

## Notes on the vocalizations of White-lined Honeyeater (*Meliphaga albilineata*) and Kimberley Honeyeater (*Meliphaga fordiana*)

Peter Boesman

In the following we briefly analyze and compare voice of the different races of White-lined Honeyeater (*Meliphaga albilineata*) and Kimberley Honeyeater (*Meliphaga fordiana*). 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).

A thorough vocal analysis (Miller *et al.* 2014) led to the conclusion that there are large differences between the songs of the species. Specifically, the White-lined Honeyeater sings songs with longer and more tremulous notes, longer pauses between notes, and a higher minimum frequency. The authors don't provide measurement data of the vocal parameters, but immediately switch to principal components, which makes interpretation and application of Tobias criteria somewhat problematic.

Many subspecies are identifiable by voice, even looking at single sound parameters, let alone several variables combined. The fact songs are recognizable is thus not enough proof for species status. I have therefore done a quick analysis on the (few) available XC recordings to have also some quantification of the extent of vocal differences based on single sound parameters.

	White-lined Honeyeater (n=5)	Kimberley Honeyeater (n=3)
min. pause	0.2 - 0.79s	0.44 - 0.60s
max. pause	0.96 - 4.7s	0.6 - 2.8s
min. freq.	1520 - 2000Hz	1100 - 1420Hz
max. freq.	2900 - 3700Hz	3300 - 3400Hz
min. note length	0.12 - 0.43s	0.08 - 0.14s
max. note length	0.28 - 0.45s	0.20 - 0.27s
max. freq. range single note	900 - 1700Hz	1700 - 1800Hz
max. freq. range song	1000 - 2100Hz	2000 - 2200Hz
#notes per phrase	1 - 7	3 - 6
average pace	0.7 - 1.7s/note	0.32 - 0.55s/note

The above data confirm that White-lined Honey-eater differs mainly by the slower pace (score 2-3), the lack of short notes which have a high frequency range (score 2), the presence of long tremulous notes (score 2) and slightly higher minimum frequencies (score 1-2) (Fig. 1).

If we apply Tobias criteria on this admittedly small set of recordings, this would lead to a total vocal score of 4-5.

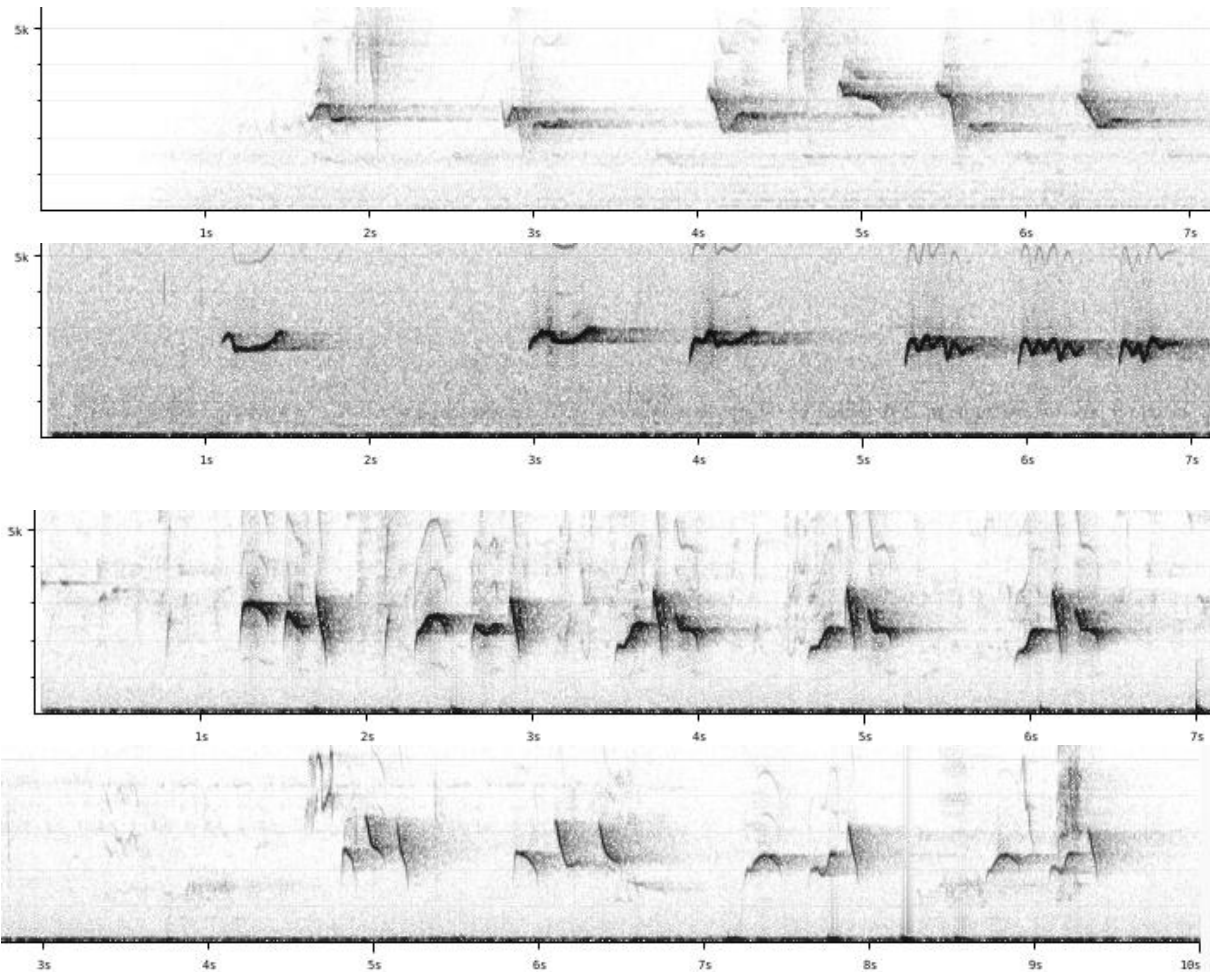


Figure 1: song of White-lined Honeyeater (top two) and Kimberley Honeyeater (bottom two)

This note was finalized on 17th September 2015, using sound recordings available on-line at that moment. We would like to thank in particular the sound recordists who placed their recordings for these species on XC: Eliot Miller and Marc Anderson.

## References

Miller, E.T. and Wagner, S.K. (2014). The vocalisations and species status of the White-lined and Kimberley Honeyeaters. *Emu* 114(2): 116-120.

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.

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