HANDBOOK OF THE BIRDS OF THE WORLD Alive

ORNITHOLOGICAL NOTES

Notes on the vocalizations of Buffy Tuftedcheek (*Pseudocolaptes lawrencii*)

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In the following we briefly analyze and compare voice of the different races of Buffy Tuftedcheek *(Pseudocolaptes lawrencii*). 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).

Song of the 2 races, *johnsoni* ('Pacific Tuftedcheek') and *lawrencii,* seems to be quite different.

johnsoni
Song is a high-pitched rattled series of notes slowing into stuttering and ending (always) with a characteristic high-pitched downslurred note (overall not unlike a chasing call of some Hummingbirds, but obviously more powerful). Sometimes preceded by loud call notes, not clear if these are part of the full song (Fig. 1).

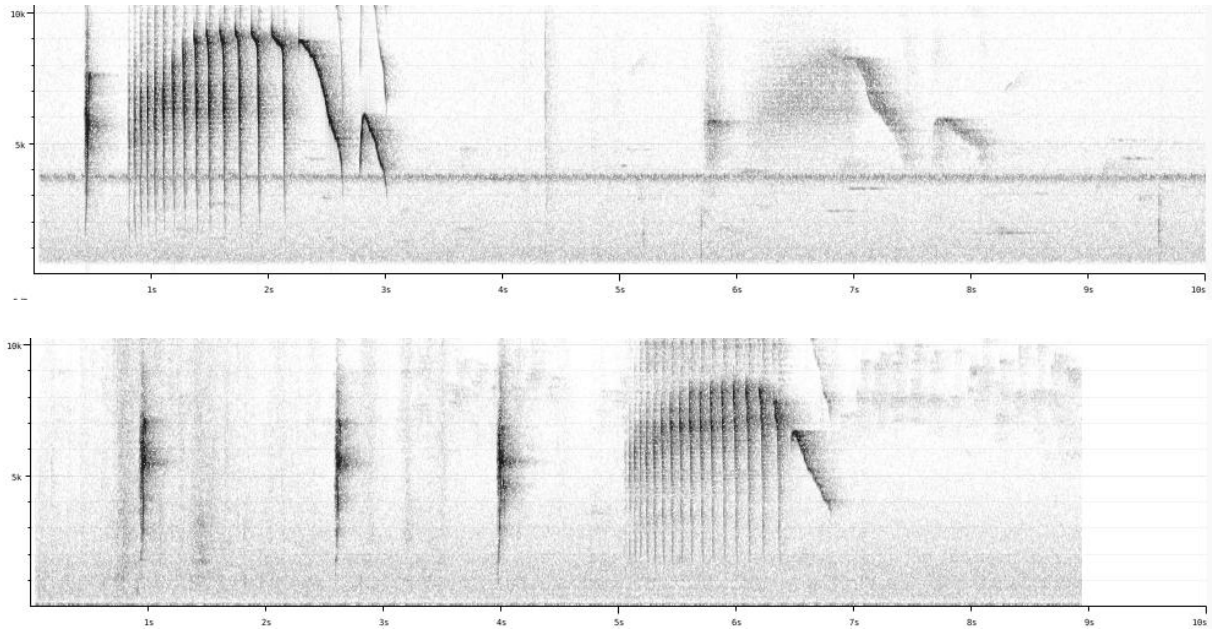

Figure 1: typical song of *johnsoni* from Colombia (top) and Ecuador (bottom)

lawrencii

Song is a number of well-spaced staccato notes (always present unlike *johnsoni*) followed by a trill, which usually first ascends in pitch and then slightly descends while slowing down in pace (Fig. 2). (A note of caution: this description is only based on 1 recording from Panama and 3 (of the same bird) from Costa Rica. Voice is however also described in Stiles and Skutch (1989), a reliable source for voice descriptions, and confirms the recordings)

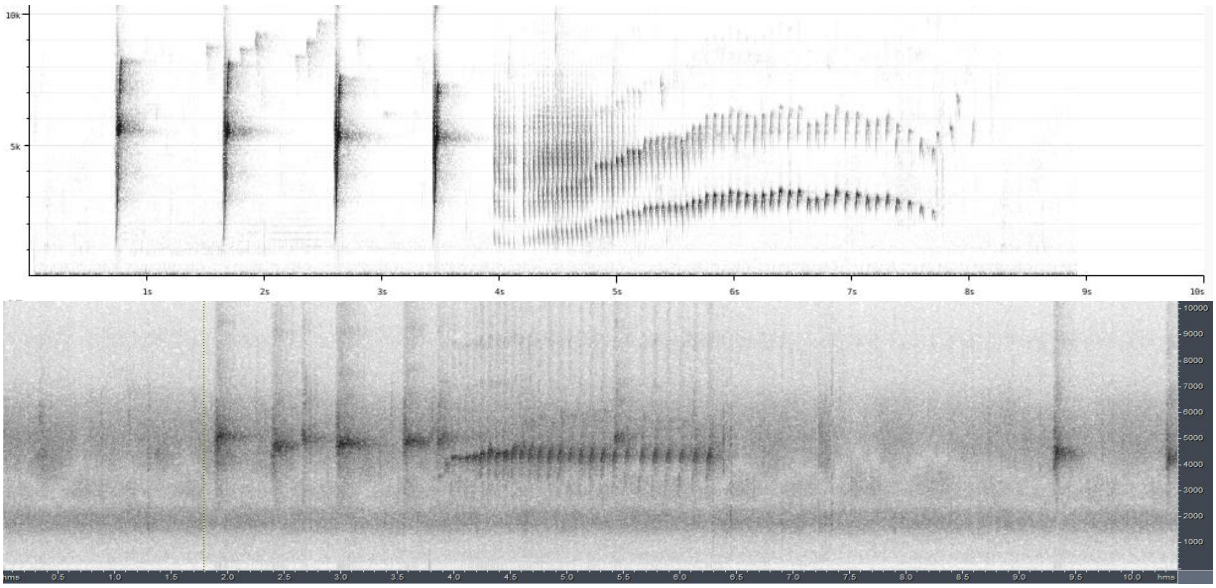

Figure 2: typical song of *lawrencii* from Costa Rica (top) and Panama (bottom)

There seems to be quite some variation in voice, especially when birds are excited (e.g. playback). *johnsoni* also utters a rattle which comes closer to *lawrencii,* but this doesn't seem to be the primary song.

Measurement of basic parameters of trilled part:

johnsoni (n=7)

max. frequency	8500-10500Hz
note length at start	0.015-0.03s
pace at start (over 5)	0.2-0.38
note length towards end	0.039-0.17s
pace towards end	0.42-0.9
length downward slur	0.2-1.14s (always present)
number of introductory notes	0,0,0,1,1,3,4
note shape	sharply descending at beginning and end of every note

lawrencii (n=4)

max. frequency	3050-4750Hz (but 7180Hz when excited)
note length at start	0.016-0.028s
pace at start (over 5)	0.18-0.29
note length towards end	0.033-0.06s (but 0.14s when excited)
pace towards end	0.41-0.53 (but 0.94 when excited)
length downward slur	never present
number of introductory notes	1(?), 3,4,4
note shape	all rounded overslurred notes

Assuming the few recordings of *lawrencii* are typical for the song of this race, we can conclude the following:

Song of 'Pacific Tuftedcheek' *johnsoni* differs mainly from *lawrencii* by its much higher frequency (score 2), the presence of a long down-slurred ending note (score 2) and different shape of notes (score 1). This would lead to a total vocal score of 4 by applying Tobias criteria.

This note was finalized on 17th April 2015, using sound recordings available on-line at that moment. We would like to thank in particular the sound recordists: Andrew Spencer (with 3 of the 4 recordings of *lawrencii*) and Dodge Engleman (whose recording was published in Boesman 2011), and for *johnsoni* Nick Athanas, Olaf Jahn, Niels Krabbe, Mitch Leisinger, Oscar Marín Gomez, Manuel Sanchez, Andrew Spencer, Charlie Vogt and Julian Zuleta Marín.

References

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Stiles, F.G. & Skutch, A.F. (1989). A Guide to the Birds of Costa Rica. Christopher Helm, London.

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