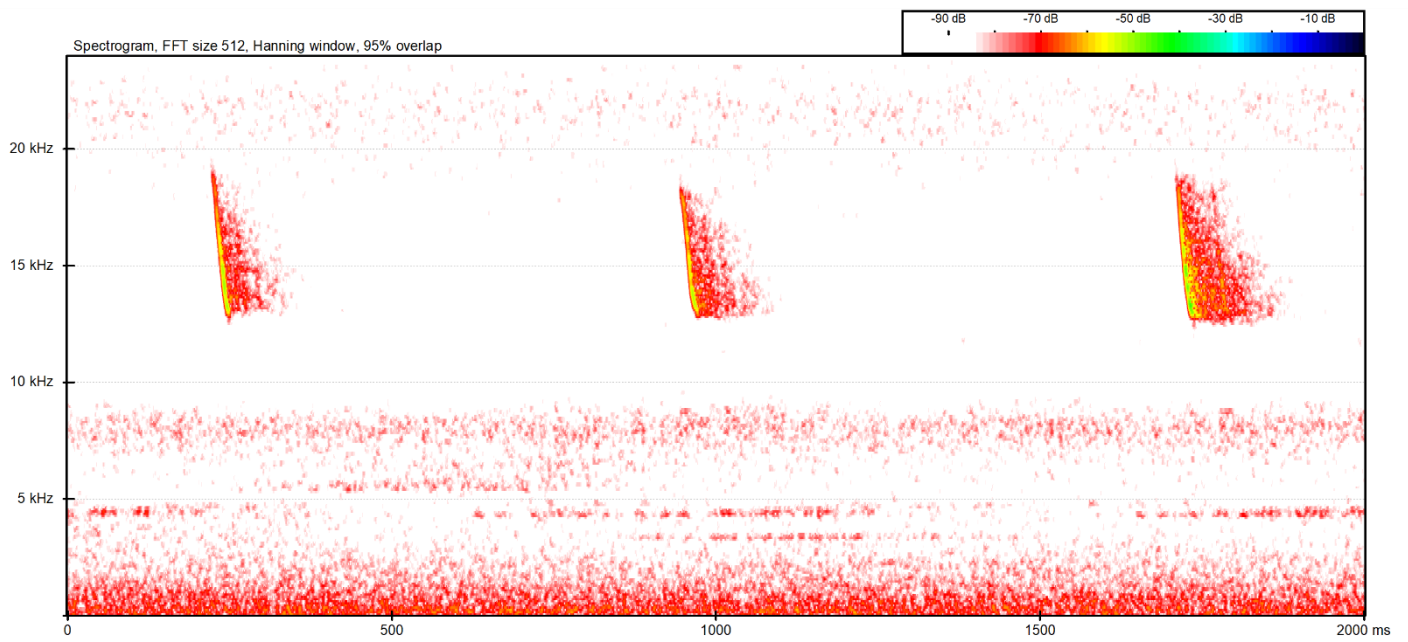


Figure S13. *Nyctalus leisleri* type C.d1 (around 150, 900 and 1800 ms) and D2 (around 1250 ms) social calls. Trento (Italy), 20/07/2020.

Recorded by:

d. LG Nexus 5 (Nexus 5)

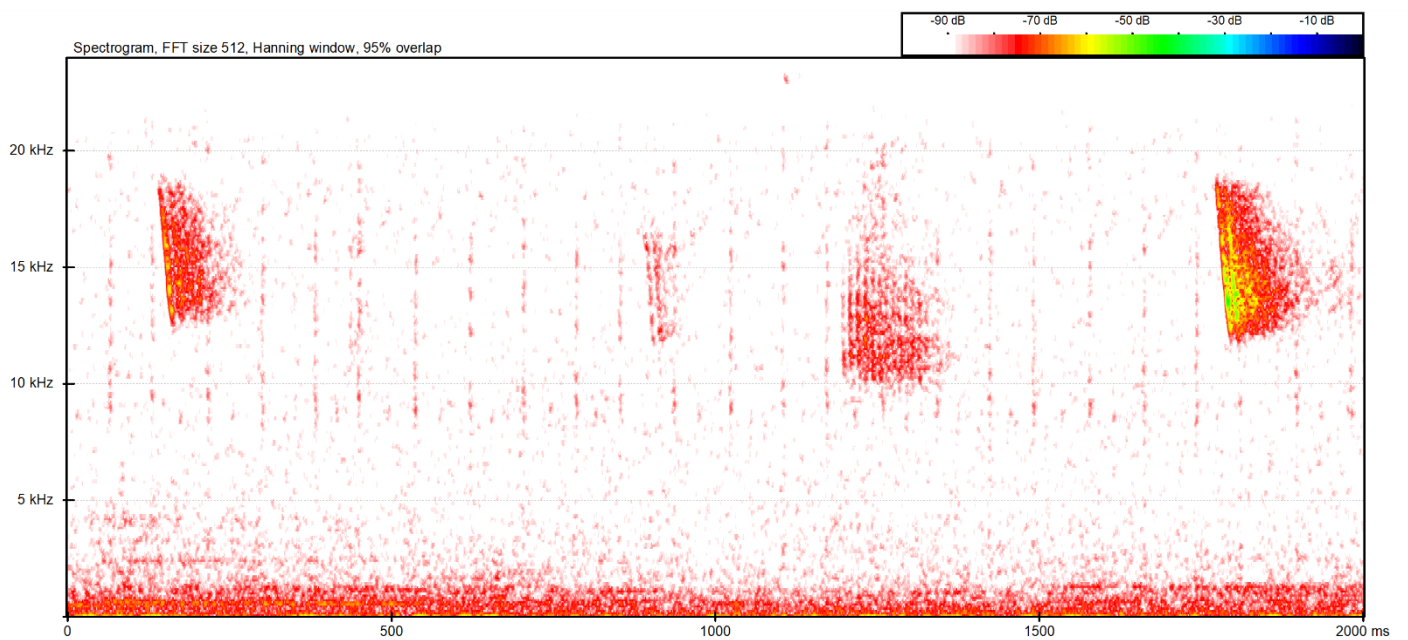


Figure S14. *Pipistrellus pipistrellus* type D social call. Bagnasco (Italy), 09/05/2020.

Recorded by:

e. Samsung Galaxy S6 (SM-G920F)

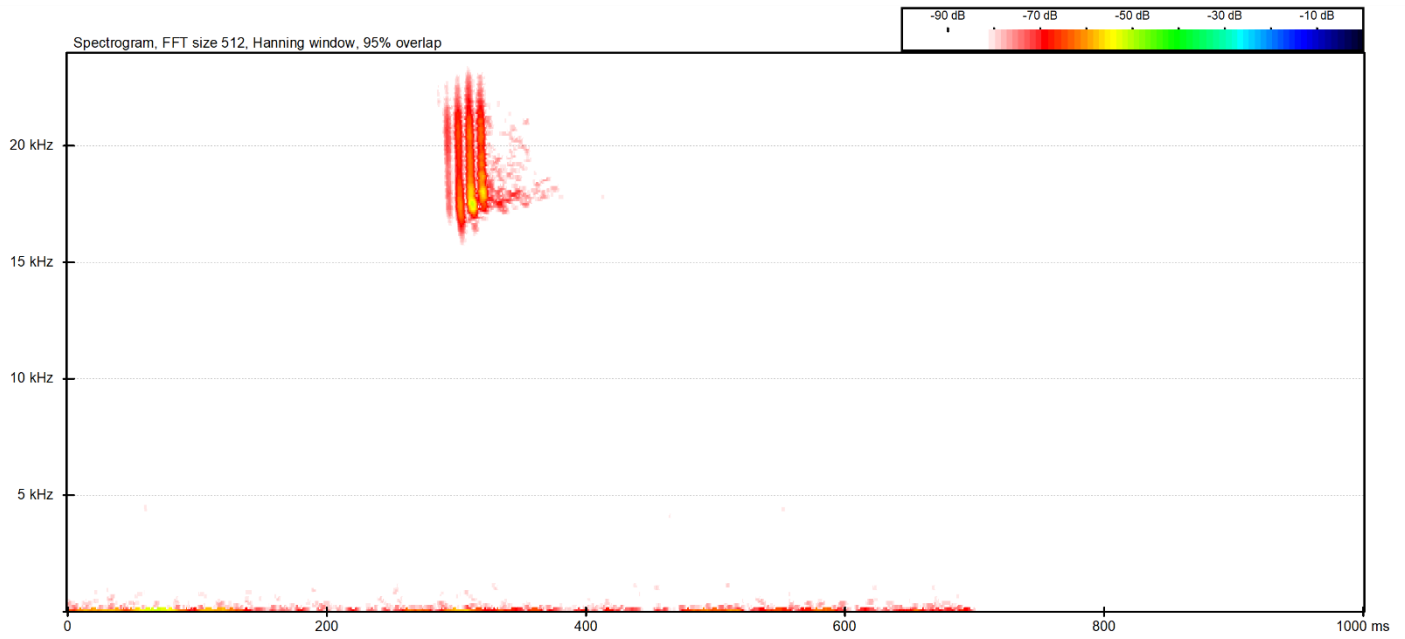


Figure S15. *Pipistrellus pipistrellus* type D social calls. Pragelato (Italy), 24/08/2020.

Recorded by:

f. Xiaomi Redmi Note 8 (M1908C3JG)

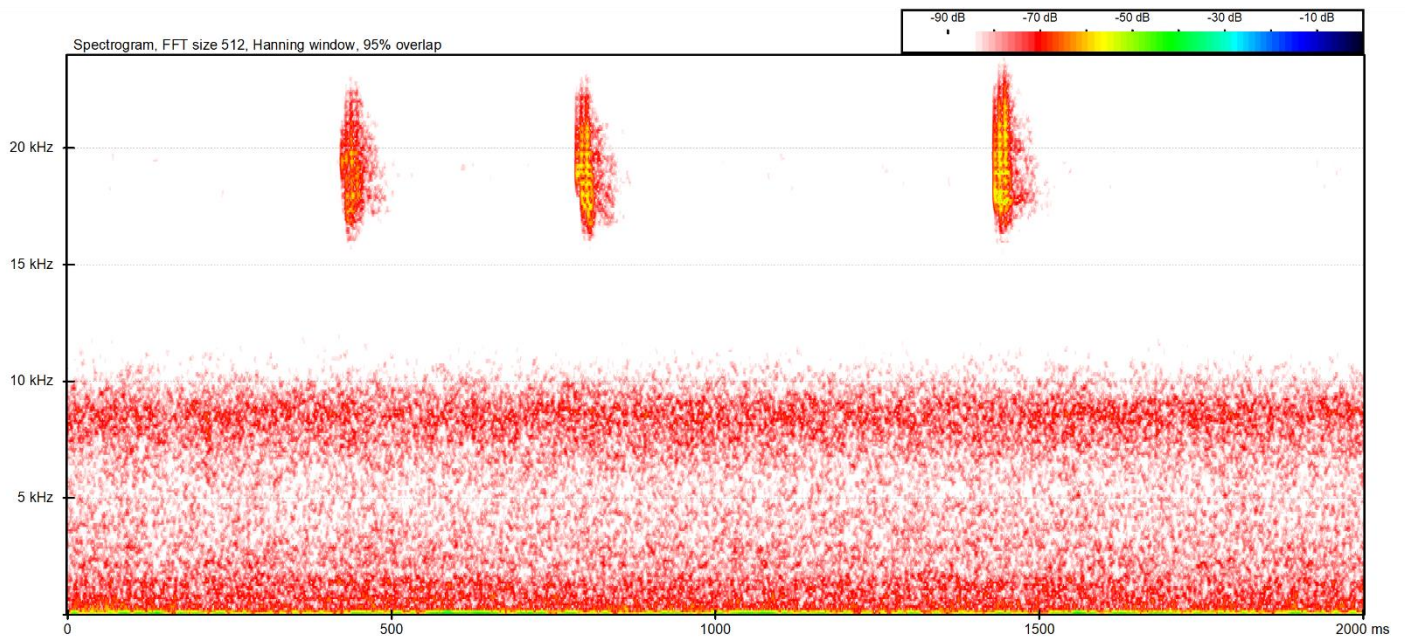


Figure S16. *Pipistrellus pygmaeus* type D social call. Seville (Spain), 14/10/2021.

Recorded by:

g. Samsung Galaxy Tab S2 (SM-T819)

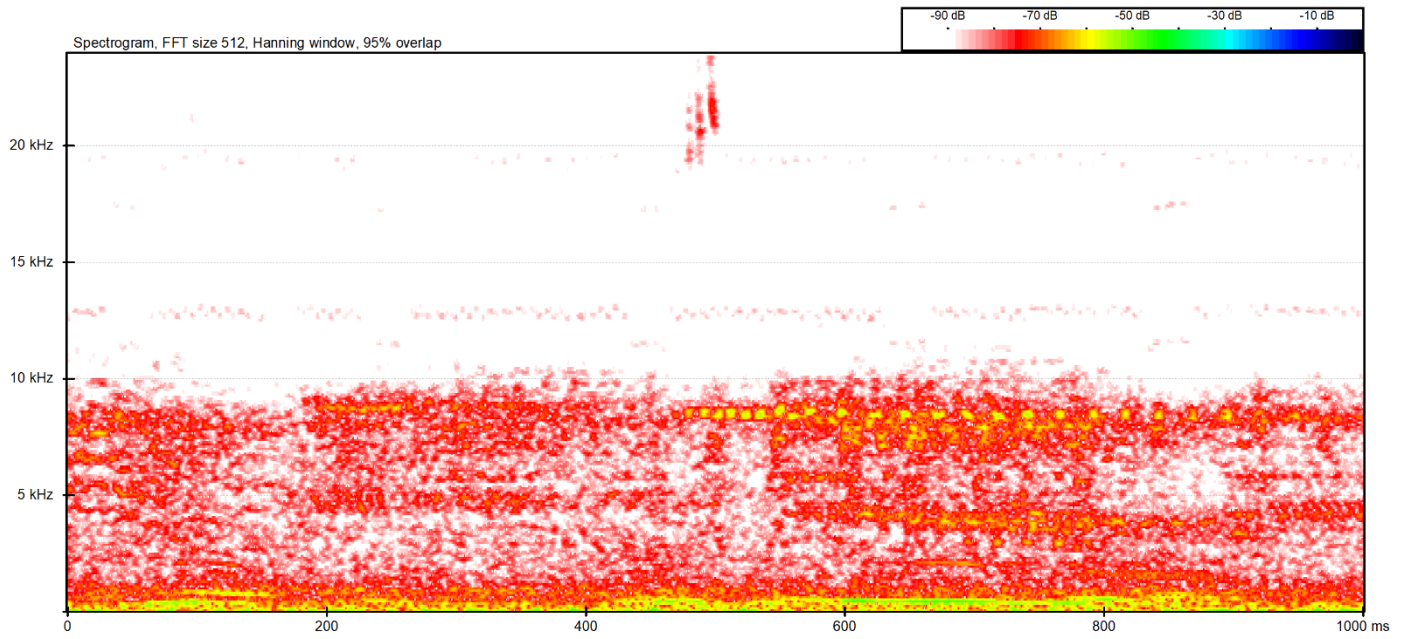


Figure S17. Aliasing artifacts. Turin (Italy), 21/10/2021.

Recorded by:

h. Huawei Mate 20 (HMA-L29)

