

Notes on the vocalizations of Rufous-winged Antwren (*Herpsilochmus rufimarginatus*)

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In the following we briefly analyze and compare voice of the different races of Rufous-winged Antwren (*Herpsilochmus rufimarginatus*). 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).

Loudsong is a stuttering series of notes, accelerating towards the end. We have made a number of measurements for the basic sound parameters of this loudsong:

exiguus (n=3)

total length	1.2 - 1.5s
# of notes	29-30
initial pace	0.08-0.09 (here measured as period, duration between 2 subsequent notes)
average pace	0.047-0.052
start max. freq.	2040-2300Hz
max. freq.	2160-2420Hz
initial freq. rise	80-160Hz

frater (n=6)

total length	1.3 - 1.9s
# of notes	20-35
initial pace	0.09-0.13
average pace	0.046-0.074
start max. freq.	2000-2300Hz
max. freq.	2090-2380Hz
initial freq. rise	80-150Hz

scapularis (n=4)

total length	1.4 - 1.7s
# of notes	25-34
initial pace	0.08-0.10
average pace	0.05-0.056
start max. freq.	1850-2070Hz
max. freq.	1920-2140Hz
initial freq. rise	20-90Hz

rufimarginatus (n=10)

total length	1.57-1.95s
# of notes	16-23
initial pace	0.17-0.23
average pace	0.082-0.103
start max. freq.	2070-2620Hz
max. freq.	2570-3180Hz
initial freq. rise	170-550Hz

Song of all races is very similar except nominate race. Race *scapularis* of NE Brazil surprisingly is in the same group as *frater* and *exiguus*. This is assuming that *scapularis* occurs only south to S Alagoas, while birds further south are nominate (different from HBW Vol. 8 !).

It is clear from the above measured parameters that race *rufimarginatus* differs in many ways (Fig. 1):

song initiates with typically 3 slow-paced notes (score 3-4) which rise in frequency (score 2) reaching a higher frequency than other races (score 3), after which a low number of fast notes gradually decelerate. Total number of notes is lower (score 1-2) and overall song length is marginally longer, resulting in a much lower average pace (score 2-3).

Also, song of other races switches halfway to much more scratchy notes.

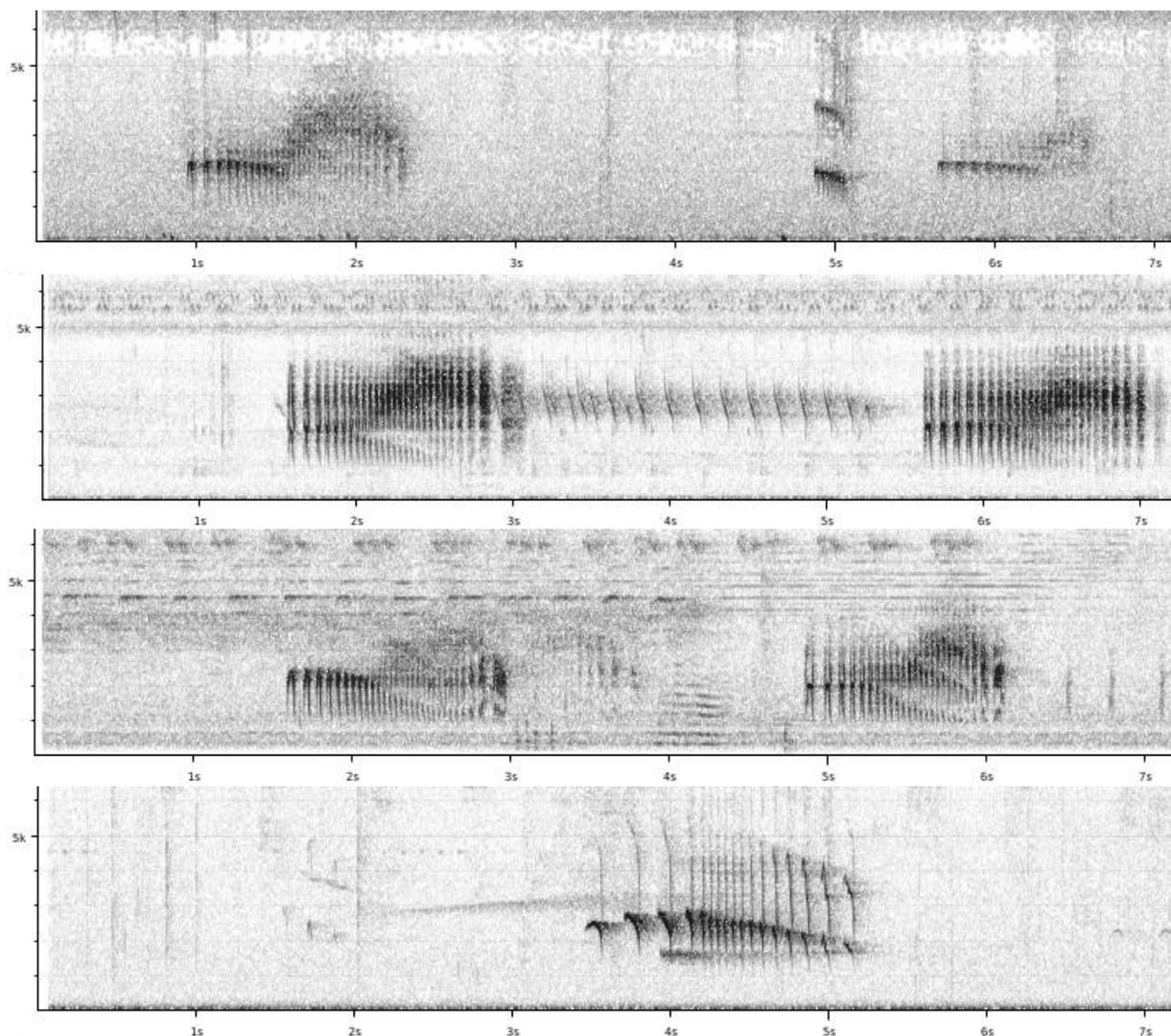


Figure 1: top to bottom: typical loudsong of *exiguus*, *frater*, *scapularis* and *rufimarginatus*

Furthermore, call seems to differ significantly as well, with nominate typically uttering short series of 2-5 mellow notes repeatedly.

We can conclude that vocal differences of race *rufimarginatus* vs. all other races are significant, leading to a total score of about 6.

At the other hand, differences between the 3 other races are minimal, with almost all data ranges overlapping. Score at most 1+1.

This note was finalized on 18th June 2015, 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

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