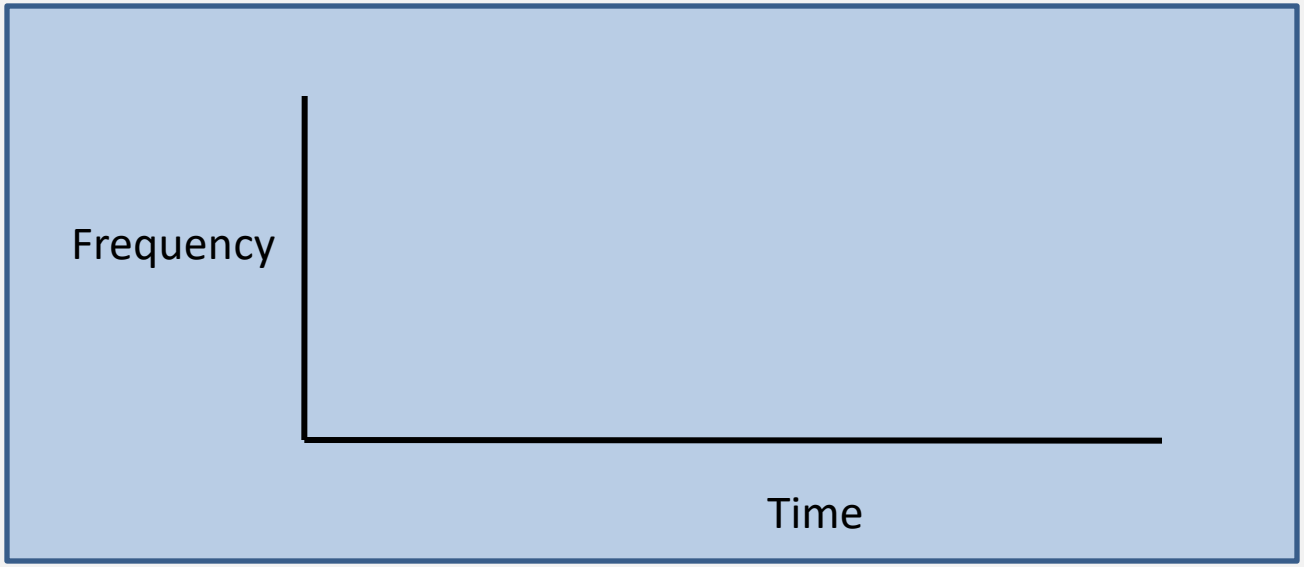
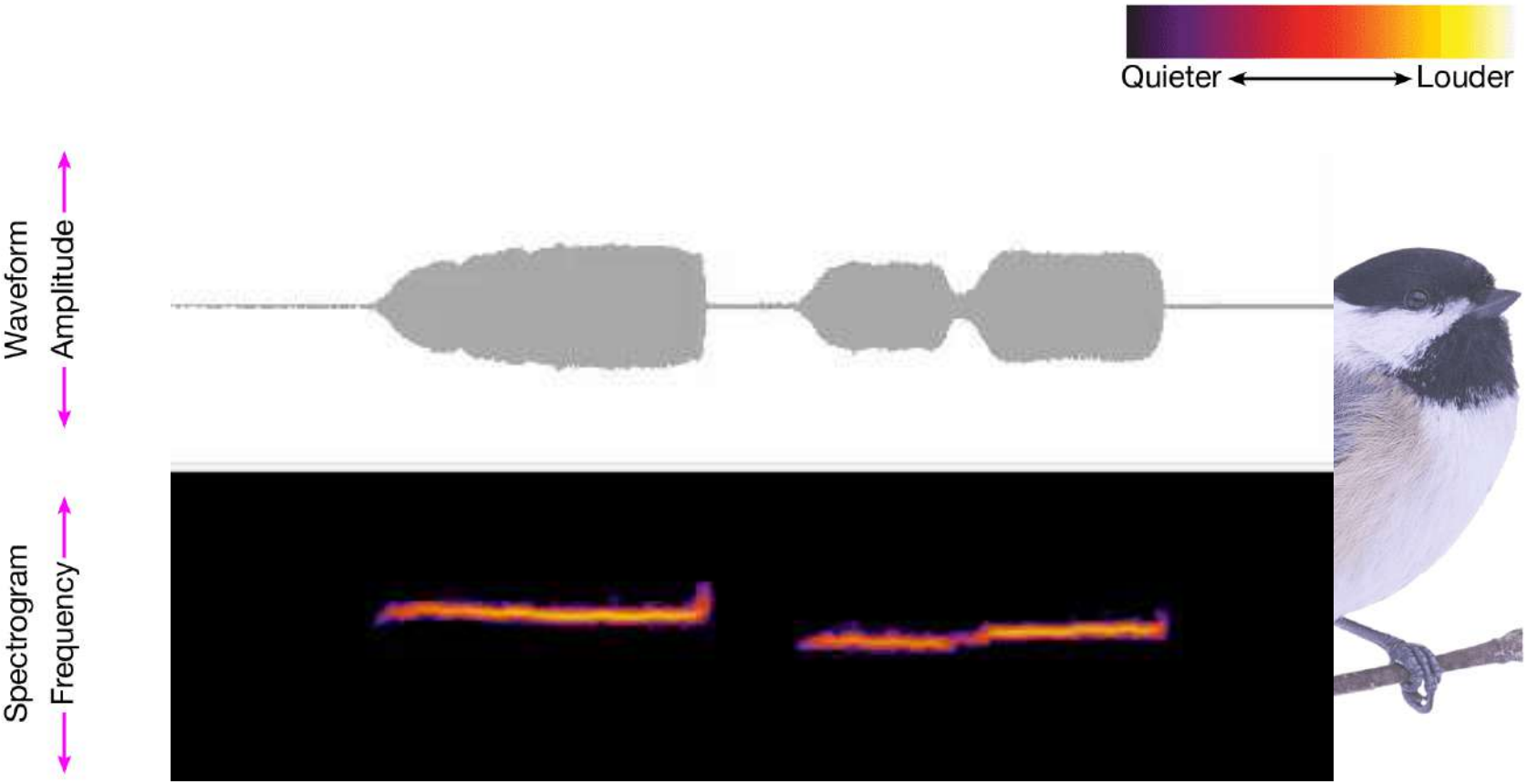
Spectrograms

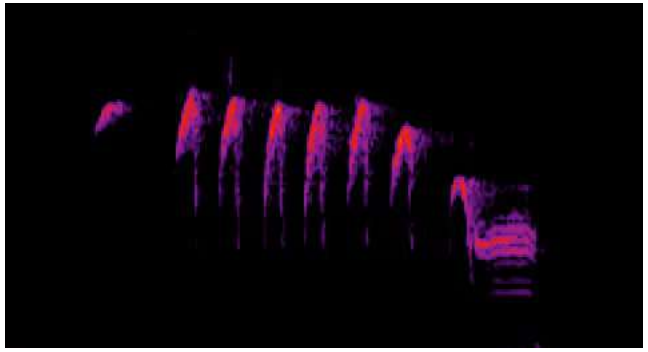
- The spectrogram (sonogram) is a way of drawing a ‘picture’ of a sound.
- It is a graph showing how the frequency of the sound changes over time.

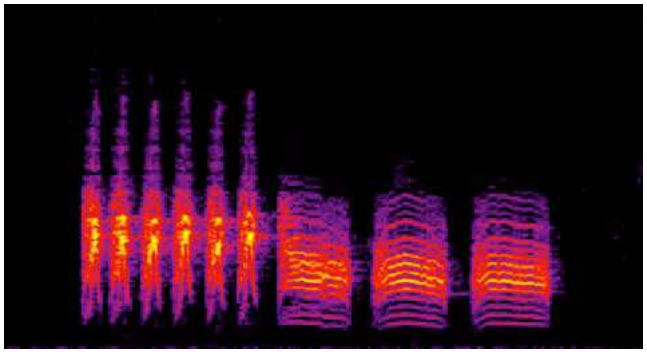




Animated Slide

Advance to play

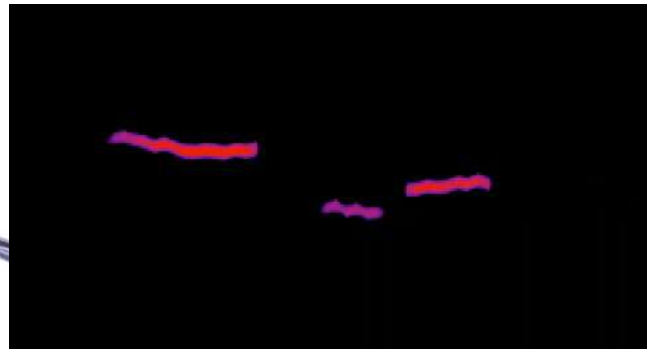




Contact Calls

Alarm Calls

Black-capped Chickadee

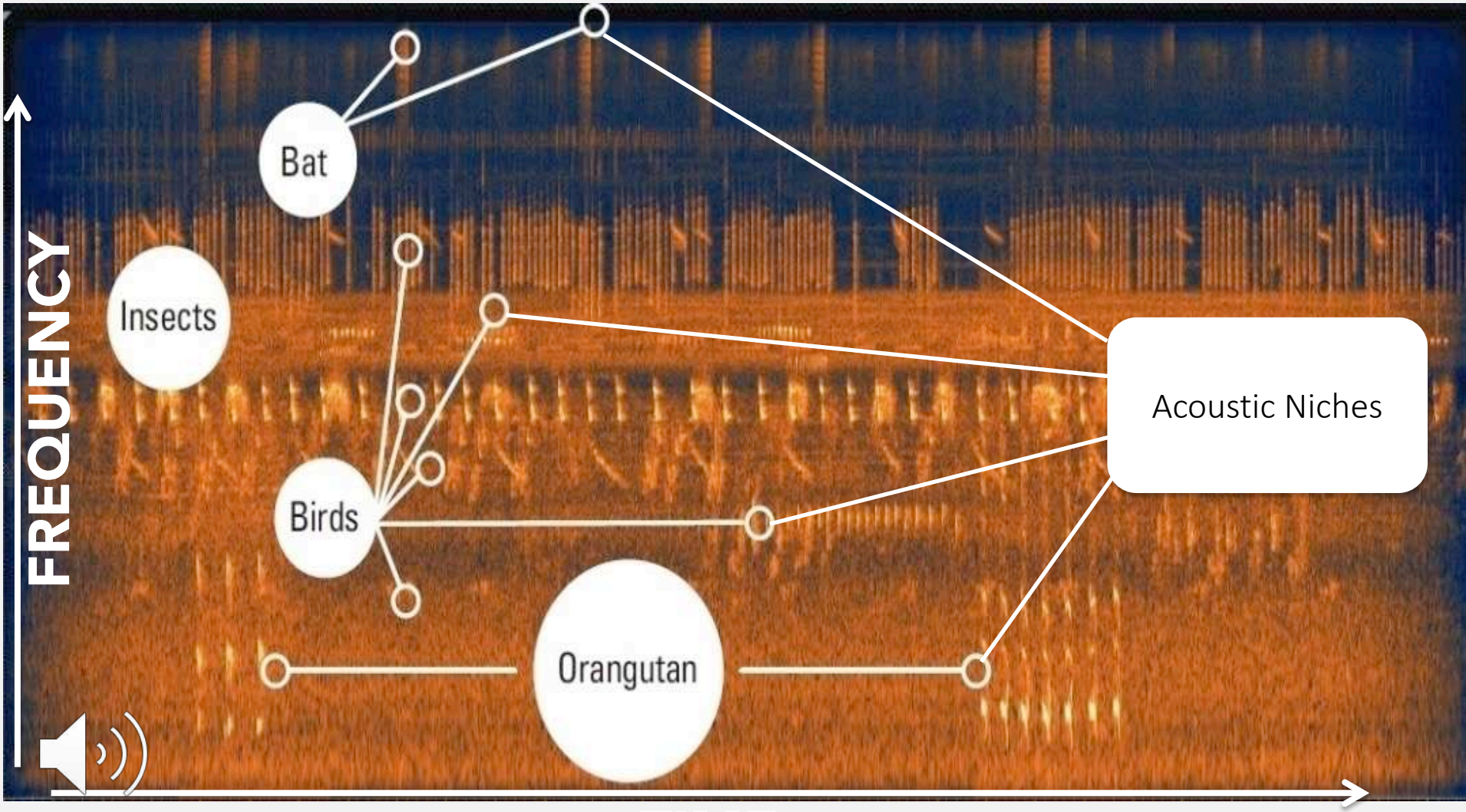


Song

Animated Slide

Advance to play

SOUNDSCAPE - SUMATRA

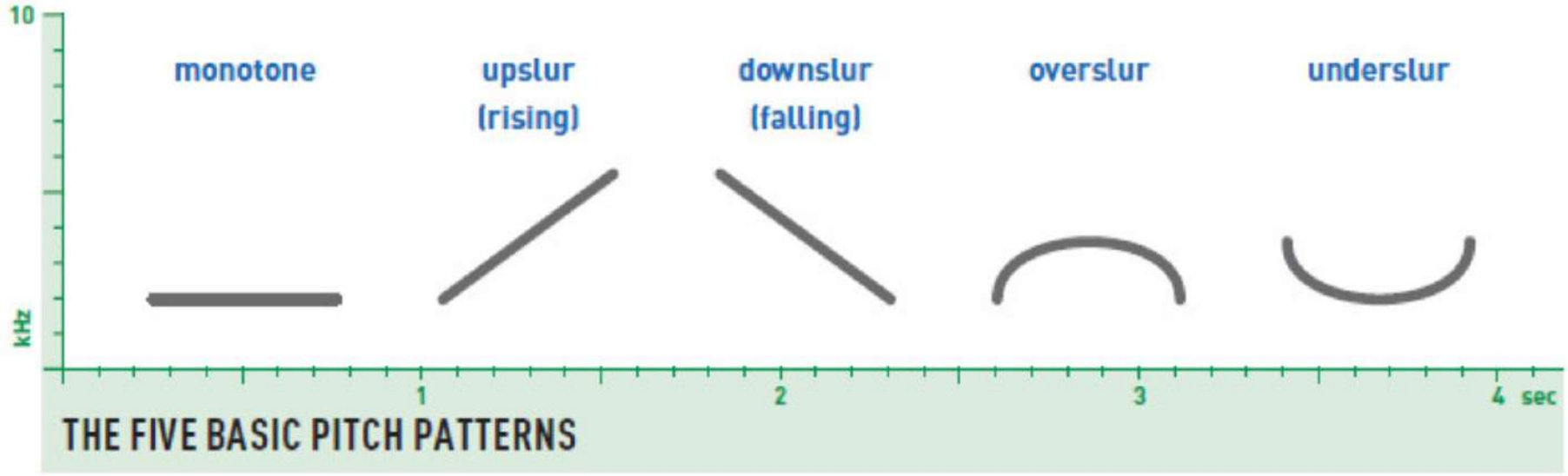


EARBIRDING

Recording, Identifying, And Interpreting Bird Sounds

The five basic pitch patterns

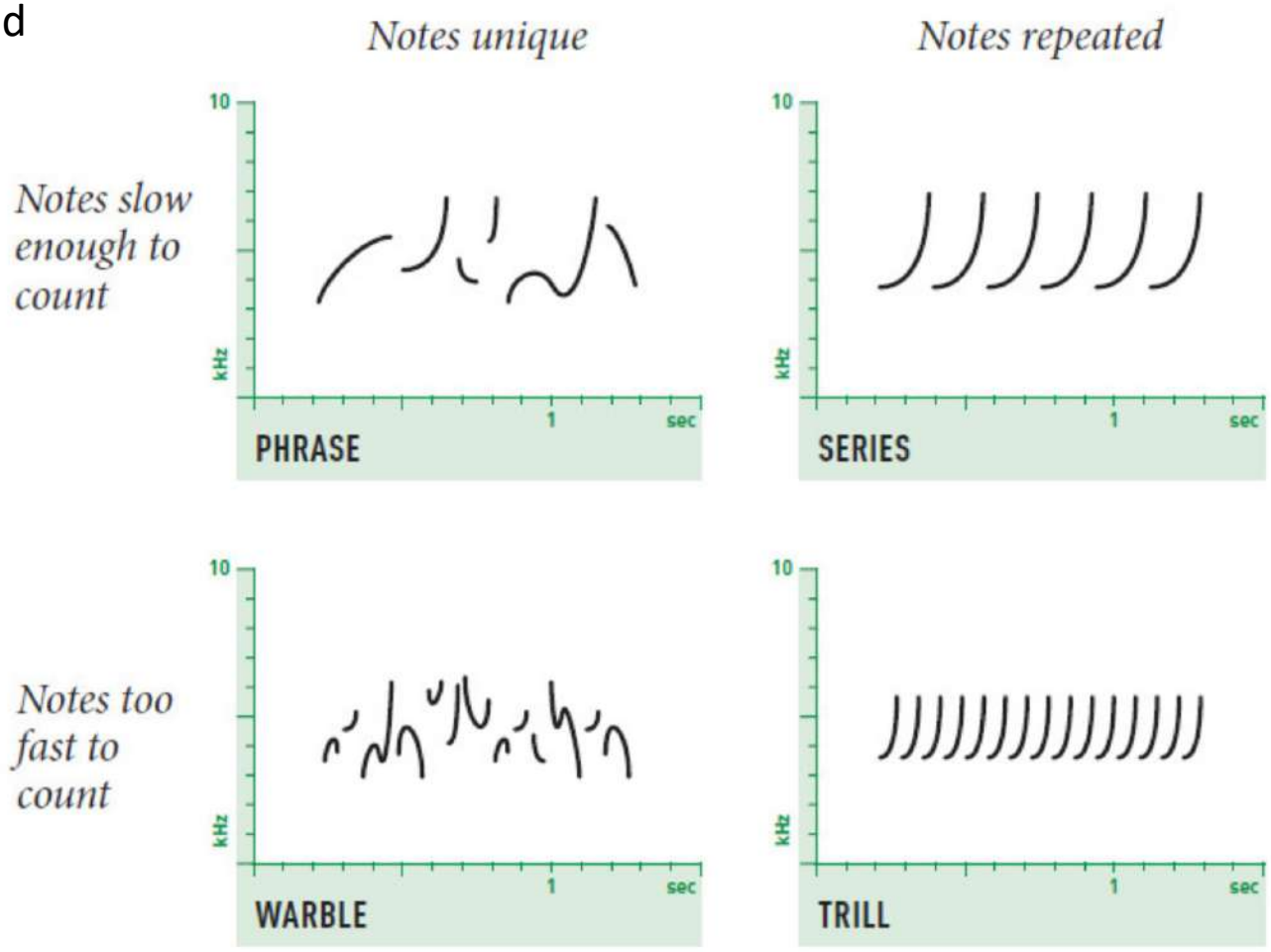
Unlike music, bird sound identification does not require attention to the precise pitch of notes; more important is *how the pitch changes*. All bird sounds can be described with just five basic pitch patterns (or combinations thereof), which can be visualized this way:



EARBIRDING

Recording, Identifying, And Interpreting Bird Sounds

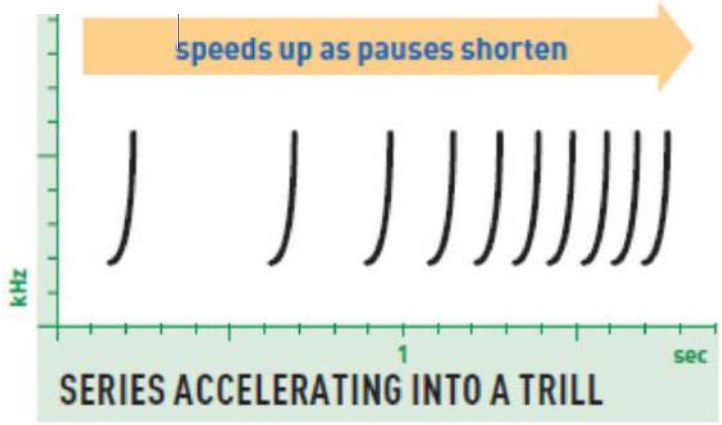
Repetition x speed

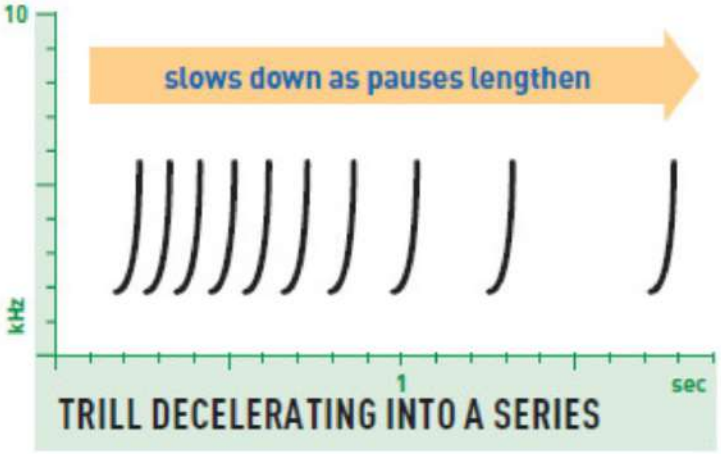


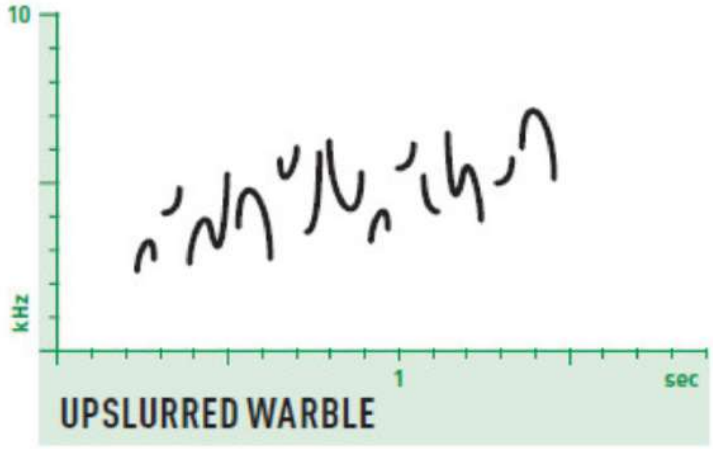
EARBIRDING

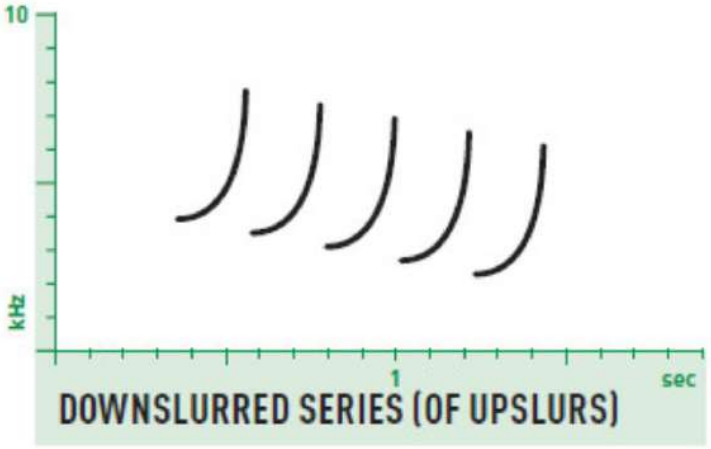
Recording, Identifying, And Interpreting Bird Sounds

Changes in speed and pitch





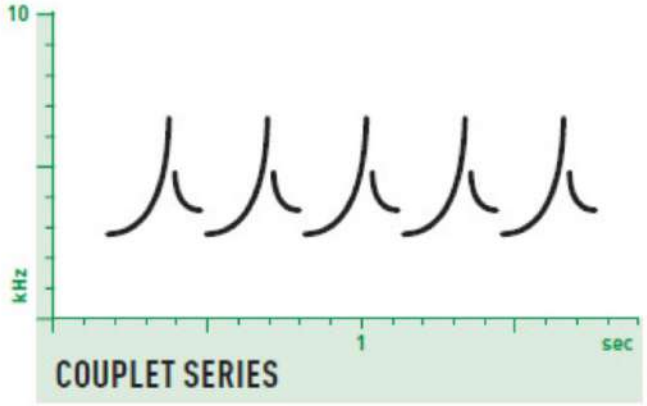


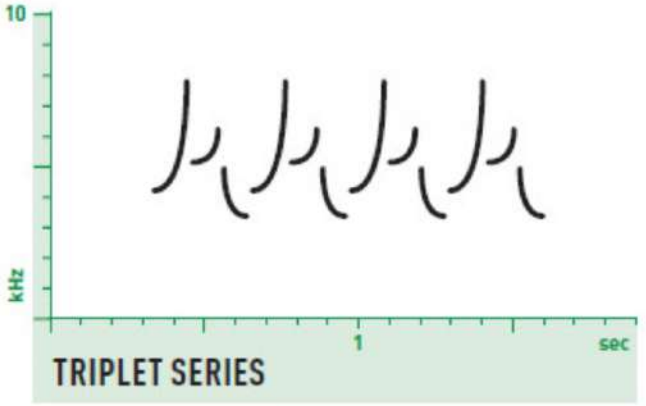


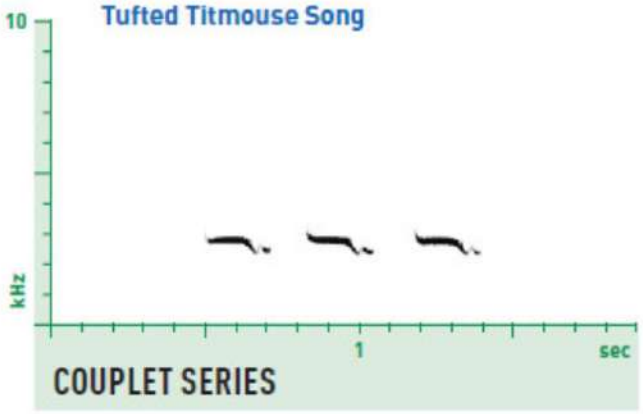
EARBIRDING

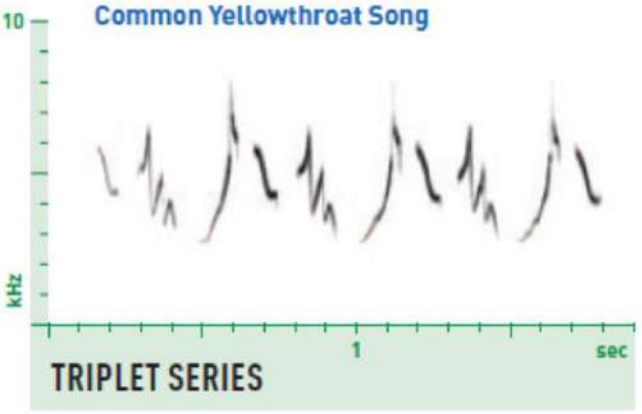
Complex series

Sometimes the repeated elements in a series themselves consist of multiple notes. A **couplet series** sounds like a 2-syllable word repeated, such as “peter peter peter”; a **triplet series** sounds like a 3-syllable word repeated, such as “teakettle teakettle teakettle.” Series of 1-syllabled notes can be called **simple series**.





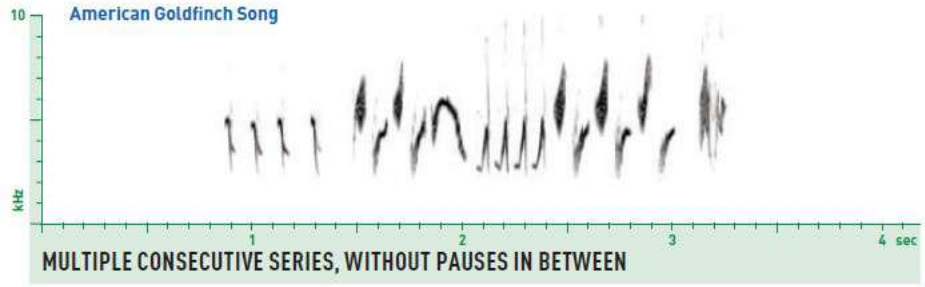




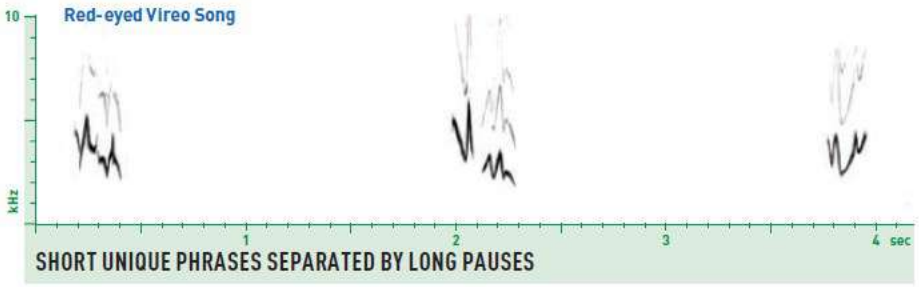
EARBIRDING

Recording, Identifying, And Interpreting Bird Sounds

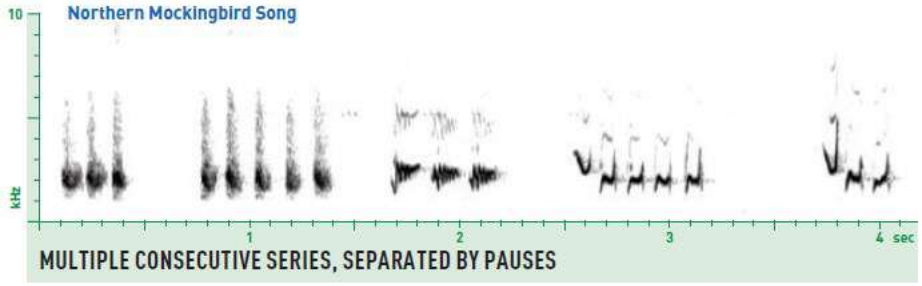
Pauses



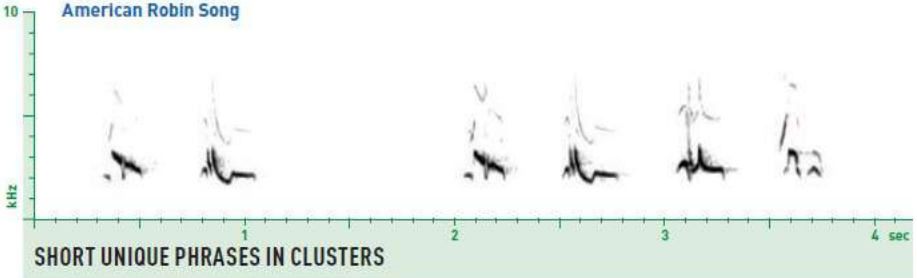
MULTIPLE CONSECUTIVE SERIES, WITHOUT PAUSES IN BETWEEN



SHORT UNIQUE PHRASES SEPARATED BY LONG PAUSES



MULTIPLE CONSECUTIVE SERIES, SEPARATED BY PAUSES



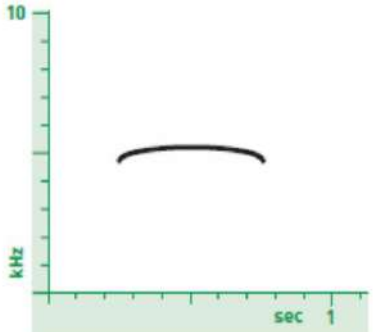
SHORT UNIQUE PHRASES IN CLUSTERS

EARBIRDING

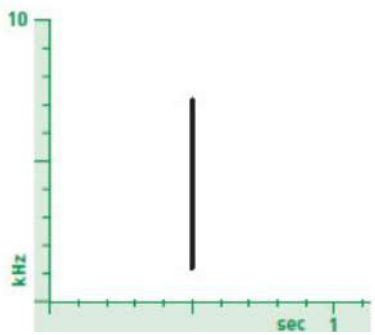
Recording, Identifying, And Interpreting Bird Sounds

Seven basic tones

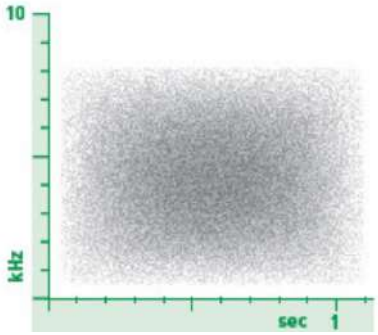
Whistled sounds



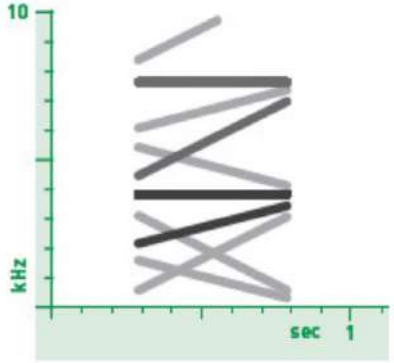
Ticking sounds



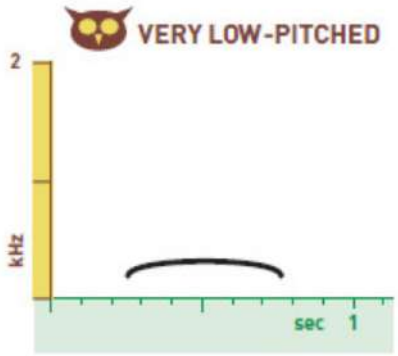
Noisy sounds



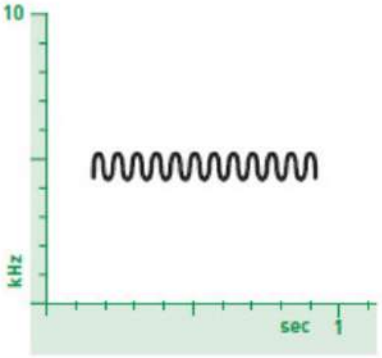
Polyphonic sounds



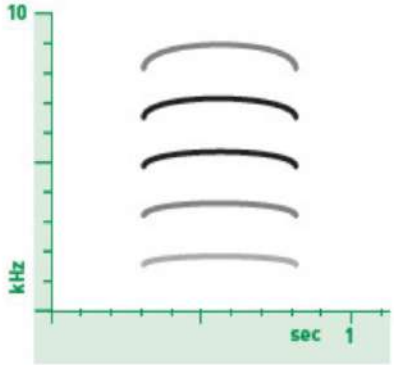
Hooting and cooing sounds

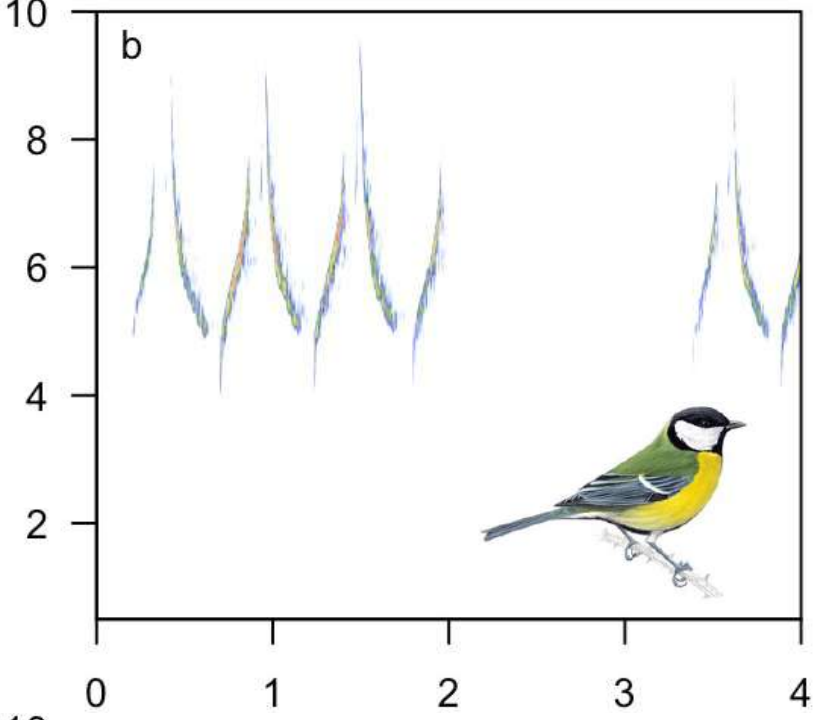


Burry and buzzy sounds



Nasal sounds

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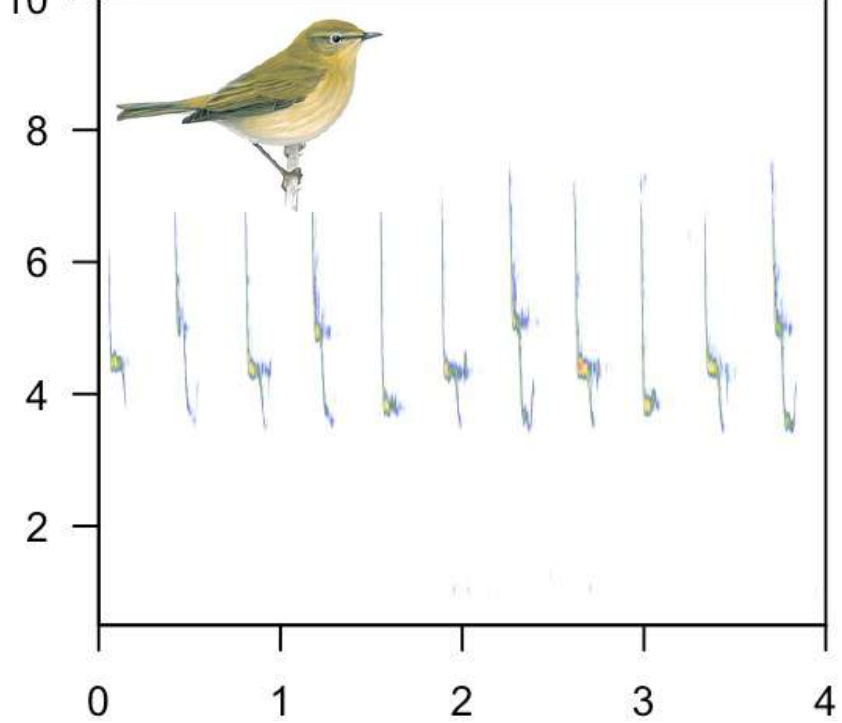
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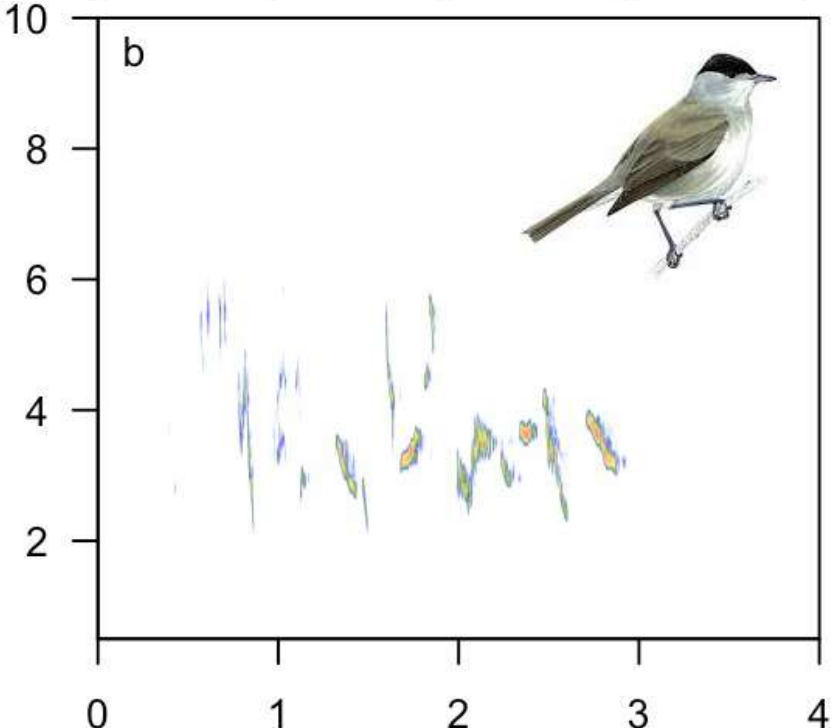
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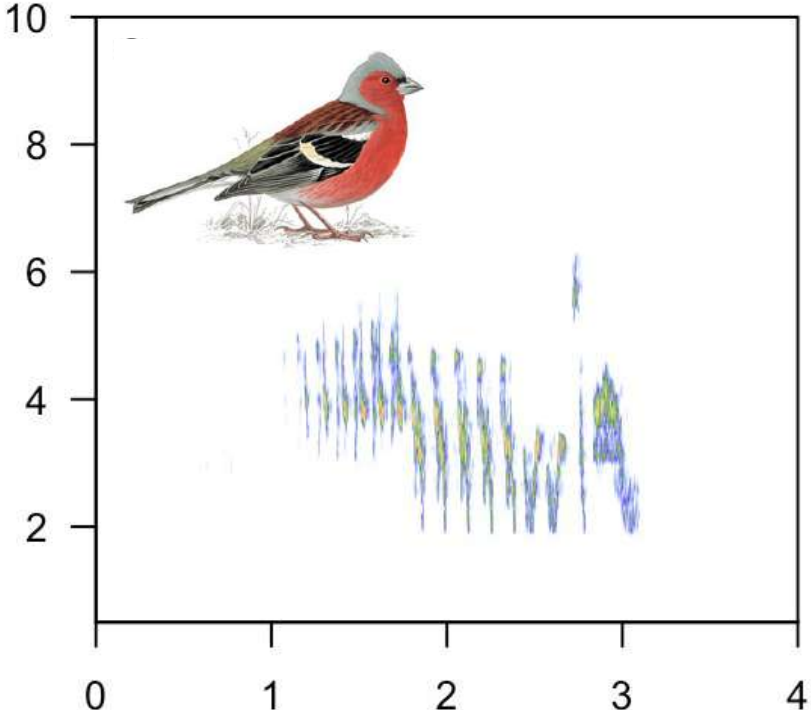
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Kin recognition in long-tailed tits

AMY LEEDALE[1]

Dr Elva Robinson[2], Prof Ben Hatchwell[1]

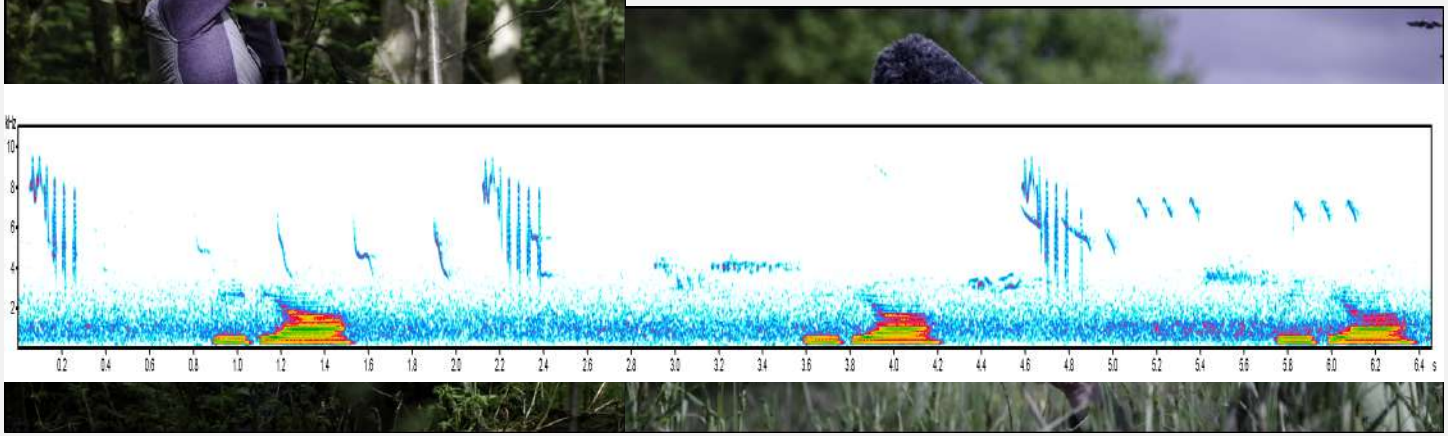
[1]University of Sheffield, [2] University of York

aleedale1@sheffield.ac.uk

@amyleedale

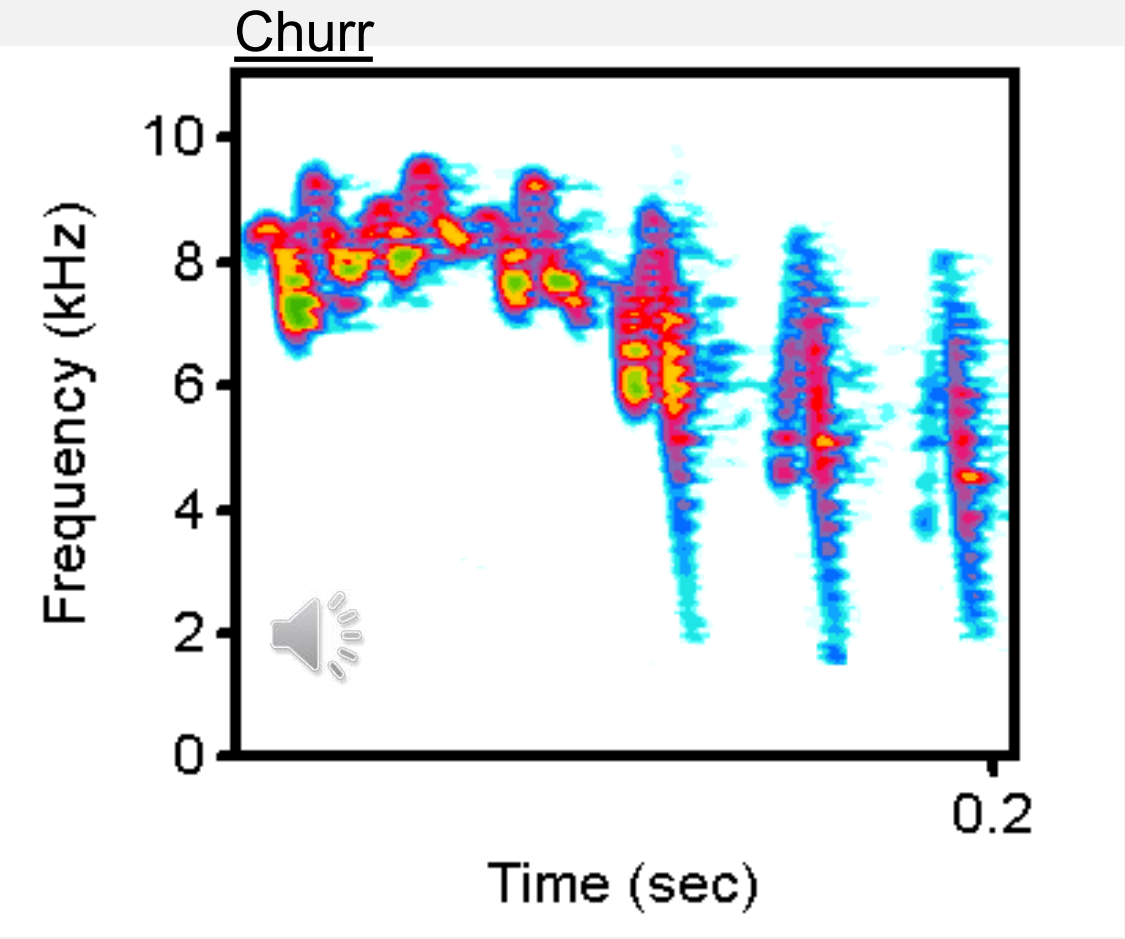
NERC SCIENCE OF THE ENVIRONMENT

- Spring 2015-2017; 06:00-18:00h BST
- Senheiser ME67/K6 directional microphone
- (Rycote windjammer)
- Roland R-05 WAV/MP3 recorder v1.03
- Sample rate: 48kHz, 16-bit resolution
- Low-cut frequency: 400Hz
- 1-15m from focal individual

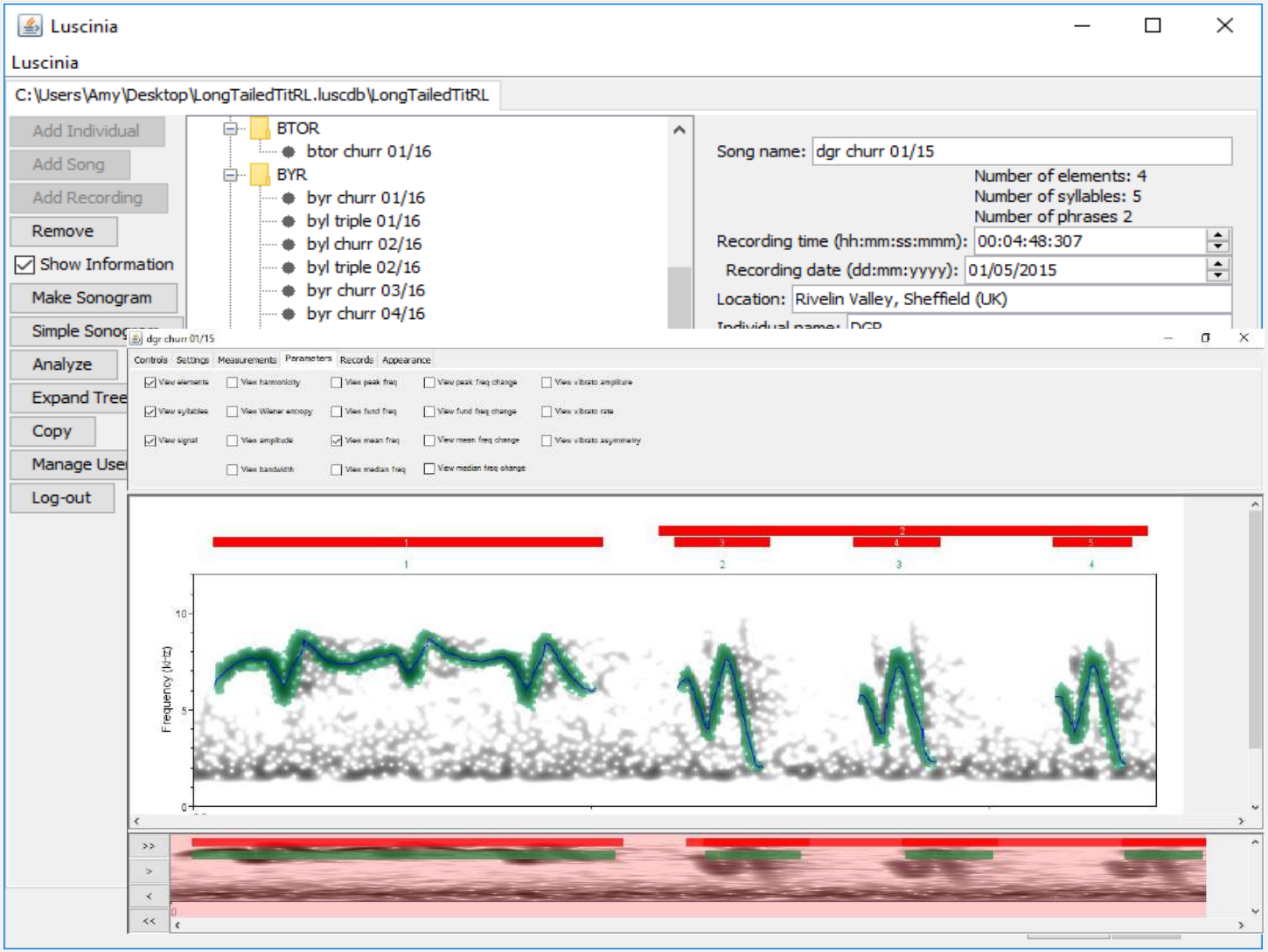


How are kin recognised?

Long-tailed tits recognise siblings using learned calls (playback experiments)

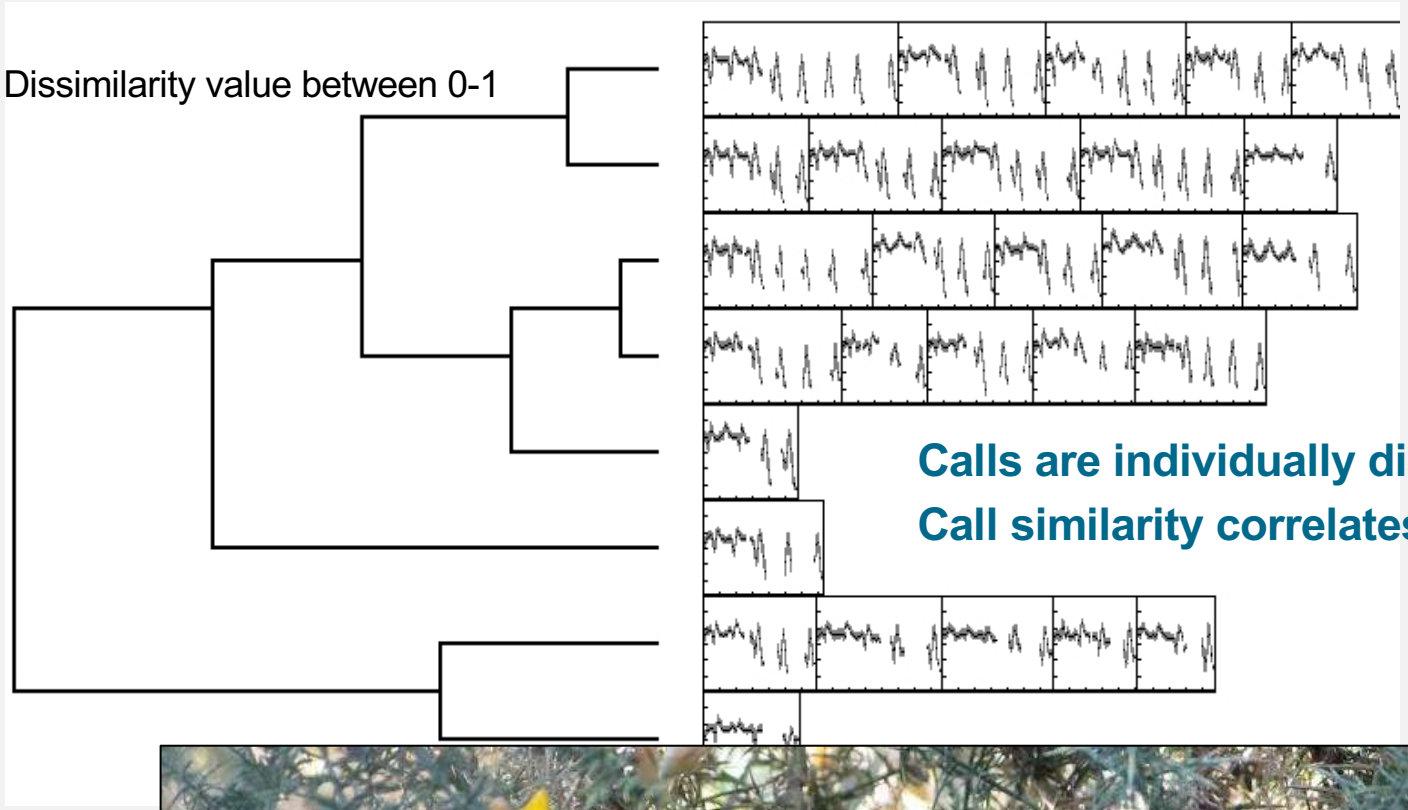


Is churr call similarity used to distinguish between close and distant kin?



Dynamic Time Warping (DTW)

Call similarity and relatedness



Calls are individually distinct

Call similarity correlates with relatedness

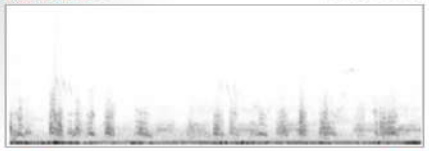
Recordings

12 results from 10 species for query '**box:54.107,-2.411,54.236,-2.233** ' (foreground species only) (0.78s)

- **Export all results as a CSV (spreadsheet) file** (maximum 1000 results)
- **Make a map of all locations of the current selection**
- **Add all results to a recording set**
- Results format: **detailed** | **concise** | **codes** | sonograms

Sort by: Taxonomy Normal Submit

XC467517



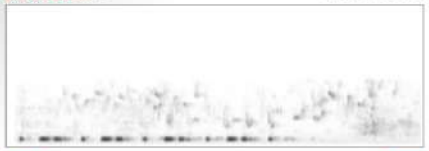
0:00 0:21

Lesser Black-backed Gull (Larus fuscus graellsii) · call, flight call
Andrew Harrop
Craven District (near Austwick), North Yorkshire, England, United Kingdom
2019-04-19

Calls from birds migrating through... more »

A **B** C D E

XC455705



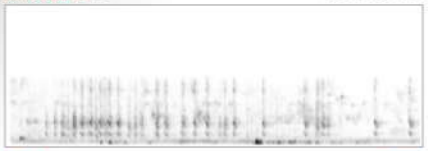
0:00 0:20

Eurasian Collared Dove (Streptopelia decaocto) · male, song
Andrew Harrop
Craven District (near Austwick), North Yorkshire, England, United Kingdom
2019-02-10

Unmodified recording of bird calling... more »

A **B** C D E

XC455708



0:00 0:16

Western Jackdaw (Coloeus monedula) · call
Andrew Harrop
Craven District (near Austwick), North Yorkshire, England, United Kingdom
2019-02-10

Unmodified recording of calls given by... more »

A B C D E

XC455706

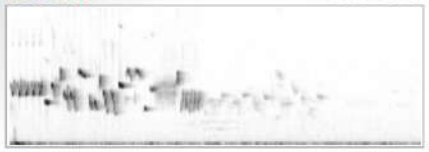
0:00 0:26

Western Jackdaw (Coloeus monedula) · call
Andrew Harrop
Craven District (near Austwick), North Yorkshire, England, United Kingdom
2019-02-10

Unmodified recording of calls,... more »

A B C D E

XC489218



0:00 0:30

Eurasian Wren (Troglodytes troglodytes) · male, song
Andrew Harrop
Craven District (near Austwick), North Yorkshire, England, United Kingdom
2019-07-28

Bird singing from wooded garden; sound... more »

A B C D E

XC467518

0:00 0:13

Eurasian Wren (Troglodytes troglodytes) · male, song
Andrew Harrop
Craven District (near Austwick), North Yorkshire, England, United Kingdom
2019-04-19

Song from bird in hawthorns by path... more »

A B C D E

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bioacoustica

Search... SEARCH

All Taxonomy

HOME NEWS BROWSE BY TAXON BROWSE MAP ANALYSES COLLECTIONS LITERATURE HELP MISCELLANEOUS RECORDINGS PODCASTS RESOURCES GLOSSARY

ECOLOGICAL INTERACTIONS VIDEOS ONOMATOPOEIA OR IMITATIONS

Welcome to BioAcoustica. This site is an online repository and analysis platform for scientific recordings of wildlife sounds. In order to use the analysis functions you will need to create an account.

It is hoped that this archive of field and laboratory recordings will become a useful resource for those working on acoustic identification and monitoring whether they work by ear or are developing automated techniques.

Read more about the aims of BioAcoustica. Recordings are individually licensed, please see our Licensing Policy.

RECENT RECORDINGS

Jassopsaltria rufifacies male calling song
Bristol Community Garden Pond

RECENTLY ADDED LITERATURE

A Comparison of Mating Calls Recorded around the Type Localities of Rana tagoi and R. neba (Amphibia: Anura:

LATEST PROJECTS

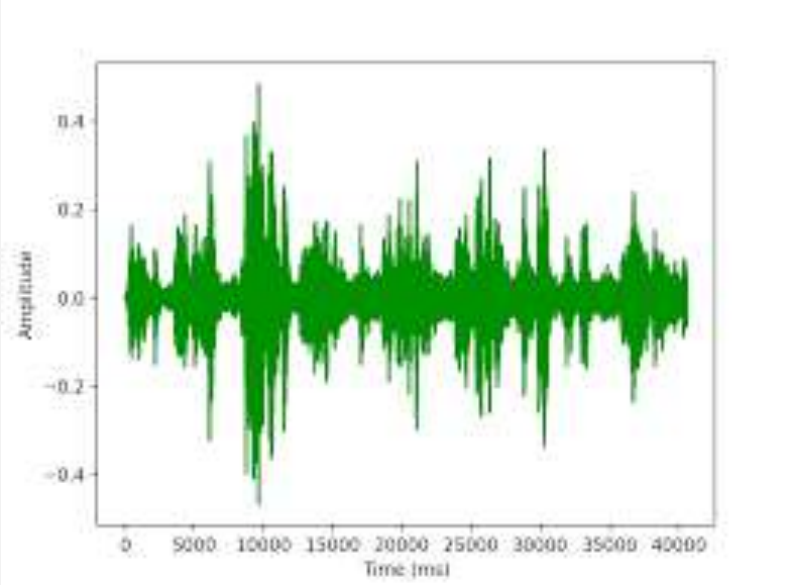
External Repository Copies
Recordings: 1,368

http://bio.acousti.ca/classification/micronecta

Download, listen and sort

- Download your WAVs
- Rename filenames

  ProjectLocation-Species_ yyyy-mm-dd_hh-mm-ss
- Listen to them



Editing individual WAVs – exercise

- See Volker Arnold article on Xeno-Canto: https://www.xeno-canto.org/article/146

- https://www.macaulaylibrary.org/resources/audio-editing-tutorials/editing-in-audacity/

- Choose and edit one (or more) of your WAVs - and export as MP3?