

Notes on the vocalizations of Sulphur-rumped Flycatcher (*Myiobius sulphureipygius*), Whiskered Flycatcher (*Myiobius barbatus*) and Black-tailed Flycatcher (*Myiobius atricaudus*)

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In the following we briefly analyze and compare voice of the different races of Sulphur-rumped Flycatcher (*Myiobius sulphureipygius*), Whiskered Flycatcher (*Myiobius barbatus*) and Black-tailed Flycatcher (*Myiobius atricaudus*). 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).

Myiobius flycatchers are particularly unvocal, and when vocalizing, most often this is limited to a single very short note. We have examined all available recordings on-line of the lowland *Myiobius* flycatchers. Given that over most of the geographical range of these similar-looking flycatchers two taxa can be observed, there is also a potential identification pitfall.

Myiobius sulphureipygius

Several sources describe a song, but indicate that the species does not sing often. The song is a rising and falling series of 4-6 lilting, clear notes, *tseuu tseuu tseuu tseer tseer* or *tchew tchew tchew tchew* with variants (Stiles and Skutch 1989, Howell and Webb 1995). The dawn song is a rapidly repeated *chu wee-da-wiit'* or *chu wee-da-ti-wit* (Howell and Webb 1995). Its call is described as a low, sharp, dry *psit* or *spik* or *fit* or *pit* or a wet, fairly sharp *plik* or *pic* (Skutch 1960, Stiles and Skutch 1989, Howell and Webb 1995). This call frequently is used while foraging and during other daily activities.

We located 13 recordings. 11 recordings are of a very short note "spik!" which shows as a vertical line on a sonogram with very large frequency range. 1 recording had similar but doubled notes, 1 recording was different and may actually be *atricaudatus*. We did not find any recording which resembles the descriptions of 'song'.

Measurements:

Length	0.029-0.04s
min. freq.	1550-2000Hz
max. freq.	10000-20000Hz (mainly dependent on quality of recording)
freq. range	> 9000Hz (mainly dependent on quality of recording)

M. s. sulphureipygius and *M. s. aureatus* have an identical call.

Myiobius barbatus

HBW (Farnsworth *et al.* 2015) mentions for voice: Generally silent; sometimes a high sharp "tsip" or "psik" call note. We located 21 recordings.

Amazonian birds: *M. b. semiflavus*, *M. b. barbatus*, *M. b. amazonicus*

Vocabulary seems to be more varied than *sulphureipygius*:

a. a short rising note "wit!" (6 recordings)

Length 0.044-0.09s
min. freq. 3000-4350Hz
max. freq. 6500-7400Hz
freq. range 2200-3800Hz

b. an overslurred "psiw" (4 recordings) (asymmetric with 'second leg' longest and lowest in freq.)

Length 0.10-0.19s
min. freq. 2600-4250Hz
max. freq. 5100-6300Hz
freq. range 2000-2800Hz

c. a longer phrase starting with the "psiw note" (2 recordings): "psiw..tsew" and "psiw..wit..wit..wit..wit".

d. an overslurred note "wheet" (2 recordings) (symmetric on sonogram)

Length 0.12-0.16s

e. a short "spik" (1 recording) similar to *sulphureipygius*

Atlantic birds: *M. b. insignis* *M. b. mastacalis*

a. a short rising note "wit!" (4 recordings)

Length 0.050-0.070s
min. freq. 3400-4800Hz
max. freq. 6500-7400Hz
freq. range 2200-3500Hz

b. a short liquid "psit" (4 recordings)

Length 0.035-0.045s
min. freq. 2800-3600Hz
max. freq. 6500-7050Hz
freq. range 2900-4100Hz

c. an overslurred "psiw" (1 recordings) (asymmetric with 'second leg' longest and lowest in freq.)

Length 0.12s
min. freq. 3600Hz
max. freq. 6700Hz
freq. range 3100Hz

d. a longer phrase (2 recordings): "psiw..tsew" and "wit..tsew".

Myiobius atricaudus

HBW mentions: Generally quiet; call a soft wiry “tsit” or “wit”, weaker than that of *M. sulphureipygius*; song a sweet “cheer-cheer-cheer”.

We located 11 recordings.

Vocabulary seems to be quite varied, and the few recordings don't allow to evaluate any possible differences between birds from Atlantic Brazil and other races.

As a matter of fact, the identification pitfall *barbatus/atracaudatus* in the field also puts some uncertainty on the recordings of both species (where they occur together). Furthermore, 3 recordings seem to be outside the known range, they are either range extensions or wrong identifications...

We found vocalizations similar to the previous species:

- * an overslurred symmetrical note (4 recordings)
- * a rising note (2 recordings)
- * descending notes (1 recording)
- * a chatter of > 10 notes (3 recordings)

Conclusion

The vocabulary of Whiskered Flycatcher *M. barbatus* is quite varied, Amazonian birds and Atlantic birds have quite a similar range of vocalizations, although there may be some differences which will only be possible to uncover when more recordings become available. Black-tailed Flycatcher *M. atricaudatus* seems to have some unique vocalizations such as a rapid sequence of notes, but the few recordings don't allow to define main vocalizations. No differences between Atlantic birds and others can be substantiated.

The only taxa which clearly stand apart are *M. s. sulphureipygius/aureatus*, which seem to utter only one type of single note, quite different from all other lowland *Myiobius* taxa. This call note has by far the highest frequency range (score 3) and is extremely short (score 1-2). Although this call note has presumably also been recorded for Amazonian *M. barbatus*, it is definitely not a main vocalization.

Based on this analysis and if we apply Tobias criteria on call notes, quantification of vocal difference of *M. s. sulphureipygius/aureatus* versus all taxa in *M. barbatus* leads to a score of about 4.

This note was finalized on 3rd July 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 and ML.

References

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Recommended citation

Boesman, P. (2016). Notes on the vocalizations of Sulphur-rumped Flycatcher (*Myiobius sulphureipygius*), Whiskered Flycatcher (*Myiobius barbatus*) and Black-tailed Flycatcher (*Myiobius atricaudus*). *HBW Alive Ornithological Note* **112**. In: *Handbook of the Birds of the World Alive*. Lynx Edicions, Barcelona. (retrieved from <http://www.hbw.com/node/932017> on 2 August 2016).