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Publicado em:

CHIROPTERA NEOTROPICAL
VOLUME 10 - NUMBER 1-2
2004

ISSN 1413-4403
Brasília-DF
BRAZIL



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UPDATED LIST OF BATS FROM UBERLÂNDIA, STATE OF MINAS GERAIS, SOUTHEASTERN BRAZIL

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ABSTRACT:

The present paper is an update of the bat list from the city of Uberlândia, Minas Gerais, Brasil. This list is done with the objective of extending the knowledgment on these animals in the study area with highlights to their adequate management and conservstion.

KEY WORDS: Chiroptera, Rabies, Species Richness, Cerrado, Brazil

INTRODUCTION:

Bats represent one of the largest groups of wild mammals in tropical regions (Findley 1993). The knowledge of their diversity, ecology and biology is important for any study about the management and control of their populations. These night flying mammals also may act as ecological indicators of environment disturbances (Medellin 2000). Our aim is to present an updated list of bats from the region of Uberlandia, Minas Gerais State, Brazil, based on data obtained by the Laboratory of Bats and Poisonous Animals Managementde (LMAPQ) from the Health Department of Uberlandia and also based on records from specialized literature.

STUDY AREA AND METHODOLOGY

The Cerrado is the second largest geographical region of Brazil and it is recognized by UNESCO as a "Biosphere Reserve". With an area of two million square kilometers, corresponding to 22% of the national territory, it is known especially because of exploitation and lack of knowledge of its biodiversity which is suffering high risk of extinction due to economic exploitation of the biome. The municipality of Uberlândia (18°55'S, 48°17'W) with altitude variation between 700 and 970 meters is located in the southwest region of Minas Gerais sate. It has

an area of 4,040 km², with an urban perimeter of 189 km². The weather is semitropical, characterized by the alternation of dry winters and rainy summers. Average temperature is of 22°C, and the period from October to March is the hottest (24,7°C). June and July are the coldest months with an average temperature of 18.8°C. Summer is characterized by a marked instability in the weather due to occasional Atlantic polar air masses which precipitate a large amount of rainfall between the months of October and March. The vegetation is predominantly of cerrado *sensu strictu*, “campos” and gallery forests along the main rivers.

Bats were captured from August 2001 to June 2003. The majority of bats were obtained during non-habitual situations, including individuals that were found dead on the ground, and others flying during the daytime or inside residences (see Uieda et al. 1995, FUNASA 1996). Beside these situations, bats were monthly captured with mist nets set in several places in the urban area, inside road sewers, in small tunnels under roads, below bridges, inside abandoned houses and caves.

Part of the specimens collected was kept as vouchers at the LMAPQ and others were sent to the Instituto Mineiro de Agropecuária (IMA) in Belo Horizonte, Minas Gerais State, and to the Pasteur Institution in São Paulo, in order to be tested for rabies (the immunofluorescence and biological tests).

The bat list of Uberlândia is composed by 41 species belonging to 26 genus and four families. The Phyllostomidae family is the most speciose with 15 genus and 18 species, followed by Molossidae, with six genus and 13 species. Vespertilionidae accounted by four genus and eight species and Noctilionidae by one genus and two species. The high number of molossid species seems to be related with problems that this special group brings to humans in urban areas of many Brazilian cities (see FUNASA 1996) due to their presence in buildings. Therefore, since most of the activities conducted by LMAPQ are related with the bat presence in houses or with the contact between bats and humans, it is very likely that, in a few years, other molossid species will be found in Uberlândia. Though, other species were previously recorded near to Uberlândia city and we believe that their presence should be confirmed in the city in the near future. This is the case of the white-winged vampire bat, *Diaemus youngi*, captured by Uieda & Araujo (1987) when feeding on chickens in the nearby city of Uberaba.

In October 2001, an adult male of *Lasiurus egregius* was found dead in the morning, hanging on the wall of an urban residence. Four molossids, one female of *Promops nasutus* (December 2001), one male of *Eumops hansae* (January 2002), and two males of *Eumops bonariensis* (November 2001 and July 2002) were found alive, lying on the floor of a house in an urban area of Uberlândia. Only *E. hansae* was found indoors at the 5th floor of a residential building. Although all of these animals were suspected to be sick, the rabies tests were negative for all individuals except the *Lasiurus egregius*. This study is until now the first rabies record for this species.

In September 2003 an alive adult male of *Macrophyllum macrophyllum* was collected inside a road sewer during our routine activities. This is the second record for this species in the state of Minas Gerais (see Harrison 1975).

Other studies of bats should continue not only in Uberlândia but also in other cities of the state. Even being the largest state of the Brazilian southeastern region, with portions of Atlantic Forest, Cerrado and Caatinga biomes, Minas Gerais has one of the poorest known bat fauna, especially on the Cerrado biome (Aguiar 1994). Work on bats should be stimulated, so it will be possible to determinate the real diversity of the state and Brazil's chiropteran fauna.

Table 1. Updated list of bat species from the Municipality of Uberlândia, Minas Gerais, based on data from LMAPQ and the literature. PS=Present Study.

Families and species of bats	Sources
Family Noctilionidae	
<i>Noctilio albiventris</i>	PS
<i>Noctilio leporinus</i>	PS
Family Phyllostomidae	
<i>Chrotopterus auritus</i>	Pedro & Taddei 1997, 1998,
<i>Macrophyllum macrophyllum</i>	PS
<i>Micronycteris megalotis</i>	PS
<i>Mimon crenulatum</i>	Pedro et al. 1994, Pedro & Taddei 1997, 1998, PS
<i>Phyllostomus discolor</i>	PS
<i>Phyllostomus hastatus</i>	Pedro & Taddei 1998, PS
<i>Anoura caudifera</i>	Pedro & Taddei 1997, 1998, 2002, PS
<i>Anoura geoffroyi</i>	Pedro & Taddei 1997, 1998, PS
<i>Glossophaga soricina</i>	Pedro & Taddei 1997, 1998, 2002, PS
<i>Carollia perspicillata</i>	Pedro & Taddei 1997, 1998, 2002, PS
<i>Artibeus lituratus</i>	Pedro & Taddei 1997, 1998, PS
<i>Artibeus planirostris</i>	Pedro & Taddei 1997, 1998, PS
<i>Chiroderma doriae</i>	Pedro & Taddei 1997, 1998
<i>Platyrrhinus lineatus</i>	Pedro & Taddei 1997, 1998, 2002, PS
<i>Sturnira lilium</i>	Pedro & Taddei 1997, 1998, 2002, PS
<i>Vampyressa pusilla</i>	present study
<i>Desmodus rotundus</i>	Pedro & Taddei 1997, 1998, PS
<i>Diphylla ecaudata</i>	PS
Family Vespertilionidae	
<i>Eptesicus diminutus</i>	Pedro & Taddei 1997, 1998
<i>Eptesicus furinalis</i>	Pedro & Taddei 1997, 1998
<i>Histiotus velatus</i>	PS
<i>Lasiurus cinereus</i>	Pedro & Taddei 1998, PS
<i>Lasiurus ega</i>	PS
<i>Lasiurus egregius</i>	PS
<i>Lasiurus blossevillii</i>	Pedro & Taddei 1998
<i>Myotis nigricans</i>	Pedro & Taddei 1997, 1998, PS
Family Molossidae	
<i>Eumops auripendulus</i>	PS
<i>Eumops bonariensis</i>	PS
<i>Eumops glaucinus</i>	Pedro & Taddei 1998, PS
<i>Eumops hansae</i>	PS
<i>Eumops perotis</i>	PS
<i>Cynomops planirostris</i>	Pedro & Taddei 1997, 1998

<i>Molossops temminckii</i>	Pedro & Taddei 1997, 1998
<i>Molossus rufus</i>	Pedro & Taddei 1998, PS
<i>Molossus molossus</i>	Pedro & Taddei 1998, PS
<i>Nyctinomops laticaudatus</i>	Pedro & Taddei 1998, PS
<i>Nyctinomops macrotis</i>	PS
<i>Promops nasutus</i>	PS
<i>Tadarida brasiliensis</i>	PS

REFERENCES

- AGUIAR L.M.S. 1994. Comunidades de Chiroptera em três áreas de Mata Atlântica em diferentes estádios de sucessão - Estação Biológica de Caratinga, Minas Gerais. MSc. Dissertation, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil.
- MEDELLIN R. A. (2000). Bat Diversity and Abundance as Indicators of Disturbance in Neotropical Rain forests. *Conservation Biology* 14(6): 1666-1675
- FUNDAÇÃO NACIONAL DE SAÚDE - FUNASA. 1996. Morcegos em áreas urbanas e rurais: manual de manejo e controle. BRETT A. (Ed). Ministério da Saúde, Brasília. 117p.
- HARRISON D. L. 1975. *Macrophyllum macrophyllum*. *Mammalian Species*, 62: 1-3.
- FINDLEY J.S. 1993. Bats: a community perspective. Cambridge, Cambridge Univ. Press, 167p.
- LOPES, J.P., A.J.G. SANTOS & R.A. TENÓRIO. 2000. Morcego pescador pode trazer grandes prejuízos aos piscicultores. *Panorama da Aqüicultura* 10 (57): 15-19.
- PEDRO W. A. C.A.K. KOMENO & V. A. TADDEI. 1994. Morphometrics and biological notes on *Mimon crenulatum* (Chiroptera: Phyllostomidae). *Boletim do Museu Paraense Emílio Goeldi, série Zool.*, 10 (1): 107-112.
- PEDRO W. A. & V. A. TADDEI. 1997. Taxonomic assemblage of bats from Panga Reserve, southeastern Brazil: abundance patterns and trophic relations in the Phyllostomidae (Chiroptera). *Boletim do Museu de Biologia Mello Leitão (N. Ser.)* 6: 3-21.
- PEDRO W. A. & V. A. TADDEI 1998. Bats from Southwestern Minas Gerais, Brazil (Mammalia: Chiroptera). *Chiroptera Neotropical* 4(1):85-88
- PEDRO W. A. & V. A. TADDEI. 2002. Temporal distribution of five bat species (Chiroptera, Phyllostomidae) from Panga Reserve, South-Eastern Brazil. *Revista Brasileira de Zoologia*, 19(3): 951-954.
- UIEDA W. & V.F. ARAÚJO. 1987. Manutenção dos morcegos hematófagos *Diaemus youngii* e *Diphylla ecaudata* (Chiroptera, Phyllostomidae) em cativeiro. *Anais Seminário Ciências, Faculdades Integradas de Uberlândia*, Uberaba, 1: 30-42.
- UIEDA W., N. M. S. HARMANI & M. M. S. SILVA. 1995. Raiva em morcegos insetívoros (Molossidae) do Sudeste do Brasil. *Rev. Saúde Pública*, 29 (5): 393-397.