

Appendix / Supplementary material

1. Burnings in the heathlands of Lygra



Figure A1 : Photography of burnings in coastal heathlands of Lygra to maintain the habitat
Source : <https://muho.no/lyngheisenteret/en>

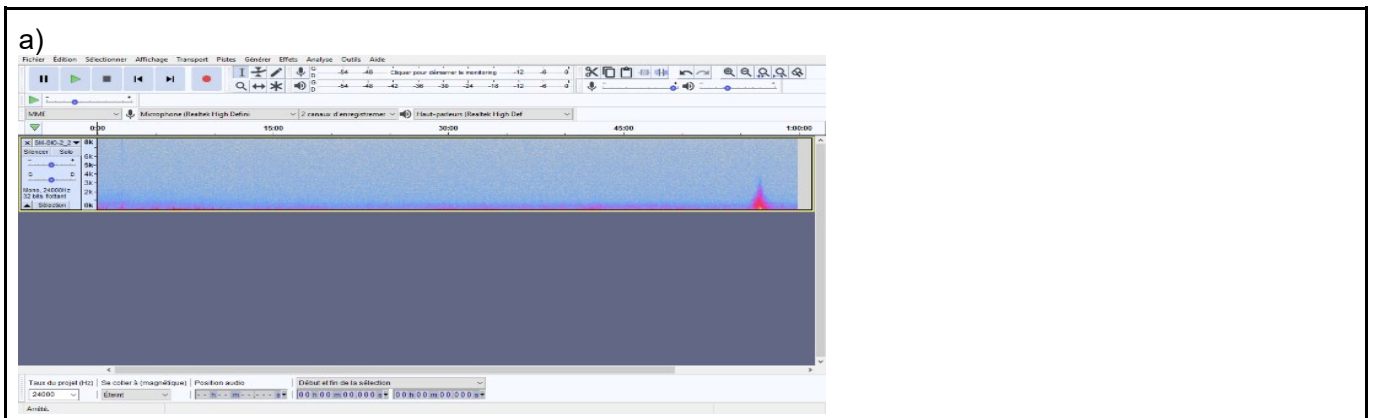
2. Observation of black grouse in the open on Lygra



Figure A2 : Observation of black grouse in the heathlands of Lygra, in a tree (a), on a hill (b), on scientific installations ©. Photo credits by the authors.

3. Our method for the recording analysis with Audacity

We open the recording, we enlarge it and we zoom in to be at the seconds scale. The horizontal axis is the duration of the recording, the vertical axis is the frequency of the sound and the color conveys the intensity of the sound. For instance, the red lines at the bottom of the spectrogram correspond to bass and deep noises that are quite loud, such as wind or planes in the background.



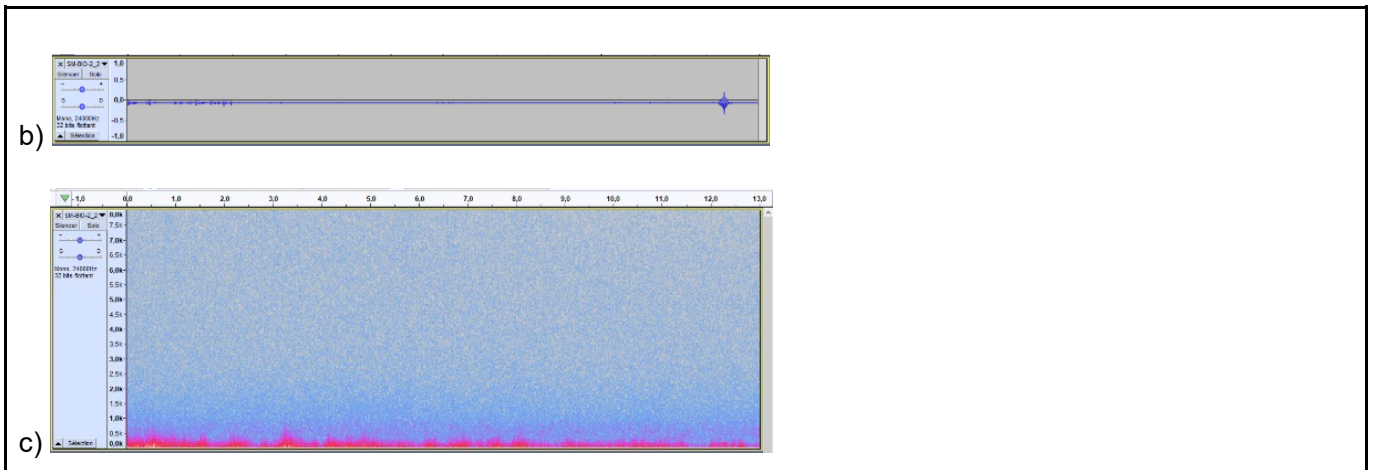


Figure A3 : Recording a) opened in Audacity b) in spectrogram mode c) Enlarged at seconds scale.

4. Dates for collecting the SD card and changing batteries

30/11 - 02/12 (but it stopped on the 05/12) - 16/12 (but it stopped on the 04/01)
 11/01 - 18/01 (but it stopped on the 20/01) - 25/01 - 05/02.

5. Overview of the number of recorded calls in the morning over the winter

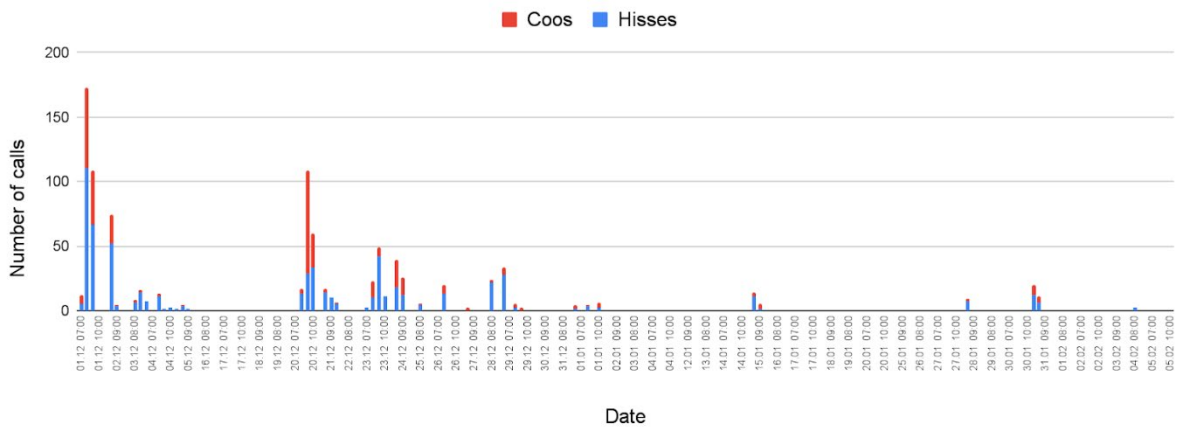


Figure A4 : Number of black grouse calls recorded per day from December to February showing a decrease

6. Margin of error during our audio analysis

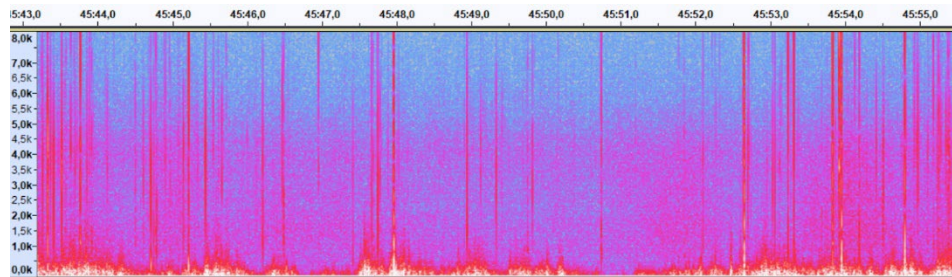


Figure A5 : Wind and rain on the spectrogram make it difficult to hear black grouse calls

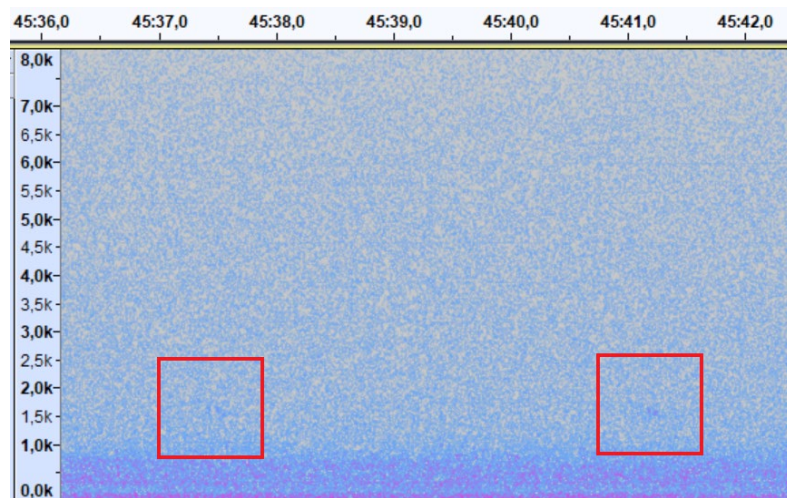


Figure A6 : Cooing call barely visible

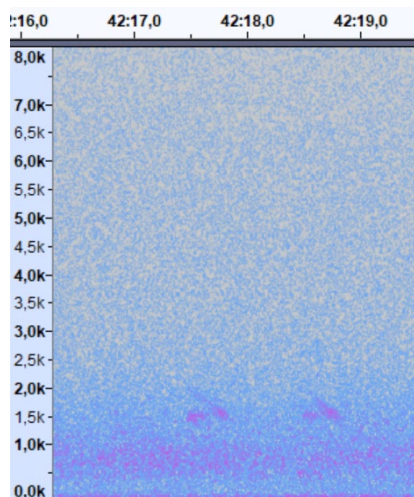


Figure A7 : Song of a crow looking like a hiss of black grouse