

## Notes on the vocalizations of Rufous Spinetail (*Synallaxis unirufa*)

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In the following we briefly analyze and compare voice of the different races of Rufous Spinetail (*Synallaxis unirufa*). 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).

Song seems to differ among races:

### *meridana*

Song is a series of 2 or 3 nasal almost identical notes, the first one only slightly shorter than the second and third. Max. freq. of all notes similar, sometimes first higher, sometimes last higher (Fig. 1).

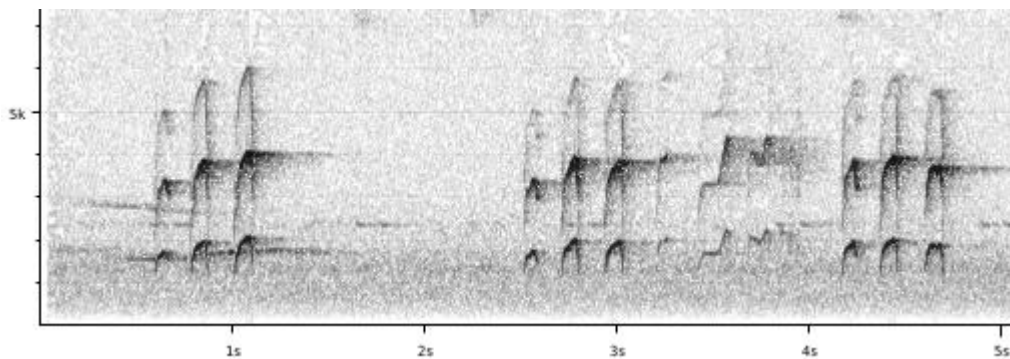


Figure 1: typical song of *meridana*

### Measurements (n=6):

# of notes	2-3 (average c. 2.5)
length of shortest note	0.073-0.096s
length of longest note	0.087-0.119s
length ratio	1.06-1.4
max freq first note	1800-2350Hz
max freq second note	1900-2250Hz
note shape	almost identical overslurred notes

### *munoztebari*

Song is a series of 2, occasionally 3 notes, the first notably shorter. Max. freq. of notes almost identical (Fig.2).

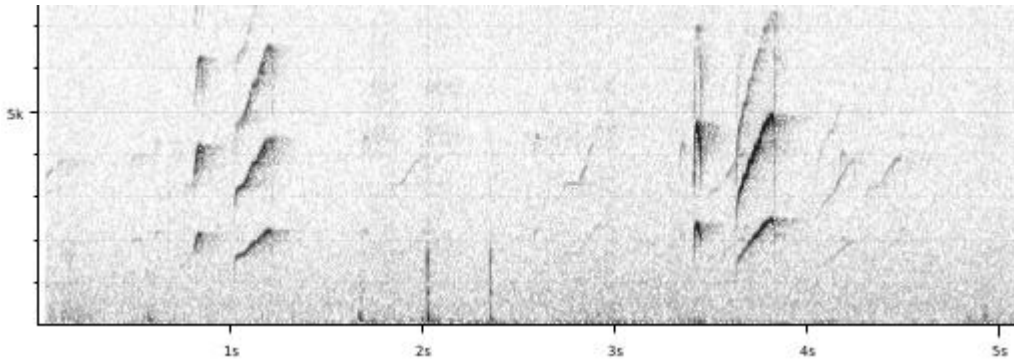


Figure 2: typical song of *munoztebari*

Measurements (n=4):

# of notes	2-3 (average c. 2.2)
length of shortest note	0.04-0.055s
length of longest note	0.14-0.20s
length ratio	3-4
max freq first note	1900-2300Hz
max freq second note	1900-2200Hz
note shape	First rounded overslurred, second 'rising overslurred'

*unirufa*

Song is single note, often preceded by one (occasionally two) short introductory notes. max. freq. of introductory note notably lower-pitched than long note (Fig. 3).

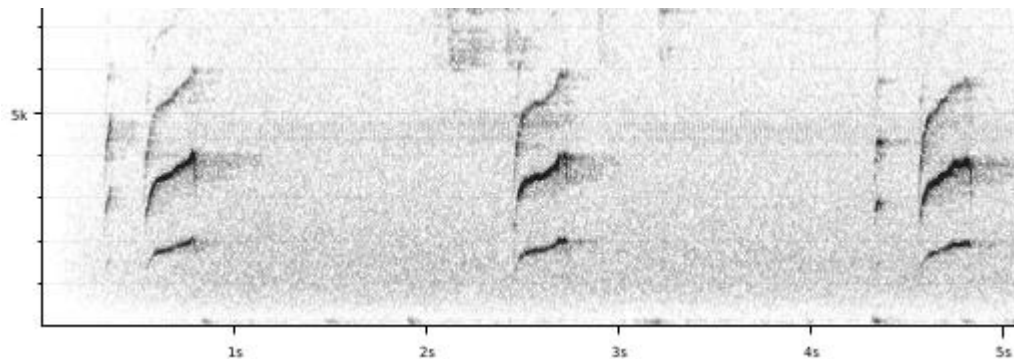


Figure 3: typical song of *unirufa*

Measurements (n=8):

# of notes	1-3 (average c. 1.5)
length of shortest note	0.035-0.047s
length of longest note	0.26-0.4s
length ratio	6-10
max freq first note	1300-1650Hz
max freq second note	2000-2600Hz
note shape	First rounded overslurred (if present), second 'rising overslurred'

*ochrogaster*

Song is single note, occasionally preceded by a short introductory note. Max. freq. of introductory note notably lower-pitched than long note (Fig. 4). (Also has a series of 2-3 rising notes, this voice in 'Birds of Peru' being called song, in this case what is song in *unirufa* would be call in *ochrogaster*, which is not impossible but would need a clear proof. In any case, the latter vocalisation is not heard from *unirufa*).

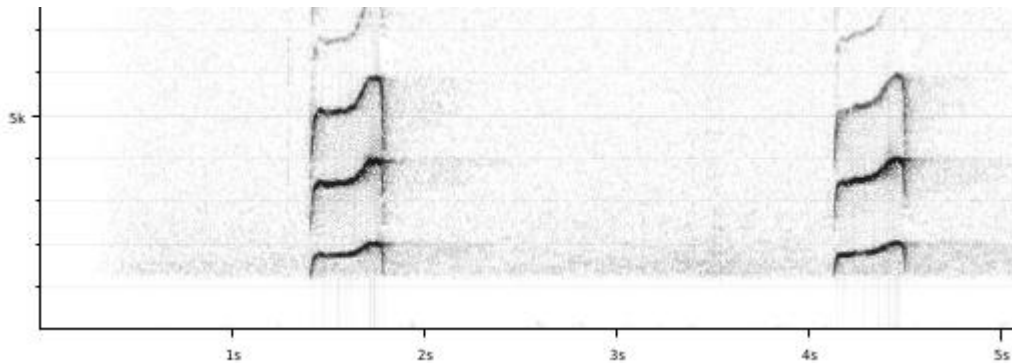


Figure 4: typical song of *ochrogaster*

Measurements (n=7):

# of notes	1-2 (average c. 1.1)
length of shortest note	0.042s (if present)
length of longest note	0.25-0.3s
length ratio	7 (if applicable)
max freq first note	1340Hz (if present)
max freq second note	1900-2200Hz
note shape	long note rising with a clear bend, sounding bisyllabic 'pueet'

Conclusion

Voice is quite different between races, the largest difference when comparing the two geographical extremes.

*meridana* differs from all other races by its series of almost identical notes resulting in a length ratio 1.06-1.4 (score 3) and on average the highest number of notes (score 1) and from *unirufa/ochrogaster* in a smaller frequency range (score 1 or 2).

*munoztebari* differs from *unirufa/ochrogaster* in having shorter 'long notes' resulting in a smaller length ratio (score 2), a higher number of notes (score 1) and in a smaller frequency range (score 1 or 2)

*ochrogaster* differs from *unirufa* in having less notes (score 1), a more bisyllabic long note and also in having an alternative vocalization (score 1 or 2)

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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.

### Recommended citation

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