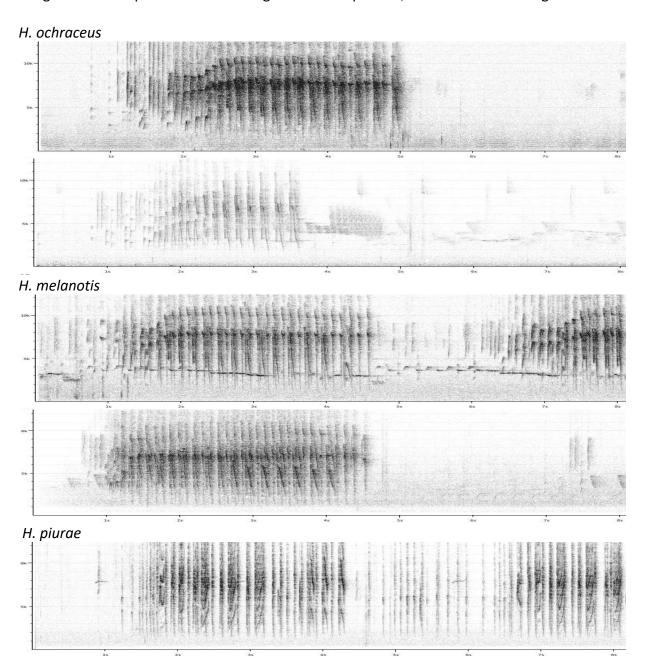


Notes on the vocalizations of Western Hemispingus (*Hemispingus ochraceus*)

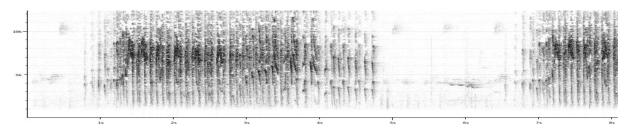
Peter Boesman

In the following we briefly analyze and compare voice of Western Hemispingus (*Hemispingus ochraceus*), Black-eared Hemispingus (*H. melanotis*) and Piura Hemispingus (*H. piurae*). 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 all three species is a chattering duet. A comparison, illustrated with sonograms:



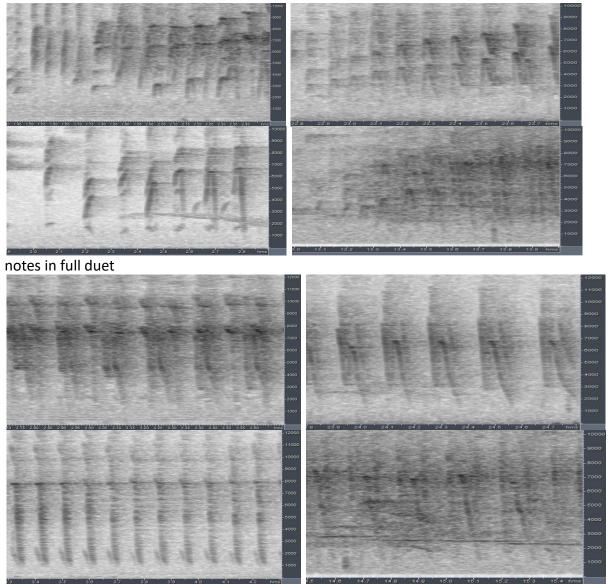


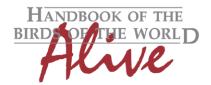


From the above, it is clear that duet song of all three species is structurally similar. There seems to be however a closer resemblance between duets of H. *ochraceus* and H. *melanotis*.

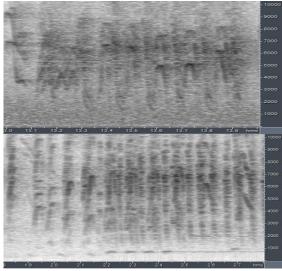
A closer look into details on sonogram:

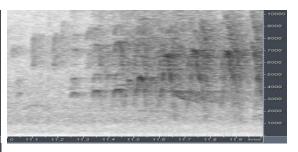
ochraceus notes at start of duet



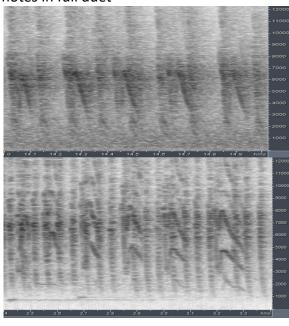


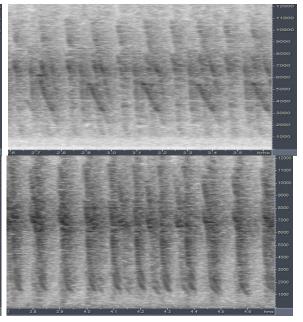
H. melanotis notes at start of duet



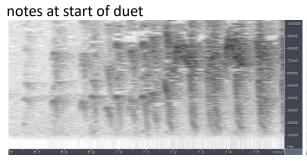


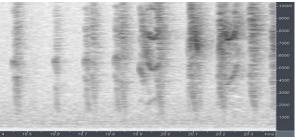
notes in full duet



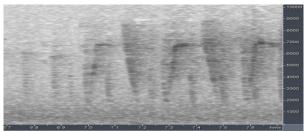


piurae

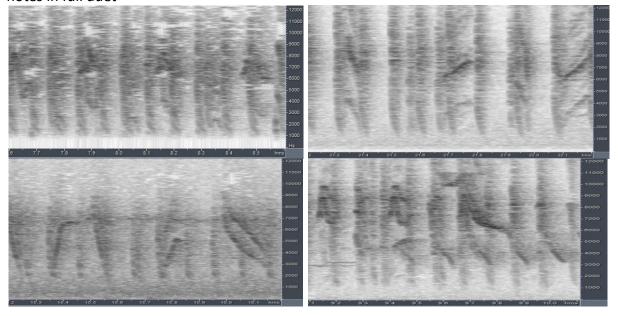








notes in full duet



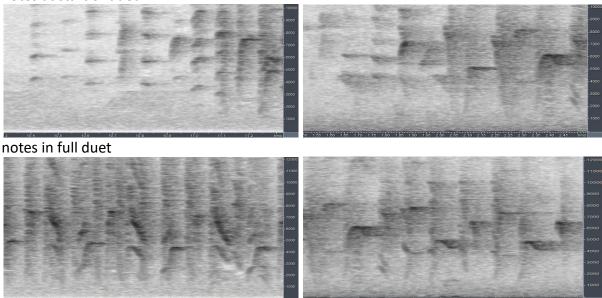
From the above examples, the similarity of *ochraceus* and *melanotis* is quite obvious: duet of *ochraceus* starts with some overslurred notes which gradually rise in pitch before bursting into a full duet, in which apparently both birds repeat incessantly the same note in perfect synchrony, one note very steeply downslurred, the other somewhat more gentler sloped. In *melanotis*, we can see exactly the same pattern, but there is slightly more variation in note shapes (which doesn't come as a surprise given the much wider range along most of the Andes).

Duet of *piuirae* on the other hand, is somewhat different: the start of the duet is rather a series of short notes at about the same pitch (not rising) and note shape of introductory notes slightly different (not nicely overslurred). In full duet, notes show a much less regular pattern, with apparently one of the birds switching frequently from one note to another note (either upslurred or downslurred).

Race *castaneicollis* of *H. melanotis* also differs from other races of this species (Boesman 2016). For the sake of completeness, we therefore also depict here similar detailed sonograms of parts of its duet song:



notes at start of duet



In these examples of *castaneicollis* note shape of introductory notes is very distinct (a vertical line of dots on a sonogram) and in full duet, there is a much less repetitive pattern, rather an alternating pattern of more curly-shaped whistles.

All in all, we can conclude that voice of *H. ochraceus* is about identical to *H. melanotis*.

Voice of *piurae* at the other hand is quite distinctive and can be safely told apart. Based on introductory notes at about flat pitch (1-2) and changing notes in duet (1-2) a total score of about 3 can be given. This vocal difference is about of the same magnitude as race *castaneicollis* within *H. melanotis*.

This note was finalized on 19th October 2016, using sound recordings available on-line at that moment. We would like to thank in particular the many sound recordists who placed their recordings for thess species on XC.

References

Boesman, P. (2016). Notes on the vocalizations of Black-eared Hemispingus (*Hemispingus melanotis*). *HBW Alive Ornithological Note* **398**. In: *Handbook of the Birds of the World Alive*. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/node/1253792 on 2 December 2016).

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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