**“DATABANK Muriqui n=570”: Description of data and table**

**“DATABANK Muriqui n=570”: Technical Information**

**Location:** RPPN Feliciano Miguel Abdalla

(former Estação Biológica de Caratinga)

Município de Caratinga

Minas Gerais, Brazil

(Coordinates: 19o 50’S 41o 50’ W)

**Study group**: Matão Group

**Recording equipment**: Marantz PMD-420, Sennheiser K3N+ME80

**Digital processing of recordings:**

Software- Signal/RTS (® Engineering Design)

Hardware- AD interface DT 281 (16 bits, sampling rate=25 kHz)

DSO32C-80 board (arithmetic accelerator)

FDI 901F low and high filter (200 Hz, 10 kHz; 30 kHz, 48db/octave)

**Period of Recording**: September 19th 1990 to February 3rd 1991

**Recorded by**: Dr. Francisco Dyonísio Cardoso Mendes

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**DATABANK Muriqui n=570: Recordings and Data Collection**

All sound files were recorded at the RPPN Feliciano Miguel Abdalla (former Biological Station of Caratinga - 19o 50’S 41o 50’ W), in the state of Minas Gerais, Brazil, as part of Mendes (1995) PhD research. Detailed information about the study site, its muriqui population and the long-term research project on the species can be found in the book “Faces in the Forest”, by K.B. Strier.

Audio recordings were made with a Marantz PMD-420 cassete recorder and a Sennheiser K3N+ME80 microphone. Segments of recordings containing sequential calls were digitized and stored using a Signal/RTS system (16 bits, sample rate of 25 KhZ).

The 570 sound files were obtained from September 19th 1990 to February 3rd of 1991; they were recorded during 190 out of the first 460 focal animal samplings and in 76 out of the first 95 ad libitum samplings conducted during this period. Focal animal samplings were 5 minutes blocks of continuous recordings of a single individual (and surrounding sounds). Ad libitum samplings were opportunistic recordings with different durations (from 1 to 14 minutes). Contextual data on the behavior and on the social context of identified callers were announced on tape and/or written on datasheets during both focal animal and ad libitum samplings.

The data set used to build this databank belongs to a larger set with more detailed contextual data obtained from a larger number of focal animal and ad libitum samplings. However, correspondent sound files are only available for the sampling sessions used in this databank: the first 460 focal animal and 95 ad libitum samples.

**DATABANK Muriqui n=570: Description of the Table**

TABLE “DATABANK Muriqui n=570” lists the names of 570 sound files (under “Filename” column) and provides information on the date and time they were recorded in the field, as well as on the interactional context in which they were produced. Each entry in the “Filename” column corresponds to an actual sound file stored in the folder named “Databank Muriqui Sound Files (n=570)”; each sound file refers to a single sequential call, that is, a single utterance (vocalization) given by a single individual.

Files can represent either an “isolated” sequential call (i.e. not preceded or succeeded by another call in less than 10 seconds), or a call that occurred within a series of calls (i.e. as part of a vocal “sequential” exchange).

The following information is provided for each sound file:

1. **Filename**  the name of the sound file containing the individual vocalization; the actual sound file is stored in the “Databank Muriqui Sound Files (n=570)” folder.

Files were originally named during the transcription of recordings for Mendes (1995) PhD thesis, and have been used as so in several spreadsheets. We kept the original names in the Databank to facilitate cross-reference between data sets.

The value of each sound file starts with either “vn” or “qvn” (codes for sequential calls) followed by a dash (“ - ”). The letter “q” in the beginning of the filename indicates that the transcription brings additional qualitative information about the context in which the call was produced.

Two or more letters and two numbers follow the dash. Letters after the dash relate to the name of the caller (e.g. ar = arlene; dg = diego). A value starting with “q” after the dash indicates that the field researcher (FDCM) was not positive about the identification (ex: qar = probably arlene). Sometimes two strings of two letters are separated by the letter “o”, indicating that the call could have been emitted by one of two individuals (e.g. cloiv = either cutlip or irv; soosy = sony or sylvia).

The numbers that come after the letters identify each sequential call recorded for each caller. A “p” after the two digit number informs that there was some problem related to the recording (e.g background noise) or to the gathering of contextual data.

Examples of file names:

vn-ar10 – 10th sequential call produced by arlene

vn-sy42 – 42nd sequential call produced by sylvia

qvn-da02- 2nd sequential call with additional qualitative information by daniel

vn-qbr01 – 1st sequential call that was probably produced by bruna

qvn-soosy03p – 3rd recorded sequential call (with additional qualitative information) that was produced by either sony or sylvia. There was some problem during recording or data collection.

1. **Caller:** the name of the caller, when it was possible to positively identify the individual muriqui that produced the call (n=488), or blank when it was not possible (n=82). The name of the caller can also be extracted from the filename (soundfile), as explained above.

Researchers of muriquis at the study site learn from previous researchers how to identify and name their subjects, so the names used in the current table are consistent with names used in other publications about muriquis of Caratinga. Several muriquis (callers) in the current databank are still alive as today (jan 25th 2019).

1. **Sex and**
2. **Age:** The sex and age-class of the caller: M= male, F=female; A=adult, S=subadult (i.e sexually mature but not fully grown), J=juvenile (neither dependent on mother nor sexually mature); I=infant.

Sex and age were only coded when there was positive identification of the caller, or if its sex and/or age was otherwise informed during the original audio recording.

1. **RG-sample:** The identification (“registration”) of the sample period in which the sound file was recorded.

Focal animal samples of 5 minutes of duration are identified by a value containing only numbers. For example, a value of 10 at the RG-sample column means that the corresponding sound file was acquired during the 10th focal animal sample that was conducted during data collection. Values starting with “ad” refer to ad lib recordings of different durations. For example, “ad08” means that the corresponding sound file was recorded during the 8th ad lib sampling conducted during data collection.

1. **RG-xchg:** The identification of the “episode” (i.e. exchange) in which the recording was obtained.

The value of RG-xchg is related to the line in which it appears in a larger data table where lines were not restricted to sequential exchanges, so values do not correspond to the exact number of exchanges that were registered during data collection. Nonetheless, numbers are in chronological order, so a larger numerical value means that the exchange occurred after another one with a smaller value.

The same RG-xchg for two or more sound files indicates that the corresponding vocalizations occurred during the same series of calls (i.e. same sequential exchange).

1. **RG-bank:** A registration code for each sound included in the databank. When ordered (classified) by increasing values of RG-bank, the table lists the wave files in the chronological order in which they were recorded and transcribed.
2. **Pos and**
3. **Ncalls:** Information about the “size” of the exchange (i.e. total number of calls) and about the position of the correspondent sound file (i.e. 1=first call, 9=9th call).

For example, the values “2” for “Pos” and “5“ for Ncalls” means that the listed call was the second one in a sequence (exchange) of 5 calls (2nd in 5). Values “1” for both “Pos” and “Ncalls” means that it was an “isolated” call, that is, not preceded or answered by other callers in less than 10 seconds (or 1st in 1 call).

1. **Date and**
2. **Hini**: Date and time of the recording.

Hini informs when the sample in which the sound file was recorded started, and not the actual hour and minute of the recording. In this way, “Hini” is the same for all sound files that were obtained during the same focal or ad lib sample (i.e. have the same “RG-sample” value), although they may have occurred minutes apart.

**“DATABANK Muriqui n=570”: Publications**

Publications that have used part or all data and vocalizations in this databank include:

Mendes, F.D.C. (1995). Interações vocais do muriqui. PhD thesis. University of São Paulo

Mendes, F.D.C. (1997). Padrões de interações vocais do muriqui (*Brachyteles arachnoides hypoxanthus*). In: A Primatologia no Brasil, vol. 5. (Ferrari, S.F. & Schneider, H., eds.). Editora Universitária - UFPA. Belém. (pgs 95 - 118)

Ades, C. & Mendes, F.D.C. (1997). Uma aproximação às vocalizações do muriqui (*Brachyteles arachnoides hypoxanthus*). Temas em Psicologia, 3:135- 149.

Mendes, F.D.C. & Ades, C. (2004). Vocal sequential exchanges and intragroup spacing in the Northern Muriqui (*Brachyteles arachnoides hypoxanthus*). Annals of the Brazilian Academy of Sciences, 76(2): 399-404

Demolin, D.; Ades, C. & Mendes, F.D.C. (2010). Prosodic features in northern muriquis’ vocalizations. The Evolution of Language: Proceedings of the 8th International Conference (EVOLANG8). *Utrecht, Netherland*pp. pgs:91-98.

Demolin, D.; Ades, C. & Mendes, F.D.C. (2011) Nonlinear phenomena in muriqui vocalizations. 18th International Congress of Sound and Vibration. Rio de Janeiro, Brazil. pgs: 1-7

**DATABANK Muriqui n=570: Acknowledgements**

**AUTHORS**: The databank has been organized by Francisco D C Mendes and Didier Demolin, with data and recordings obtained during Mendes (1995) PhD research at the University of São Paulo (PSE-IP-USP). Mendes is currently a professor at the University of Brasília; Demolin is currently a professor at the University of Sorbonne Nouvelle.

**PhD Advisor**: César Ades (University of São Paulo)

**PhD Co-advisors**: Charles T. Snowdon and Karen B. Strier

(University of Wisconsin, Madison)

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