Geographic variation in song of aquatic warbler
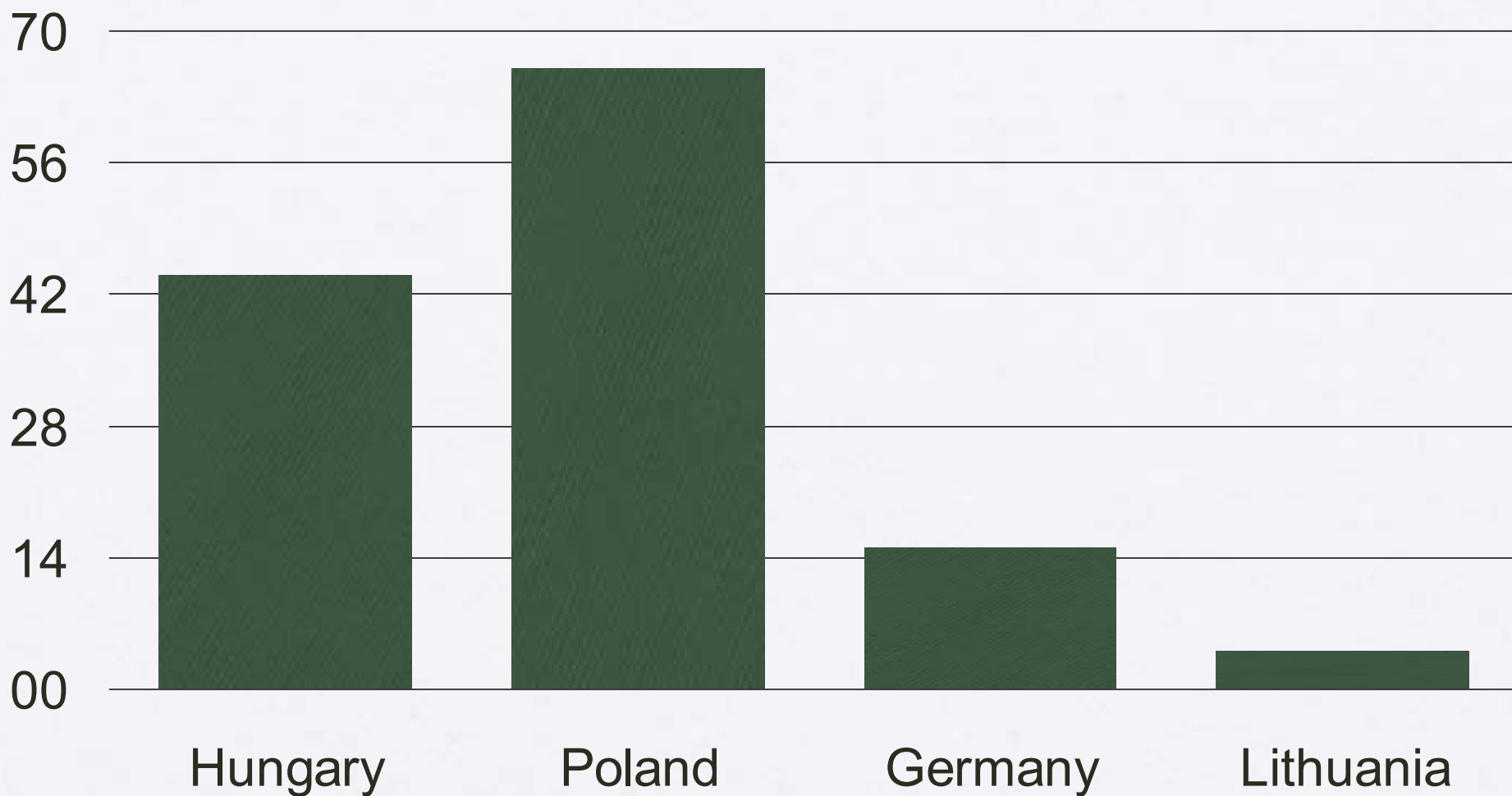
Report on song analysis progress

Tomasz Osiejuk

Recordings available (n=132)
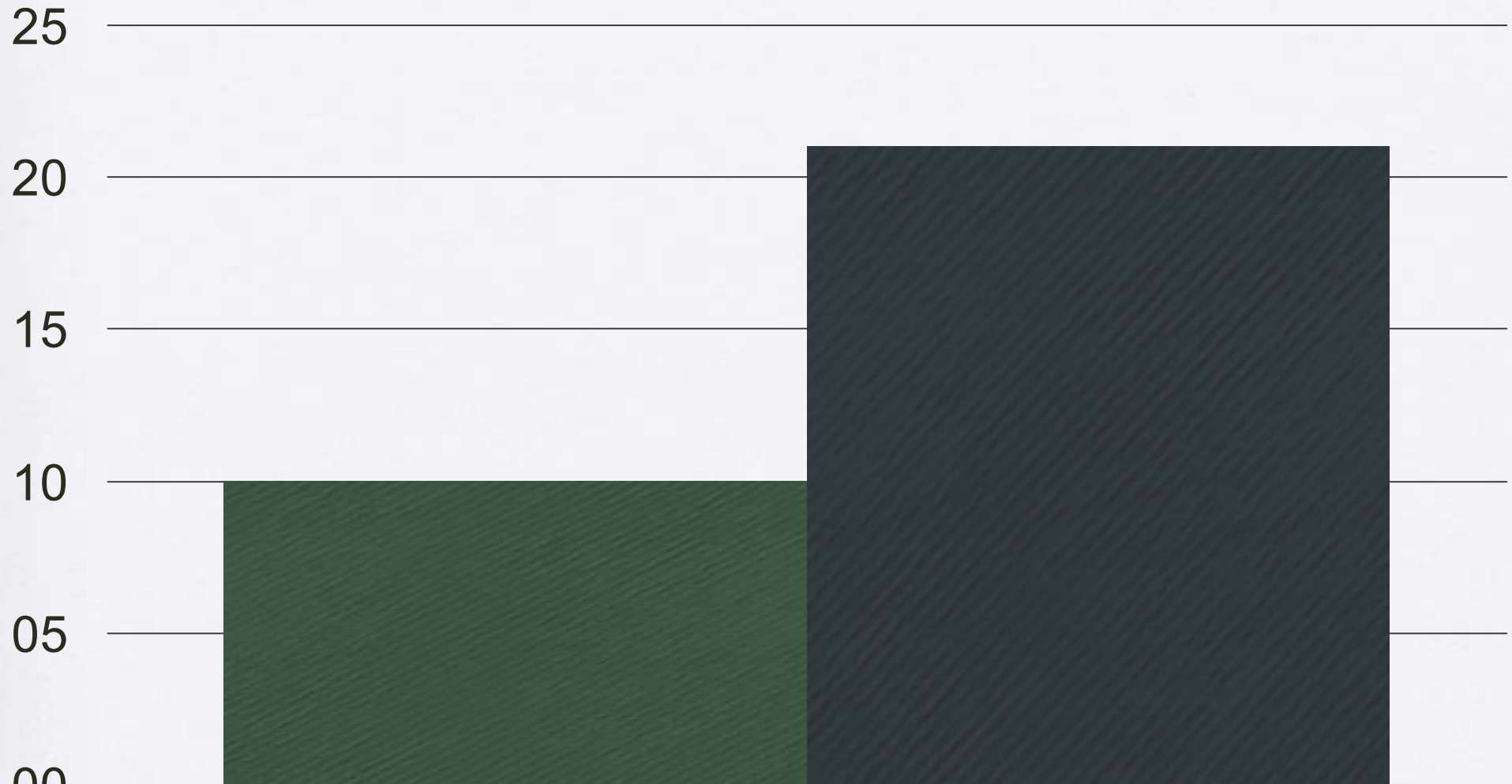
Recordings from Biebrza

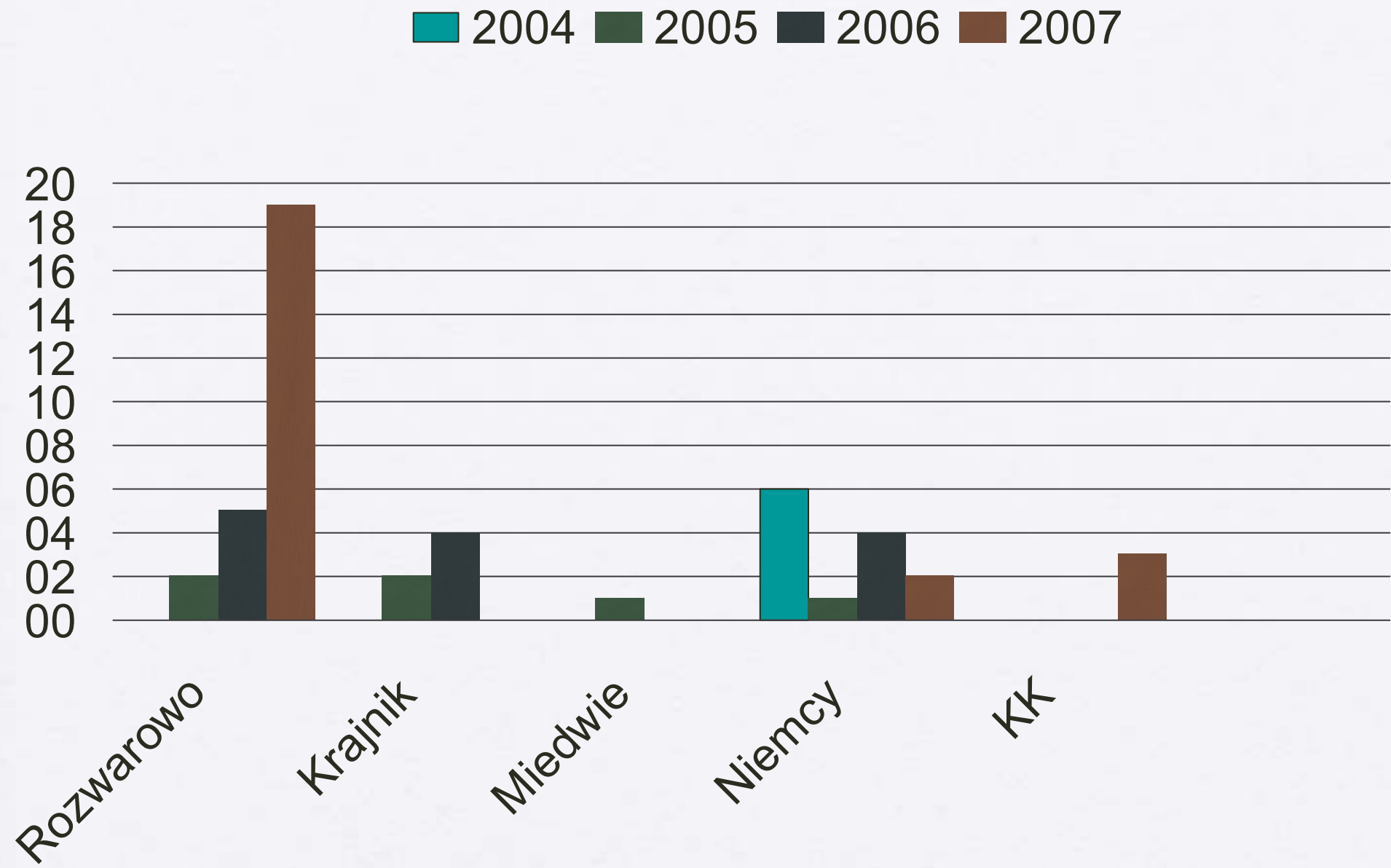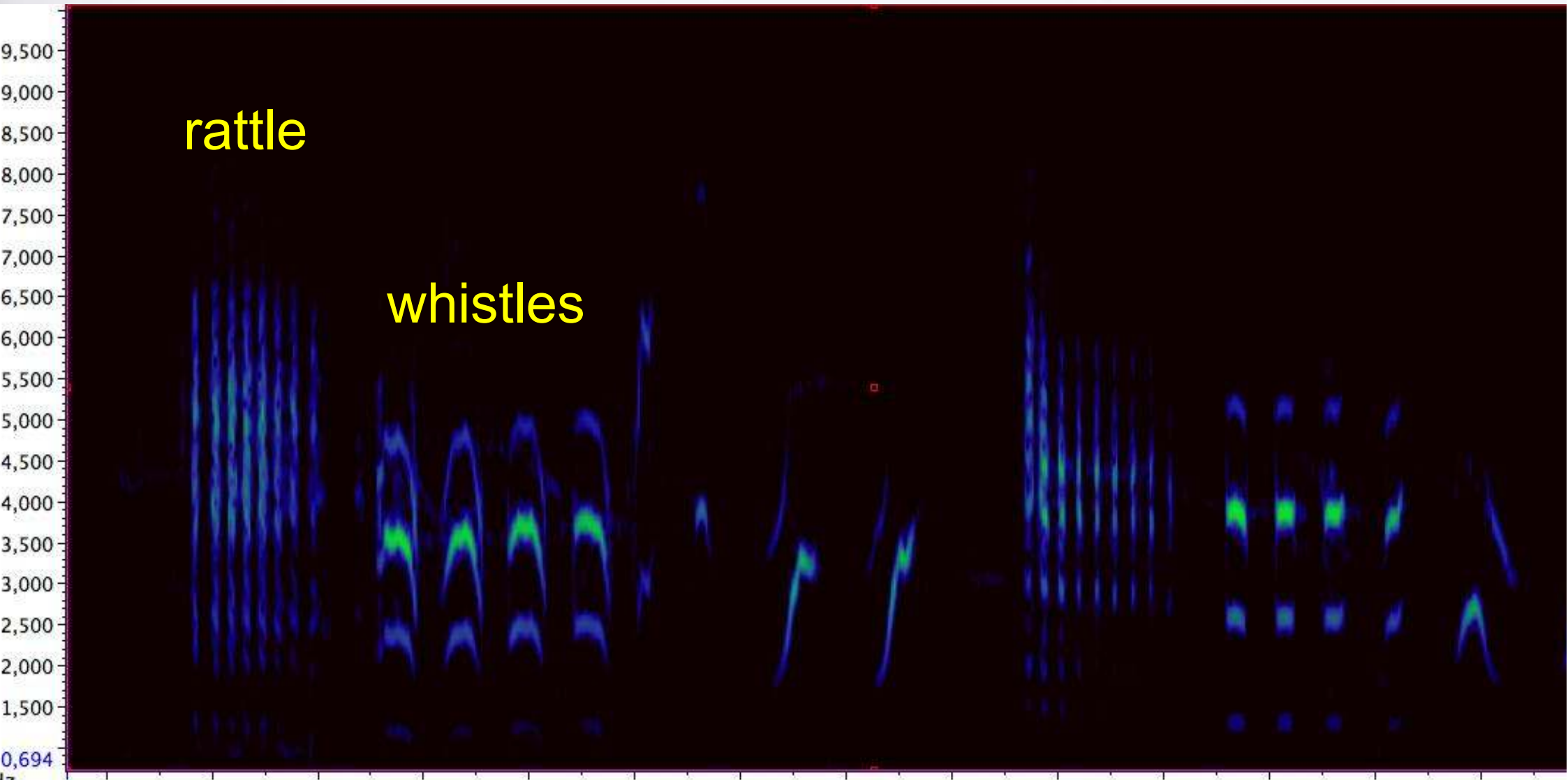## (from prof. A. Dyrcz)

Recordings from Pomerania
(from F. Tanneberger)
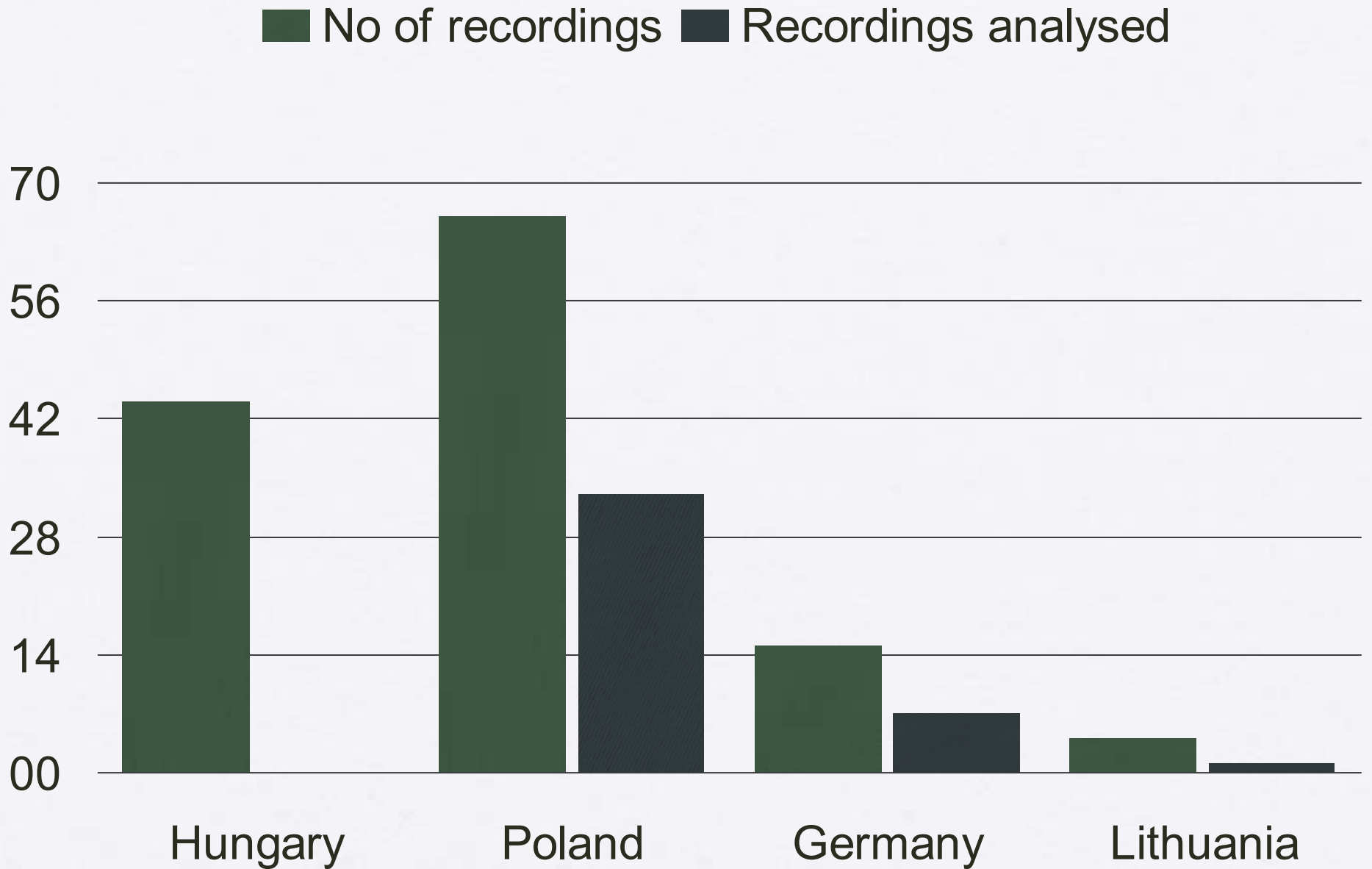
Typical song with rattles and whistles

Aims of song analysis

- Description of all song units (including both tonal whistles and rattles)

- Preparation of catalogue of whistles (repertoire) and catagorization of rattles (based on rythm and energy distribution within rattles)

- Estimation of repertoire size for males/populations

- Comparison of whistles/rattles sharing within and between populations

Methods applied

- Visual inspection of sonograms in Raven with selection of song whistles and rattles (Cornel Lab of Ornithology)

- Automatic cut of selected whistles/rattles and comparison with cross-correlation function (Avisoft SASLab Pro or XBAT)

- Estimation of repertoire size for males/populations

- Comparison of whistles/rattles sharing within and between populations

Recordings analysed till now

different types of whistles and rattles. All units within recordings classified and saved for further comparisons

rattle 1 whistle a   whistle b

0.5 1.0 1.5 2.0 2.5 3.0 3.5
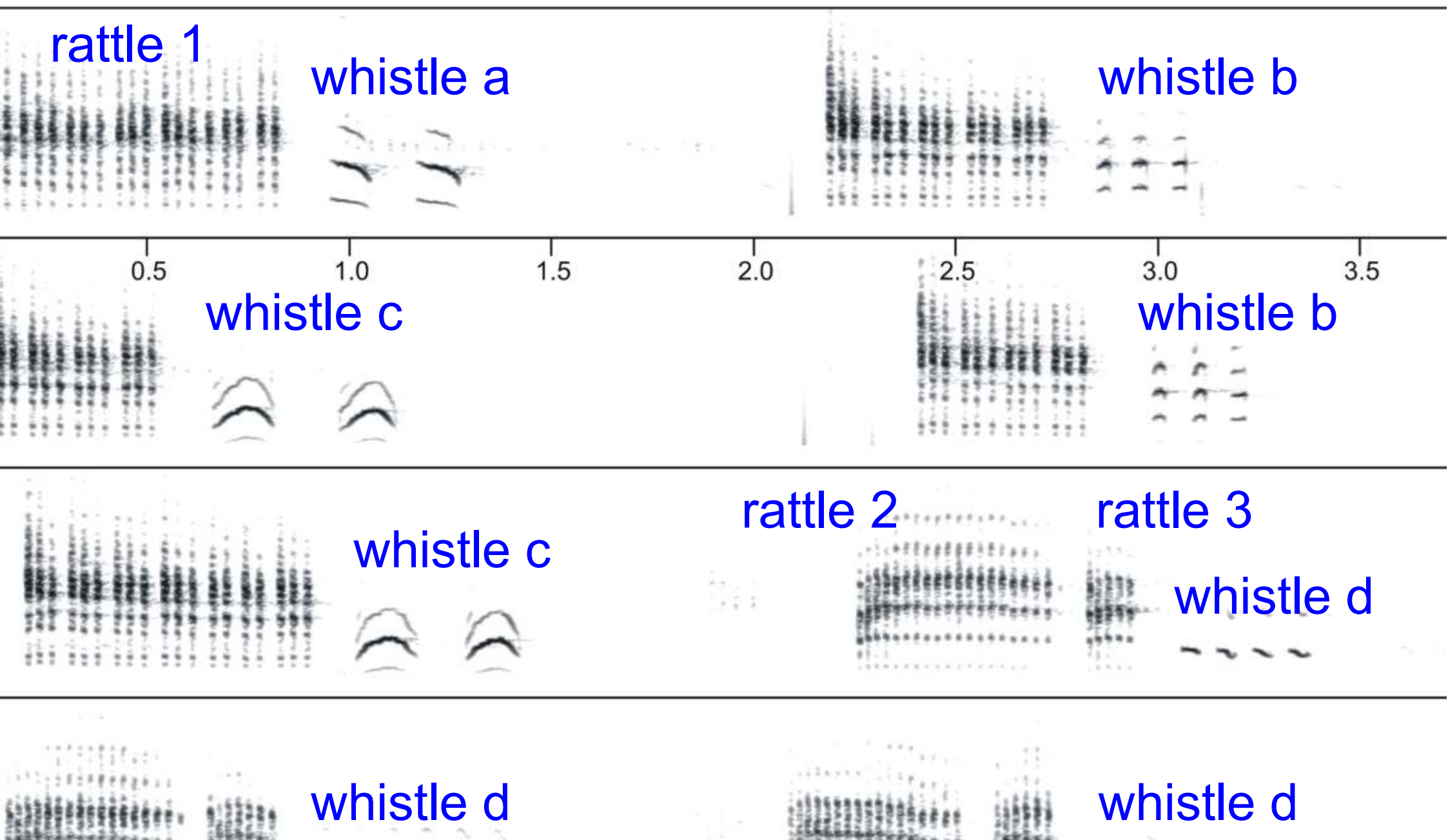
whistle c   whistle b
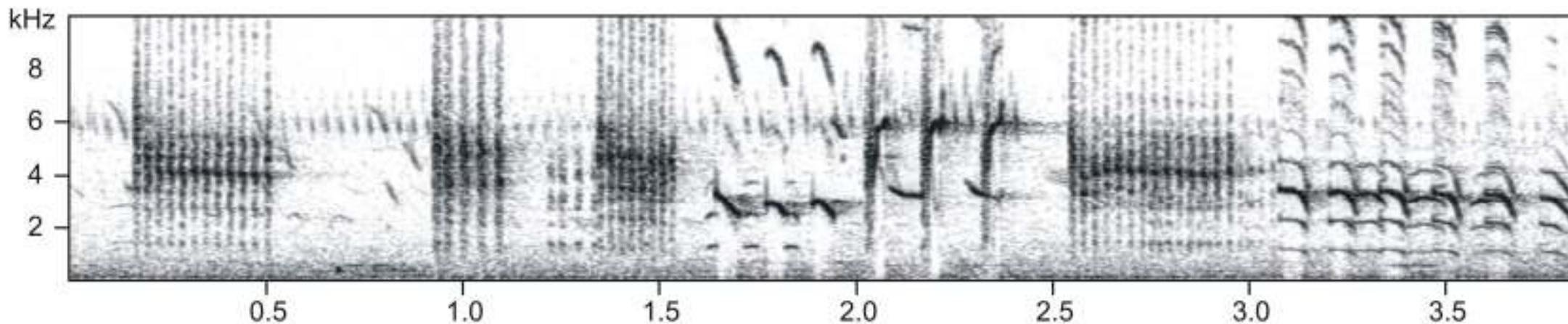
rattle 2 rattle 3

whistle c   whistle d

whistle d   whistle d

Problems with analyses

- variable quality of recordings - it's impossible to compare automaticaly poor and good quality sound samples

- many short recordings - this may affect estimation of repertoire size and repertoire sharing

An example of poor quality recording from Biebrza '93