

## Notes on the vocalizations of Rough-legged Tyrannulet (*Phyllomyias burmeisteri*)

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In the following we briefly analyze and compare voice of the different races of Rough-legged Tyrannulet (*Phyllomyias burmeisteri*). 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).

Typical vocalization is a repeated single overslurred note "pseet". Less often, a faster series of similar notes is given (often slightly descending).

While structurally about identical, there are clearly 2 vocal groups based on basic sound parameters (Fig. 1):

### Group 1: All races north of the Peruvian/Bolivian border (n=9)

#### Measurements:

Note length	0.22-0.37s (race <i>zeledoni</i> seemingly longest notes)
min. freq.	4100-5200Hz
max. freq.	6400-7100Hz
pace*	0.33-0.40s (for fast series)

### Group 2: South and east of Peruvian/Bolivian border (*burmeisteri*) (n=9)

#### Measurements:

Note length	0.14-0.24s
min. freq.	3100-3500Hz
max. freq.	4900-5700Hz
pace	0.25-0.33s (for fast series)

\* pace measured here as period, duration between two consecutive notes

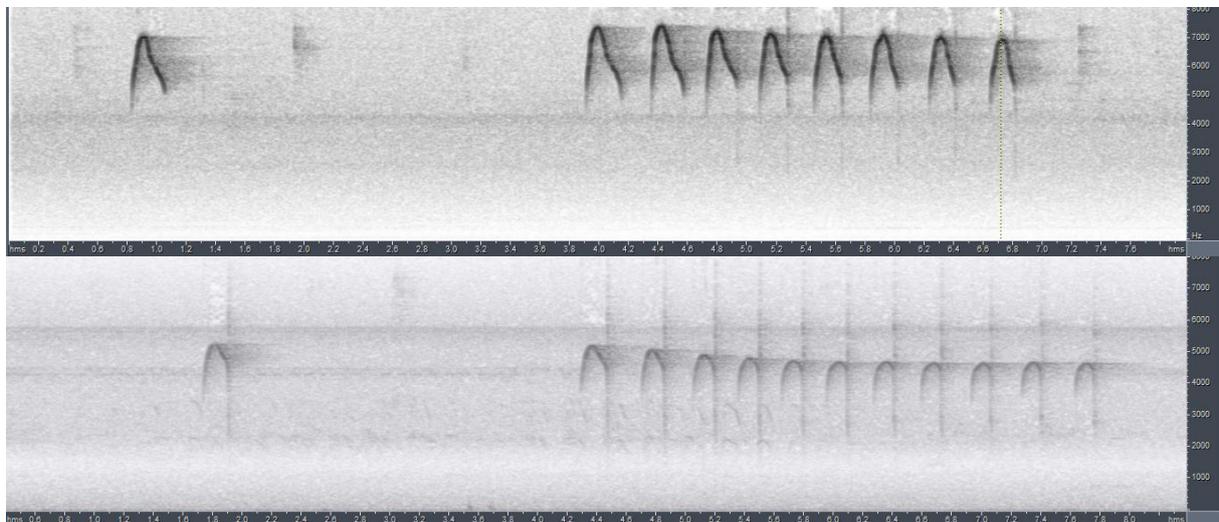


Figure 1: typical song of Group 1 (top) and group 2 (bottom)

Note: recording XC4080 of La Paz, Bolivia seems to fit rather Group 1, and may be an indication that this group extends somewhat further south (or alternatively that there is a hybrid zone where both groups meet, see also <http://www.xeno-canto.org/forum/topic/12389>)

Group 2 differs from Group 1 in having lower-pitched notes (score 3) which are slightly shorter (score 1-2). Fast note series tend to be delivered at a slightly higher pace (and seem to have slightly more notes) (score 1-2). When applying Tobias criteria this would lead to a total vocal score of about 4.

This note was finalized on 19th August 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

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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