HANDBOOK OF THE BIRDS OF THE WORLD Alive

ORNITHOLOGICAL NOTES

Notes on the vocalizations of White-winged Black-tyrant (*Knipolegus aterrimus*)

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In the following we briefly analyze and compare voice of the different races of White-winged Black-tyrant (*Knipolegus aterrimus*). 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).

Male display flight is accompanied by a short phrase of a few notes. This phrase seems to vary among races, but although number of samples is small, there is clearly consistency within every population (Fig. 1):

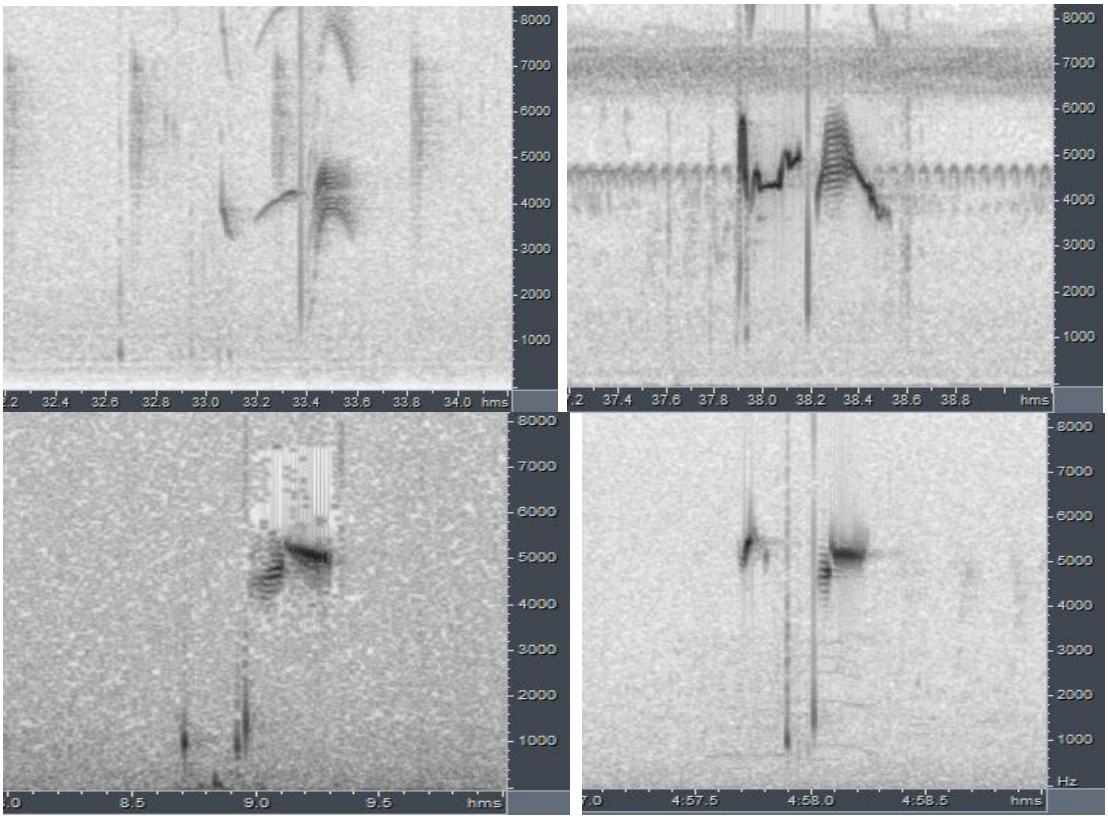

Figure 1: song during display flight: *heterogyna* (top left), *anthracinus* (top right), *aterrimus* NORTH (bottom left) and *aterrimus* SOUTH (bottom right)

K. a. heterogyna (1 recording from Cajamarca)

song of three notes: 1st note steeply downslurred, second slighly rising, third note overslurred and very buzzy in centre. Total length 0.56s, frequency 3100 - > 5100Hz (range 2000Hz).

K. a. anthracinus (3 recordings from Junin, Peru to W Bolivia)

song of two notes: a very irregular trilled note followed by an overslurred note with a very buzzy centre (like end note of previous race). Total length 0.66-0.77s, freq. 3600 -> 5950Hz (range 2350Hz).

K. a. aterrimus IN PART (3 recordings from C Bolivia, S Bolivia and extreme N Argentina)
song is a single note with a rising buzzy start and downslurred end. Total length 0.25-0.37s, freq. 4000 -> 5600Hz (range 1600Hz).

K. a. aterrimus IN PART (5 recordings from Argentina)
Song of two well-spaced notes: 1st note short and sharply rising, second note with a rising buzzy start and downslurred end (like note of previous race but shorter). Total length 0.6-0.62s, 1st note max. freq. 5600-6600Hz, 2nd note: 0.22s freq. 4100 -> 5300Hz (overall freq. range 1500-2400Hz).

K. a. franciscanus (0 recordings)

There is not a single race which clearly stands out vocally, they all are about equally different. Following Tobias criteria, we could give the following estimated scores:
heterogyna is the only one with a 3-note song and seemingly has the lowest max. frequency, and could thus be given a score of about 2 + 1 = 3 vs. all other races.
anthracinus has 2 long notes and the longest overall song length, with still fairly low frequencies, and thus could be given a total score of about 2-3 vs. all other races.
aterrimus NORTH is the only one with a single note song and a fairly narrow frequency range, and thus could be given a score of about 2 + 2 = 4 vs. above races and 2 + 1 = 3 vs. next race.
aterrimus SOUTH has the longest pause between the two shortest notes, and starts at higher frequencies.
Hopefully these differences can be confirmed when more recordings become available.

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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.

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