

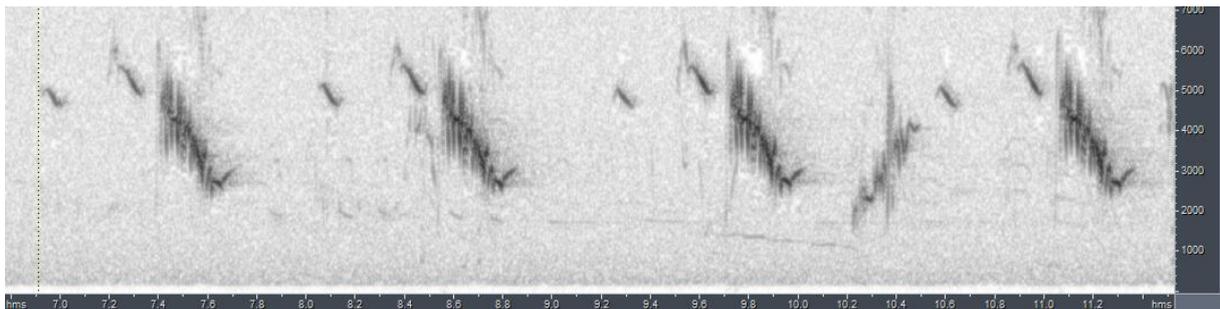
Notes on the vocalizations of Chirruping Wedgebill (*Psophodes cristatus*) and Chiming Wedgebill (*Psophodes occidentalis*)

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In the following we briefly analyze and compare voice of the different races of Chirruping Wedgebill (*Psophodes cristatus*) and Chiming Wedgebill (*Psophodes occidentalis*). We also try to quantify the extent of any vocal differences using the criteria proposed by Tobias *et al.* (2010), as a support for taxonomic review. We have made use of sound recordings available on-line from Xeno Canto (XC).

Song of both species is very different:

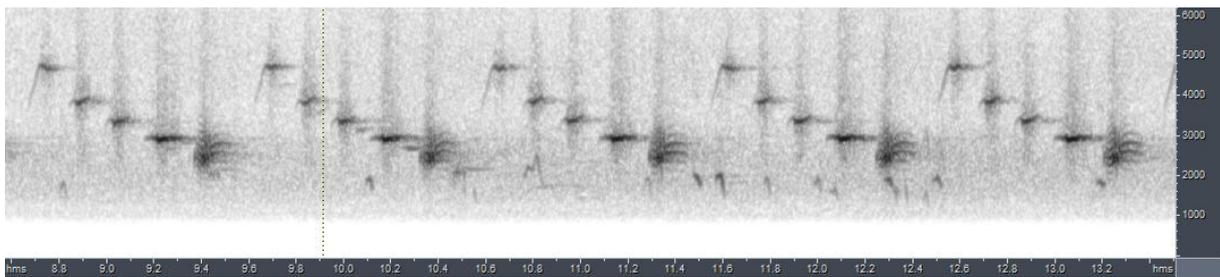
Chirruping Wedgebill : Repeated song phrase consists of 1 or 2 short introductory notes followed by a descending complex 'chirruping' note:



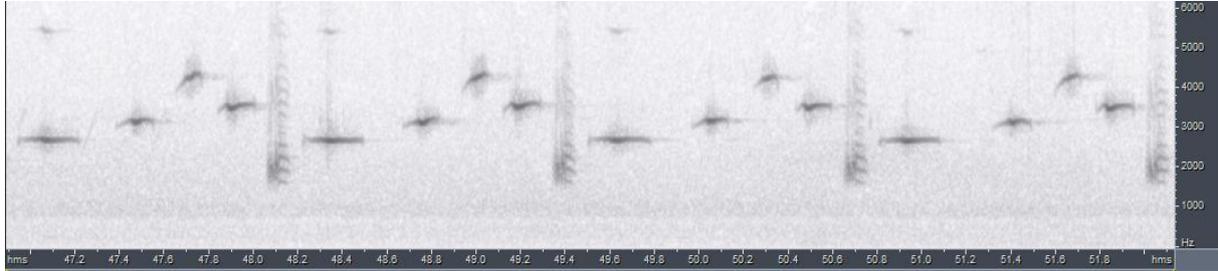
Measurements:

# notes/phrase	2-3
longest note	0.30 - 0.41s
max. freq.	5600 - 6420Hz
min. freq.	1700 - 2350 Hz
max. freq. range single note	3800 - 4220 Hz
total freq. range	3800 - 4220 Hz

Chiming Wedgebill: Repeated song consists of some 3-5 short notes, typically gradually descending in pitch with the last note more gravelly or burry:



Several variations exist, but all are similar in structure, e.g.



Measurements:

# notes/phrase	4-5
longest note	0.09 - 0.23s
max. freq.	3760 - 4800Hz
min. freq.	1270 - 2700Hz
max. freq. range single note	150 - 1400Hz
total freq. range	1900 - 3030 Hz

Differences in song can be quantified by comparing basic sound parameters:

Chirruping Wedgebill has a song phrase consisting of less notes (score 3), and includes a long chirruping note which is much longer than any note of Chiming Wedgebill (score 3) and with a far higher frequency range (score 4). Furthermore, max. frequency and total frequency range in Chirruping Wedgebill are higher (score 3).

When applying Tobias criteria, this would lead to a total vocal score of 7.

Apparently, "in far NE South Australia there are some birds that appear to sing songs that are difficult to assign to one species or the other" (Graeme Chapman, see <http://www.graemechapman.com.au/library/viewphotos.php?c=552>). I haven't found any recordings of that region to check this statement.

This note was finalized on 9th October 2015, using sound recordings available on-line at that moment. We would like to thank in particular the sound recordists: Matthias Feuersenger, Mark Harper, Nigel Jackett, Tom Tarrant and Fred Van Gessel.

References

Tobias, J.A., Seddon, N., Spottiswoode, C.N., Pilgrim, J.D., Fishpool, L.D.C. & Collar, N.J. (2010). Quantitative criteria for species delimitation. *Ibis* 152(4): 724–746.

Recommended citation

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