

## Notes on the vocalizations of Common Bush-tanager (*Chlorospingus ophthalmicus*)

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In the following we briefly analyze and compare voice of the different races of Common Bush-tanager (*Chlorospingus ophthalmicus*). 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).

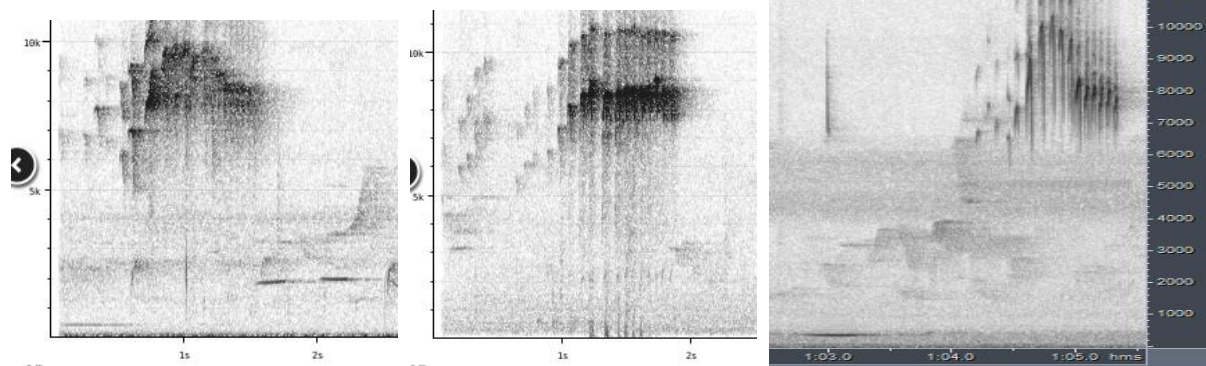
With 26 subspecies this is clearly a very complex case.

An overview of vocalizations illustrated with sonograms:

### **1. Northern group** (characterized by lacking a specific dawn song)

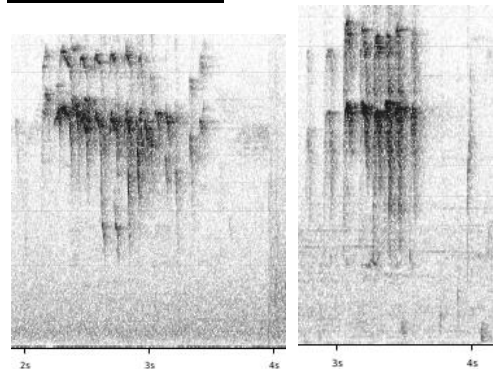
*Chlorospingus (ophthalmicus) ophthalmicus* (Brown-headed Bush-tanager)

Long call or song

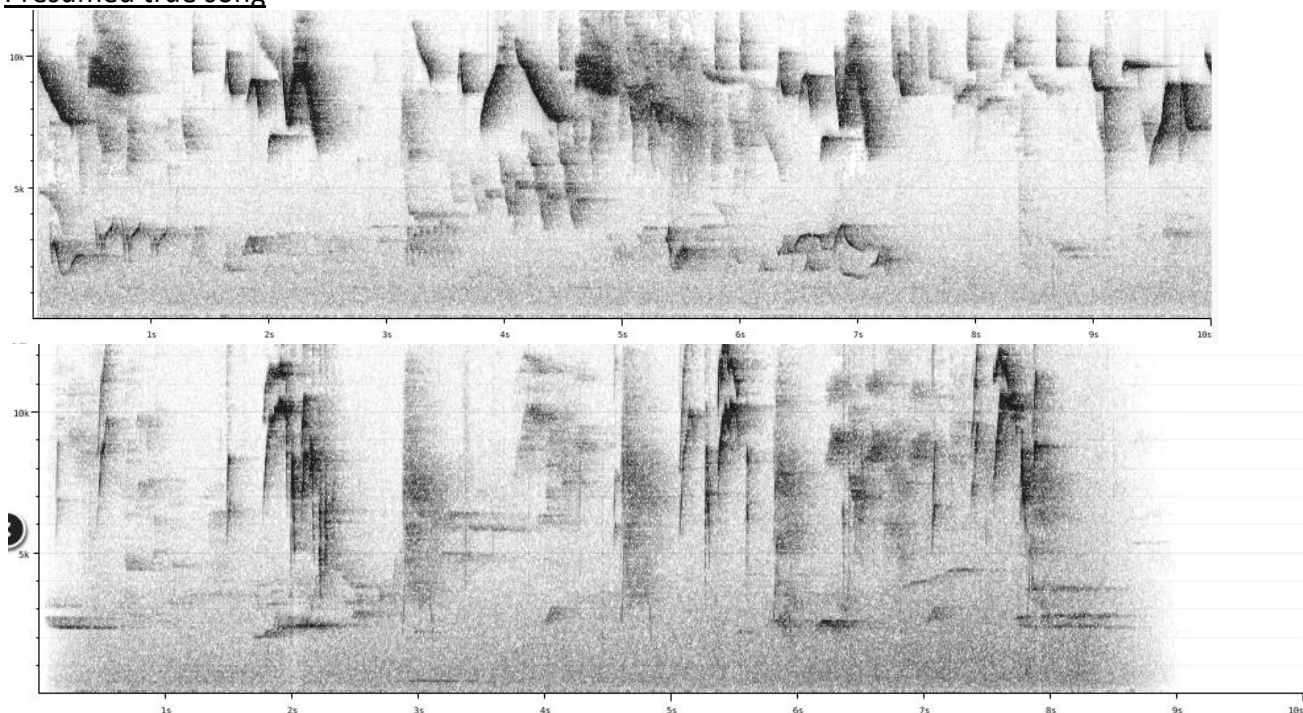


*Chlorospingus (ophthalmicus) postocularis* (Dusky-headed Bush-tanager)

Long call or song



Presumed true song

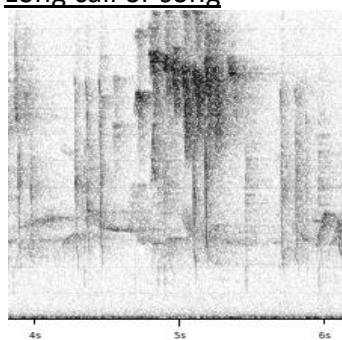


*Chlorospingus (ophthalmicus) albifrons* (White-fronted Bush-tanager)

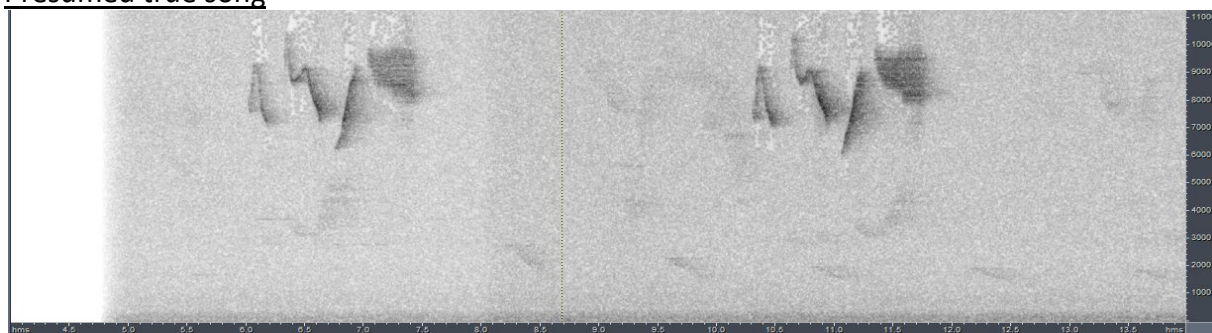
No recordings available

*Chlorospingus (ophthalmicus) dwighti* (Dwight's Bush-tanager)

Long call or song



Presumed true song



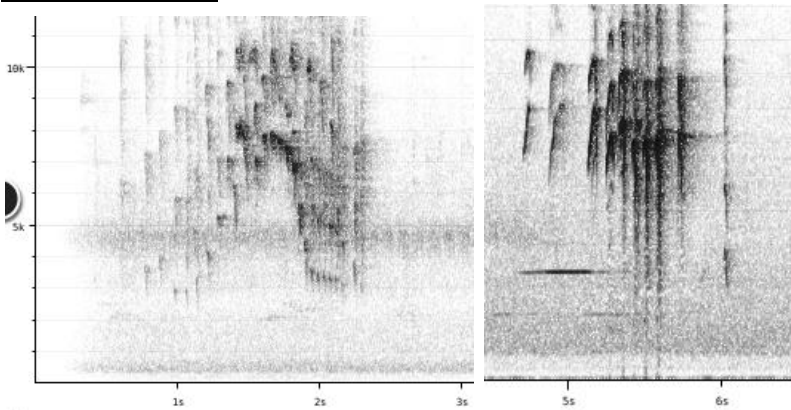
*Chlorospingus (ophthalmicus) wetmorei* (Wetmore's Bush-tanager)

Long call or song

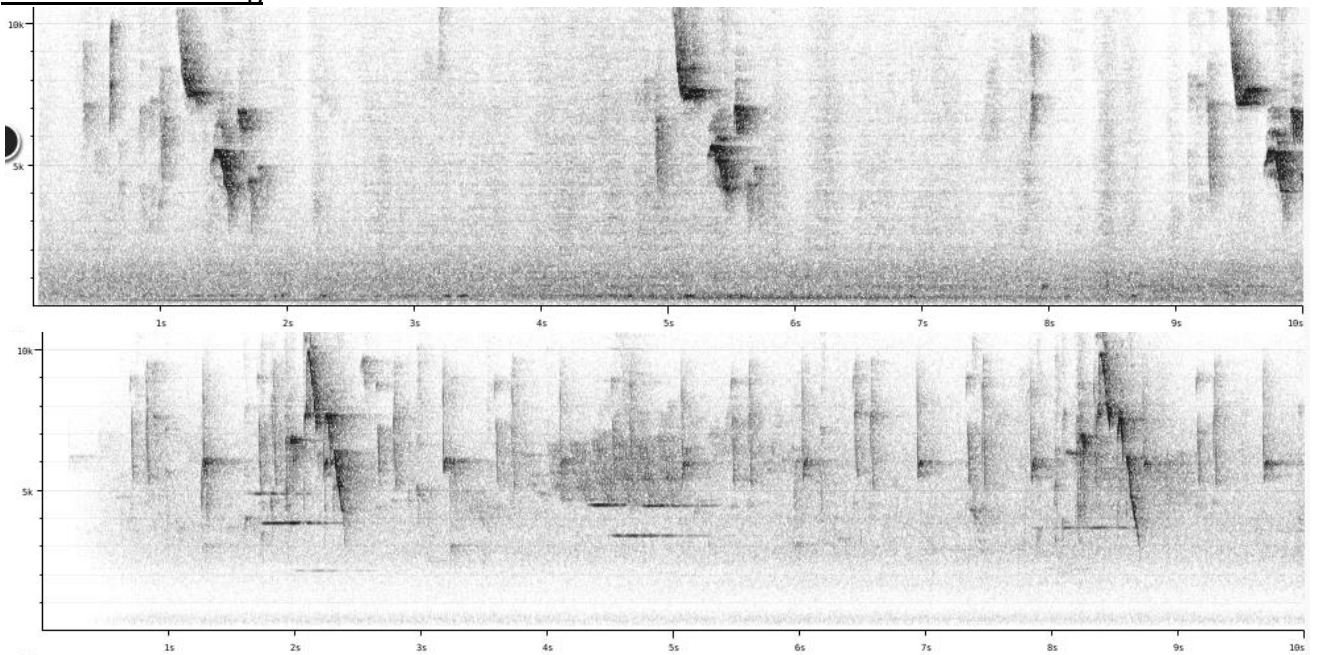


*Chlorospingus ophthalmicus regionalis* (Dotted Bush-tanager)

Long call or song



Presumed true song

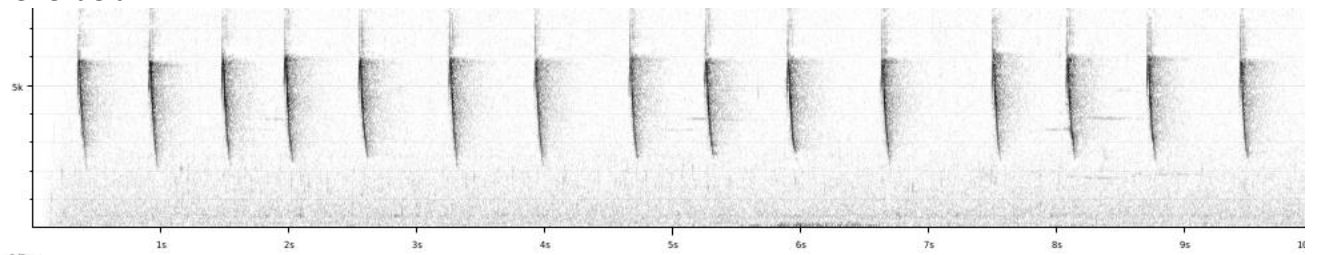


**2. Southern group** (characterized by a stereotypic dawn song)

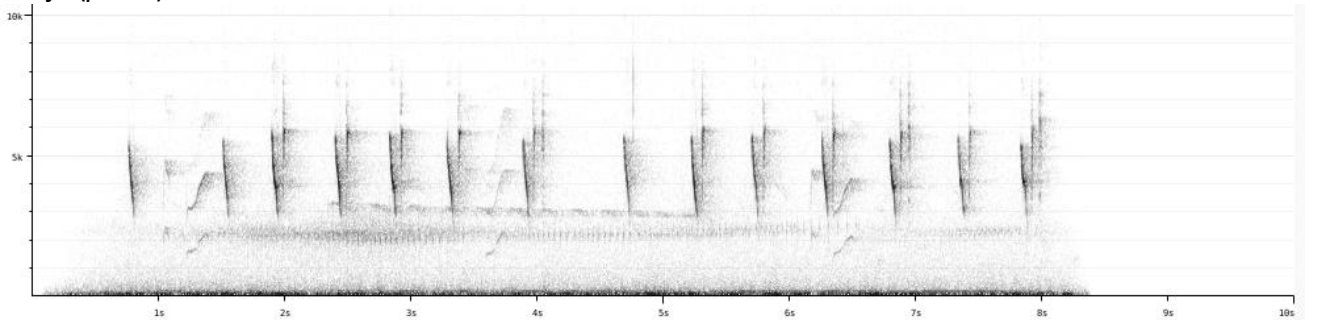
*Chlorospingus (ophthalmicus) venezuelensis* (with *jacqueti* and *ponsi*) ('Common Bush-tanager')

Dawn song

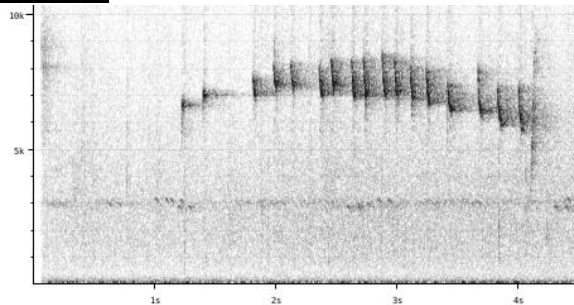
Venezuela



Perija (*ponsi*)

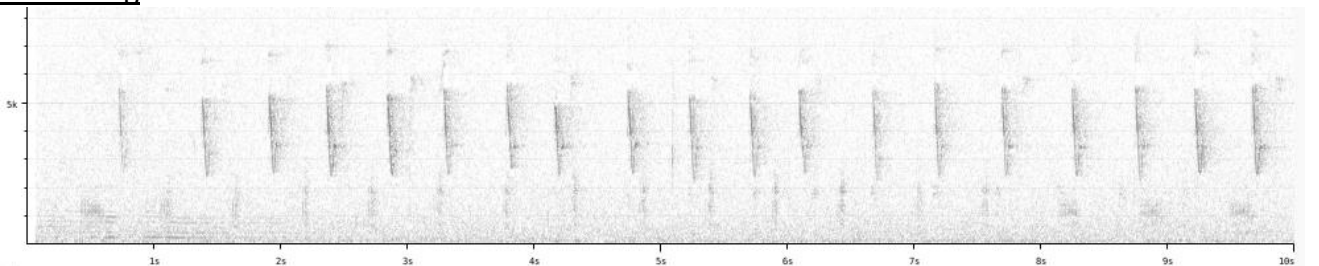


Long call



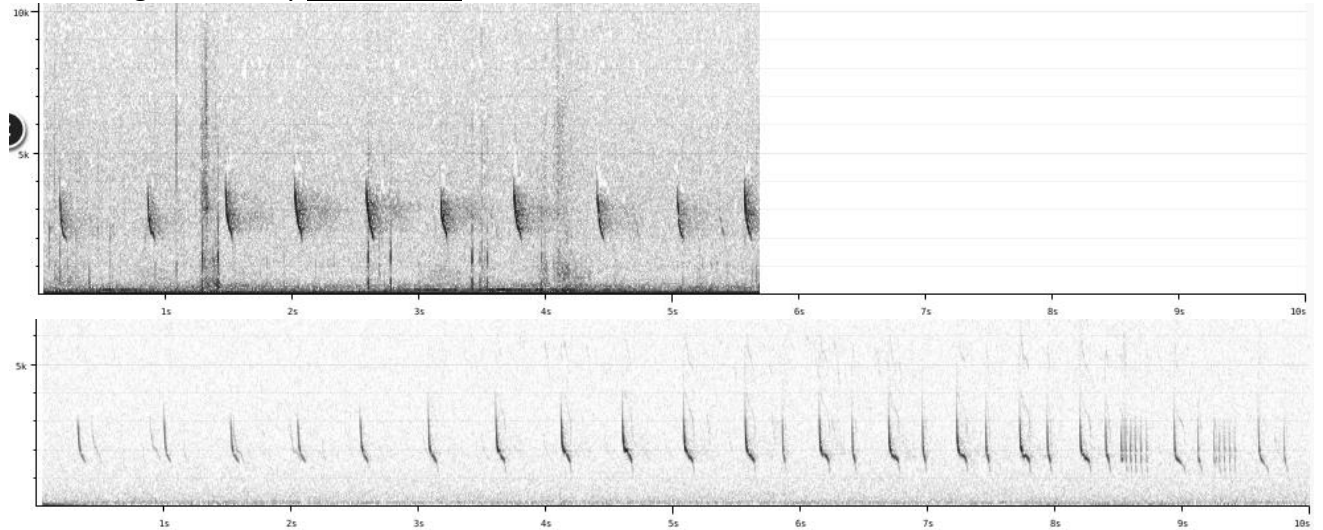
*C. o. eminens*, *C. o. exitelus* and *C. o. trudis*

Dawn song



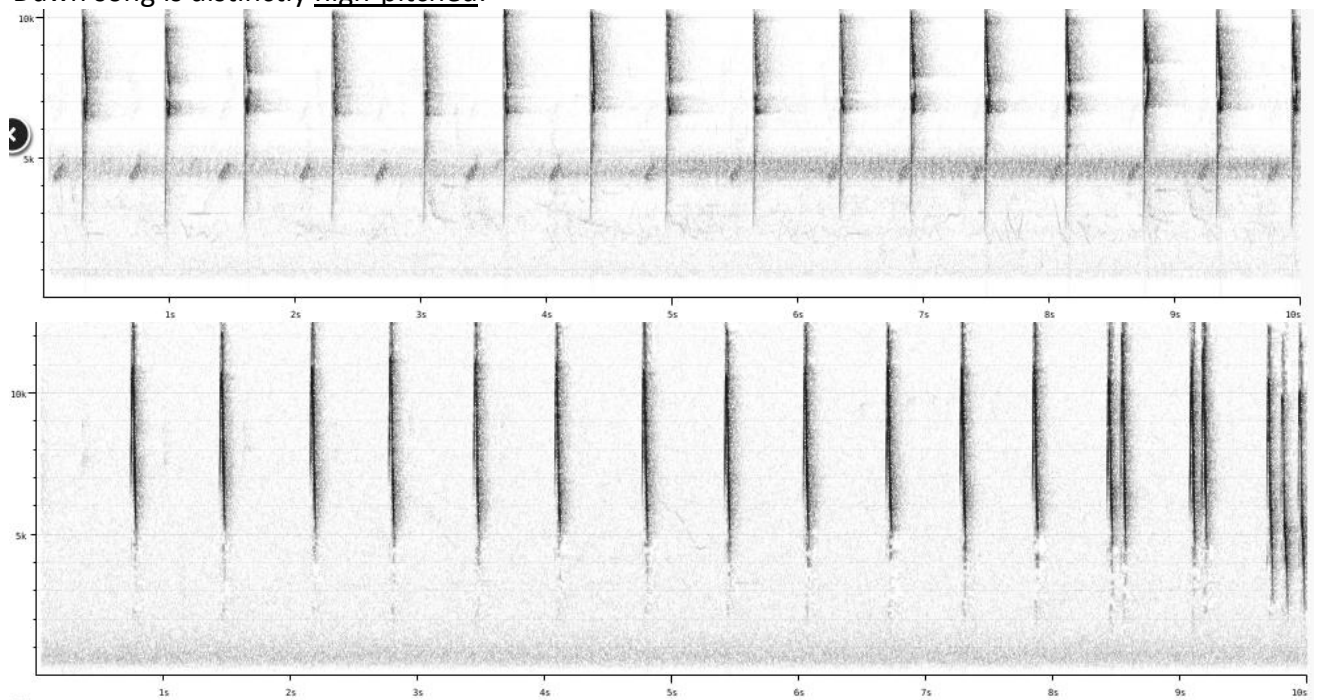
*C.o. flavopectus*

Dawn song is distinctly low-pitched:



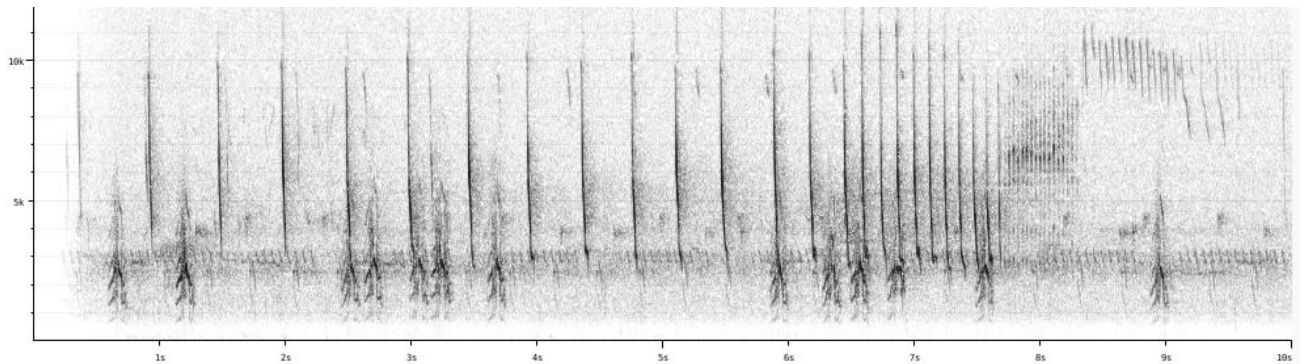
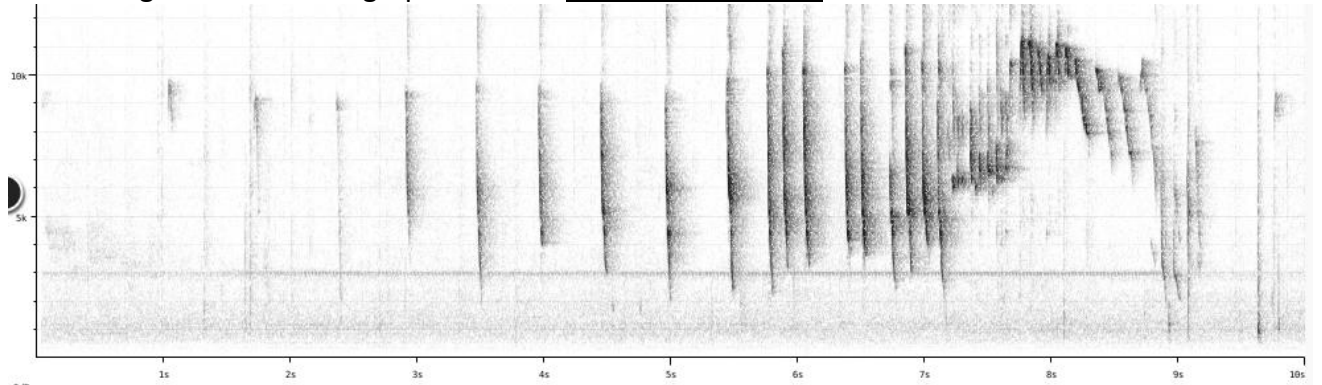
*C.o. phaeocephalus*

Dawn song is distinctly high-pitched:



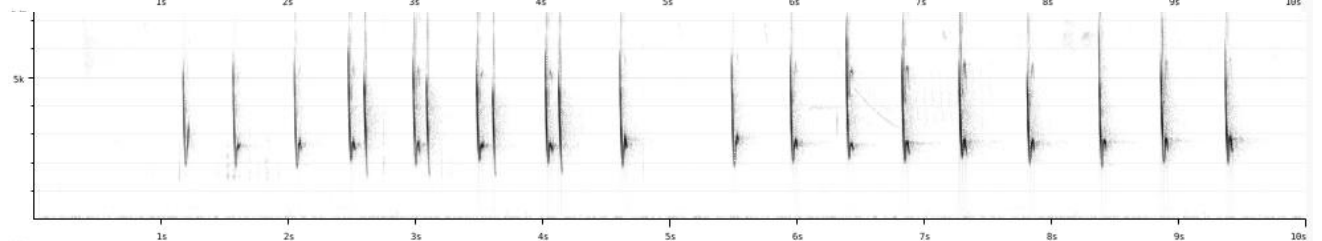
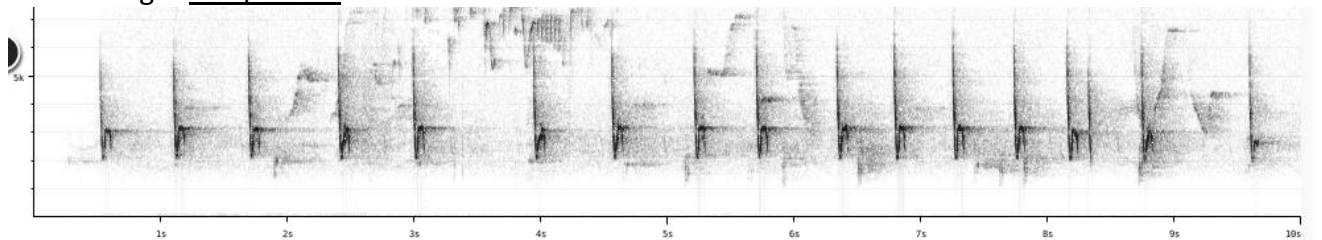
*C.o. hiaticolus*

Dawn song is medium to high-pitched and rhythmic at the end:

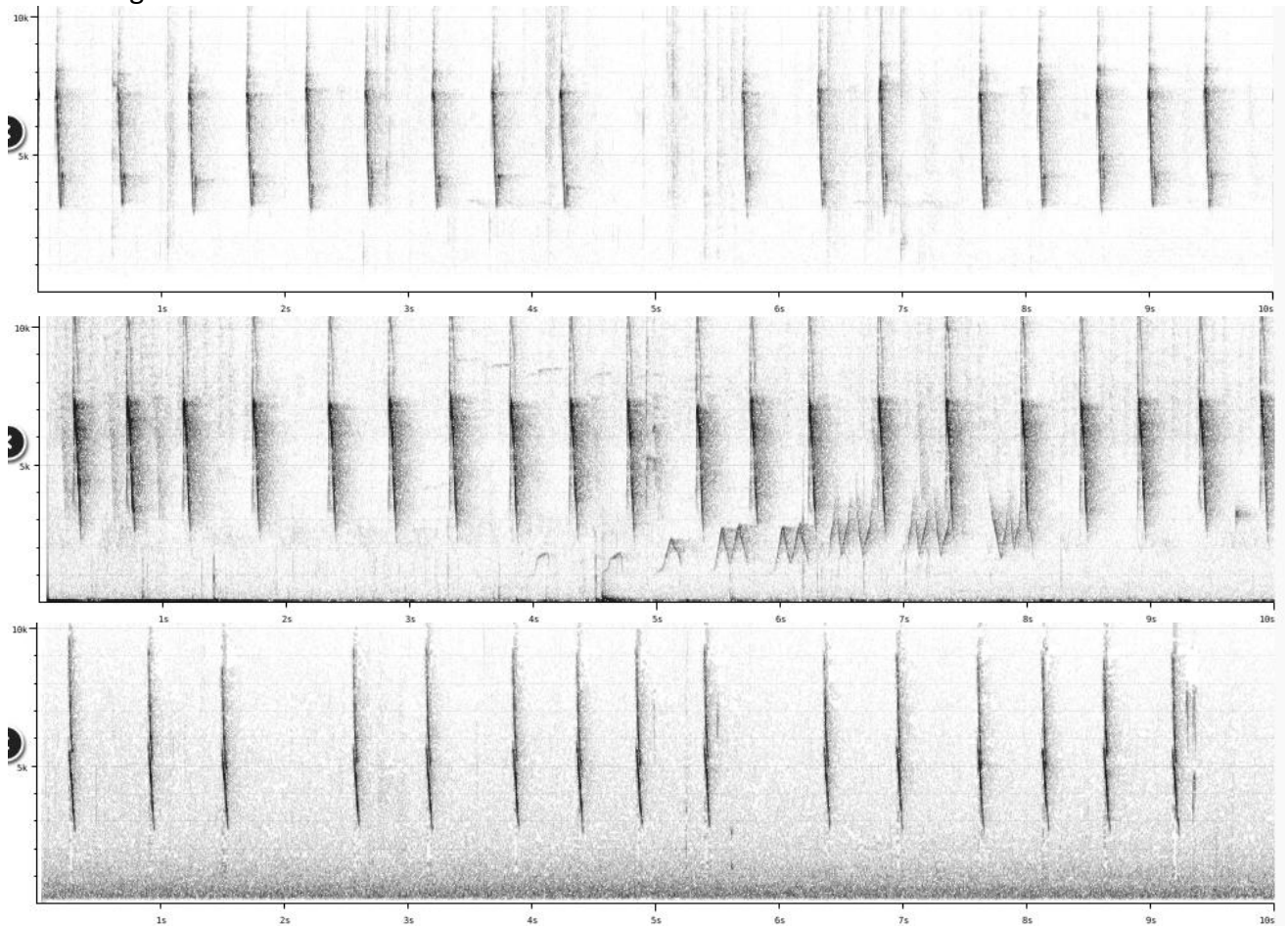


*C.o. cinereocephalus*

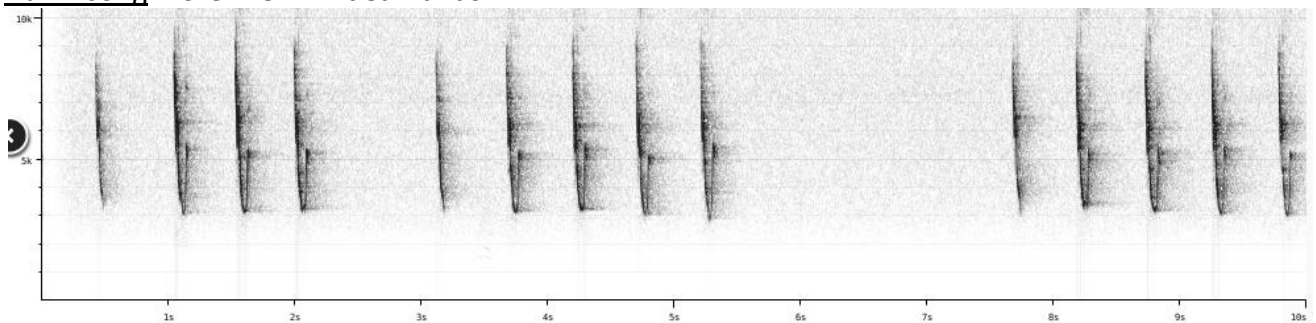
Dawn song is low pitched



*C. o. bolivianus* and *fulvicularis* (Bolivia)  
Dawn song more like N Andean birds



*C. o. argentatus*  
Dawn song more like N Andean birds



It is clear that this brief overview does not allow to unravel the complex issues of this case. Nevertheless, the following can be concluded:

\* There is an important difference between Mexican/Central-American taxa (Northern group) and South-American taxa (Southern group): the latter have a characteristic monotonous dawn-song (not unlike a Sparkling Violetear *Colibri coruscans*), the former seem to utter at dawn only the high-pitched chatters which can also be heard during day-time (score 4). If a split would be considered, this would seem vocally the most important dividing line.

\* In the Northern group, there is for some races confusion about what exactly is the song (further complicated by a few misidentifications, e.g. ML146004 being Spot-crowned Woodcreeper *Lepidocolaptes affinis affinis*). It would require an in depth analysis of all vocalizations to find out about further vocal differences, such as e.g. done in Sosa-Lopez *et al.* (2013). Their conclusion basically is that *albifrons* and *regionalis* are vocally most distinct. (These are however also the 2 races for which the authors have used recordings from only one locality). The distinctiveness of *regionalis* from the Costa-Rican/Panamanian highlands would not be surprising, as it is quite disjunct from populations both towards the north and the south and given this region is such an important endemic center. This clearly needs further study.

\* In the Southern group, comparison of dawn songs learns that there is considerable difference among races:

- *flavopectus* and *cinereocephalus* have a distinct low-pitched dawn song
- *phaeocephalus* has a distinct high-pitched dawn song (somewhat similar to Dusky Bush-tanager *C. semifiscus*)
- *hiaticolus* has a distinct dawn song with rhythmic accelerations and pitch changes towards the end
- Other races differ less, with only note shapes different, but would require further study.

This note was finalized on 24th May 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 and ML.

## References

Sosa-López, J.R., González, C. & Navarro-Sigüenza, A.G. (2013). Vocal geographic variation in Mesoamerican Common Bush Tanagers (*Chlorospingus ophthalmicus*). *Wilson J. Orn.* 125(1): 24–33.

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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