

Notes on the vocalizations of Golden-crowned Warbler (*Basileuterus culicivorus*)

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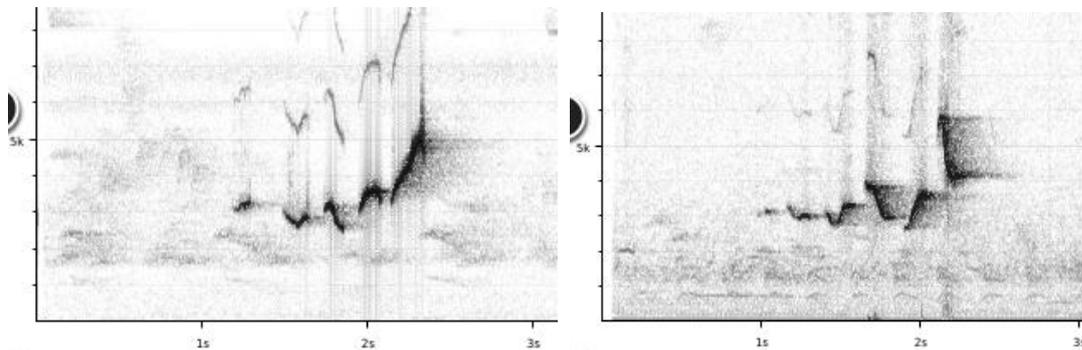
In the following we briefly analyze and compare voice of the different races of Golden-crowned Warbler (*Basileuterus culicivorus*). We also try to quantify the extent of any vocal differences using the criteria proposed by Tobias *et al.* (2010), as a support for taxonomic review.

We have made use of sound recordings available on-line from Xeno Canto (XC) and Macaulay Library (ML).

An overview of song per race, illustrated with sonograms:

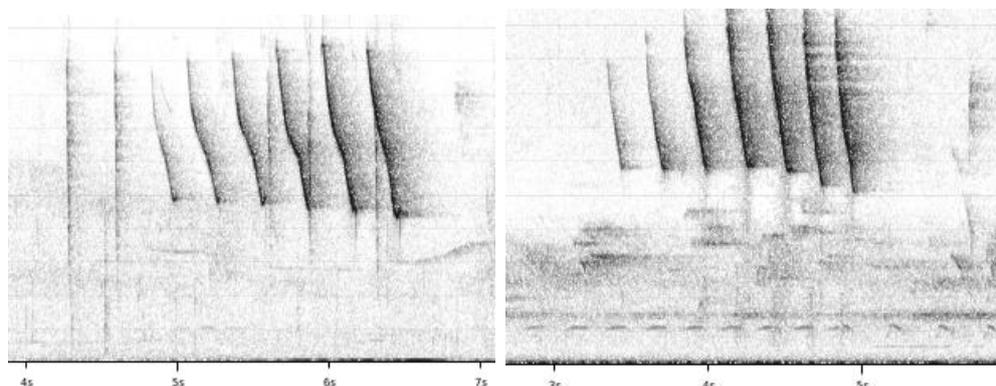
"culicivorus group" (with *brasierii*, *flavescens* and *godmani*) of C America

Song is a short melodious phrase, consisting of several sweet notes but ending with an emphasized higher-pitched note: "wee-chu-wee-chi-WEE!" or similar.



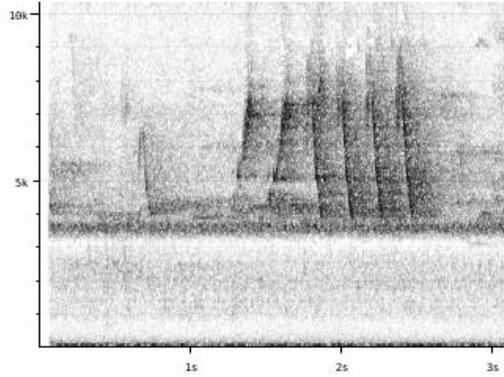
"cabanisi group" (with *occultus*, *austerus* and *indignus*) of N Colombia and NW Venezuela

Song is a series of repeated almost identical notes covering a very large freq. range, and reaching maximum frequencies of 9-11kHz.

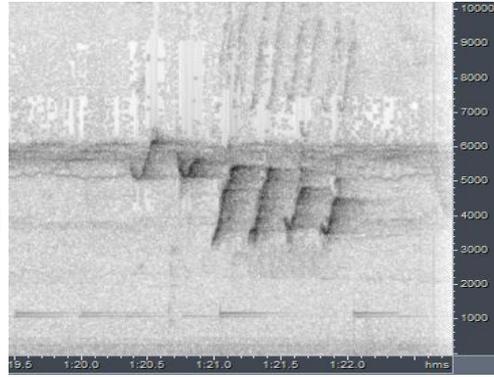


"auricapilla group" (remaining five races) of NE & S Venezuela and CE South America
Song is typically a short series of repeated notes followed (sometimes after 1-2 transition notes) by 2- 4 more emphatic notes.

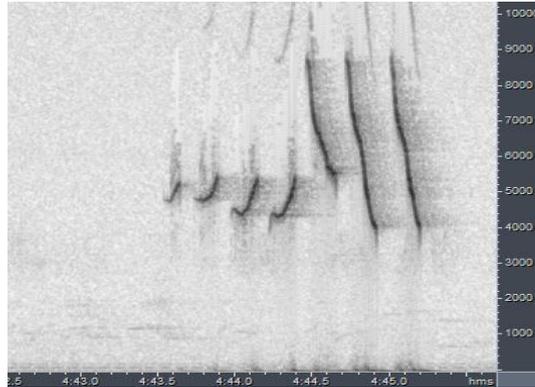
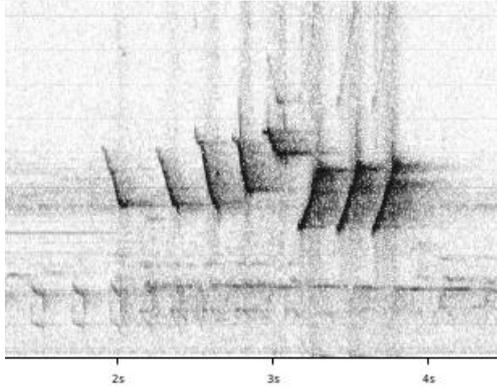
olivascens (Venezuela)



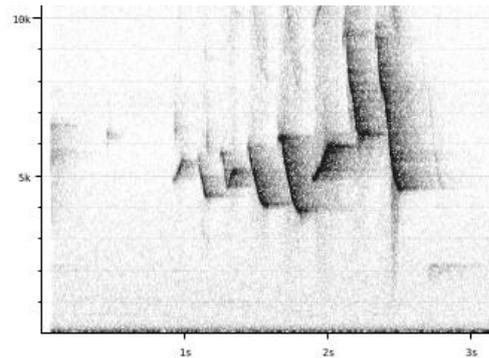
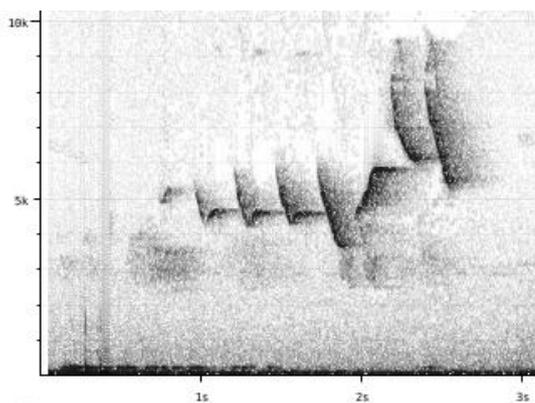
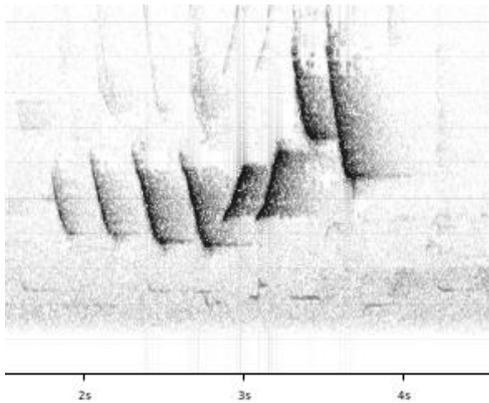
Trinidad



segrex

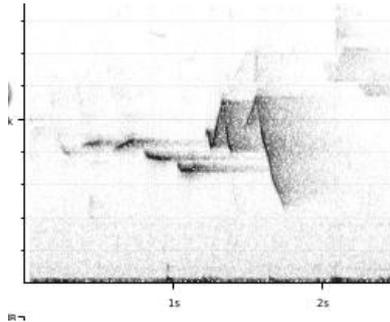


Brazilian races



The three groups have clearly a different song.

The "*culicivorus* group" is vocally the most distinct, typically 4-5 notes with a narrow freq. range, followed by a single emphasized note (typically higher in pitch but occasionally different, see example below). However, in all cases the last 1-2 notes are always very different from the previous ones.



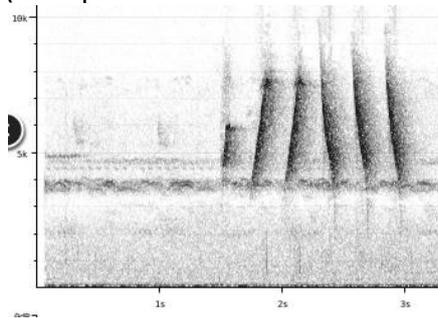
In comparison with *cabanisi* group, notes have a much lower max. freq. (score 3) and songs consists of a higher number of different note shapes (score 2). Total score 5.

In comparison with *auricapilla* group, differences are less straightforward to quantify given there is more variation in the latter group. Initial note(s) much lower-pitched (score 3) and about all notes are different in shape (score 1). Total vocal score 4.

cabanisi group differs from *auricapilla* group in having basically a single note shape (1-2) and all notes at high pitch (score 2-3). Total vocal score about 4.

A note of caution however:

An example of *olivascens* (see above) is less typical for the *auricapilla* group, and there is also a single recording of the extreme E side of *cabanisi* which is indistinguishable from the former (here presumed to be of race *cabanisi*, but bird was not seen):



This requires further investigation as it suggests an area of clinal change, and reduces the confidence about the vocal score for the last two groups.

As a final remark, the closely-related White-bellied Warbler *B. hypoleucus* has about the same song as the *auricapilla* group

This note was finalized on 27th June 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 this species on XC.

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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