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Ocurrence of the chestnut long-tongued bat *Lionycteris spurrelli* Thomas, 1913 (Chiroptera, Phyllostomidae) in the Northeastern Atlantic Forest, Brazil

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Abstract: During an inventory fieldwork carried out at Usina Salgado property in the county of Ipojuca, Pernambuco, Brazil, we captured a *Lionycteris spurrelli* specimen in a forest fragment known as Mata do Mingú (8° 31' 29" S and 35° 03' 26" W). This marks the first occurrence for the northeast region and therefore, the first record for the state of Pernambuco, widening its distribution area within Atlantic Forest. The extension of the occurrence area points out this record as being the oriental limit for the species.

Keywords: Floresta Atlântica, Phyllostomidae, Glossophaginae, range extension, Pernambuco.

LIRA, T.C., MENDES PONTES, A.R. & SANTOS, K.R.P. Ocorrência do morcego *Lionycteris spurrelli* Thomas, 1913 (Chiroptera, Phyllostomidae) na Floresta Atlântica do nordeste do Brasil. Biota Neotrop. 9(1): <http://www.biotaneotropica.org.br/v9n1/pt/abstract?short-communication+bn00909012009>.

Resumo: Durante um trabalho de campo realizado nas propriedades da Usina Salgado, no município de Ipojuca, Pernambuco, foi capturado um indivíduo da espécie *Lionycteris spurrelli*, no fragmento denominado Mata do Mingú (8° 31' 29" S e 35° 03' 26" W). O fato registra a primeira ocorrência para a região Nordeste e conseqüentemente o primeiro registro para o estado de Pernambuco, ampliando a área de distribuição do morcego na Floresta Atlântica. A extensão da área de ocorrência aponta este registro como o limite oriental para a espécie.

Palavras-chave: Floresta Atlântica, Phyllostomidae, Glossophaginae, ampliação da distribuição, Pernambuco.

Introduction

Nectar-feeding bats of family Phyllostomidae had developed a specially modified morphological system, as an elongated rostrum, gaps between teeth or absence of teeth and presence of long tongue, to meet their food habit that is fundamentally liquid, but may eventually include other items like pollen or insects (Freeman 1995, Solmsen 1998, Carstens et al. 2002).

There are controversies among distinct authors regarding the number of genera and species and their relationships (Griffiths 1982, Koopman 1993, Wetterer et al. 2000, Baker 2003, Gregorin & Ditchfield 2005, Woodman & Timm 2006, Woodman 2007). However, there is some agreement that the subfamily Glossophaginae has 16 genera distributed in three distinct tribes, namely: Phyllonictines: *Phyllonycteris* and *Erophylla*; Glossophagines: *Anoura*, *Choeroniscus*, *Choeronycteris*, *Glossophaga*, *Hylonycteris*, *Leptonycteris*, *Lichonycteris*, *Monophyllus*, *Musonycteris*, and *Scleronycteris*; Lonchophyllines: *Lonchophylla*, *Platalina*, *Lionycteris* and *Xeronycteris*.

Accordingly to Simmons (2005), there are eight genera and a total sum of 14 species for Brazil, namely: tribe Glossophagini: *Anoura* (*A. caudifer* (E. Geoffroy, 1818) and *A. geoffroyi* Gray, 1838); *Choeroniscus* (*C. minor* Peters, 1868); *Glossophaga* (*G. comissaris* Gardner, 1962, *G. longirostris* Miller, 1898 and *G. soricina* (Pallas, 1766)); *Lichonycteris* (*L. obscura* Thomas, 1895); *Scleronycteris* (*S. ega* Thomas, 1912). tribe Lonchophyllini: *Lionycteris* (*L. spurrelli*, Thomas, 1913); *Lonchophylla* (*L. bokermanni* Sazima, Vizotto and Taddei, 1978, *L. dekeyseri* Taddei, Vizotto and Sazima, 1983, *L. mordax* Thomas, 1903 and *L. thomasi* J. A. Allen, 1904) (Simmons 2005); *Xeronycteris* (*X. vieirai* Gregorin and Ditchfield, 2005).

Lionycteris spurrelli occurs from East of Panama, Colombia, Venezuela, Guyana, to Amazonian Peru and Brazil (Eisenberg & Redford 1999, Simmons 2005; Reis et al. 2007). Following Griffiths and Gardner (2007), the occurrence of *L. spurrelli* in Brazil has been registered in the Amazonia, in the states of Amazonas (Sampaio et al. 2003), Pará, Amapá (Taddei et al. 1978), and Tocantins (Nunes et al. 2005); Cerrado: in Bahia (Gregorin & Mendes, 1999), Goiás (Coimbra et al. 1982); and transitional areas of Caatinga/Cerrado: in Minas Gerais (Trajano & Gimenez, 1998). Furthermore, there are two recent records that have not been mentioned by Griffiths and Gardner (2007), one for the Cerrado biome, in Mato Grosso do Sul (Bordignon, 2006) and one for the Atlantic Forest, in Espírito Santo (Woodman & Timm 2006).

The objective of this paper is to furnish the first record of the chestnut long-tongued bat *L. spurrelli* for the northeastern Brazil, in state of Pernambuco, and to present a reappraisal on its geographical distribution.

Material and Methods

Bats were captured with mist-nets monthly for three consecutive nights during six months (from November 2005 to April 2006). Sampling effort was calculated according to Straube & Bianconi (2002), and totaled 8100 m²/h. Individuals were processed following Simmons & Voss (1990) and the guidelines of the American Society of Mammalogists in Gannon et al. (2007). The identification followed Sanborn (1943), Vizotto & Taddei (1973), Koopman (1994) and Gregorin & Ditchfield (2005). This research was carried out under IBAMA's federal license No. 05/2006.

Results and Discussion

During field research in the premises of the Usina Salgado, municipality of Ipojuca, in Pernambuco State, one single individual of *Lionycteris spurrelli*, an adult female, was captured on December 14, 2005. The specimen was collected in an Atlantic Forest fragment named Mata do Mingú (8° 31' 29" S and 35° 03' 26" W), with an area of 13,4 ha and that is connected to other fragment by a swamp of shallow waters and vegetation comprised exclusively by *Montrichardia linifera* Araceae, and they are totally isolated from other forest fragments by a matrix of sugar-cane plantations. The collected specimen was deposited in the Coleção de Mamíferos da Universidade Federal da Paraíba, under number UFPB 5764.

This record provides a considerable extension of the distribution of *L. spurrelli* in Brazil (Figure 1), inserting northeastern Brazil in the occurrence area of the species. Moreover, this fact corroborates the expansion of the distribution of this species on the Atlantic Forest, an occurrence that was previously registered by Woodman & Timm (2006) for southeastern Brazil. This record refers to a single individual that is housed at Los Angeles County Museum (LACM 62878) and was collected in the Santa Teresa, in the State of Espírito

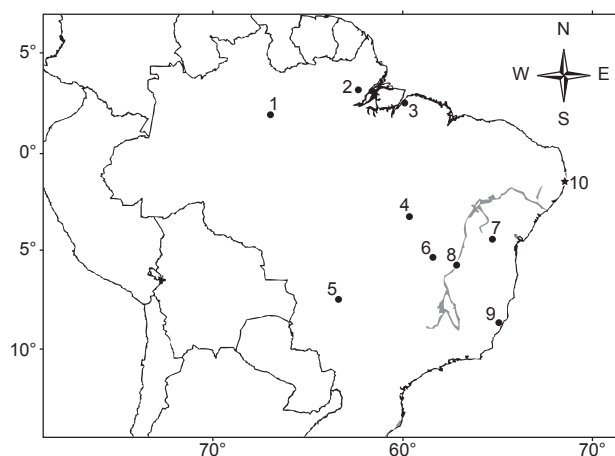


Figure 1. Brazilian distribution of *Lionycteris spurrelli*, including previous known records (1-9) displayed by dots and the new record (10), represented by a star. 1) Gavião, Amazonas (02° 27' S and 59° 47' W); 2) Igarapé Novo, Amapá (00° 20' S and 52° 23' W); 3) Bosque Rodrigues Alves, Pará (01° 27' S and 48° 29' W); 4) Aliança do Tocantins, Tocantins (11° 08' S and 48° 48' W); 5) Figueirão, Mato Grosso do Sul (18° 40' S and 53° 38' W); 6) Mambai, Goiás (14° 28' S and 46° 07' W); 7) Chapada Diamantina, Bahia (12° 57' S and 41° 06' W); 8) Olhos D'água Cave, Minas Gerais (15° 07' S and 44° 10' W); 9) Santa Teresa, Espírito Santo (19° 56' S and 40° 34' W); 10) Ipojuca, Pernambuco (8° 31' S and 35° 03' W). The São Francisco River is shown on the map. *Points 5 and 9 coordinates are not provided in their respective articles; their geographical coordinates were estimated using their names.

Figura 1. Distribuição Brasileira de *Lionycteris spurrelli*, incluindo os registros anteriores (1-9) mostrados em forma de ponto e o novo registro (10) representado por uma estrela. 1, Gavião, Amazonas (02° 27' S e 59° 47' W); 2, Igarapé Novo, Amapá (00° 20' S e 52° 23' W); 3, Bosque Rodrigues Alves, Pará (01° 27' S e 48° 29' W); 4, Aliança do Tocantins, Tocantins (11° 08' S, 48° 48' W); 5, Figueirão, Mato Grosso do Sul (18° 40' S e 53° 38' W); 6, Mambai, Goiás (14° 28' S e 46° 07' W); 7, Chapada Diamantina, Bahia (12° 57' S e 41° 06' W); 8, Olhos D'água Cave, Minas Gerais (15° 07' S e 44° 10' W); 9, Santa Teresa, Espírito Santo (19° 56' S e 40° 34' W); 10, Ipojuca, Pernambuco (8° 31' S e 35° 03' W). O Rio São Francisco é mostrado no mapa. *As coordenadas dos pontos 5 e 9 não foram fornecidas em seus respectivos artigos. Elas foram estimadas usando os nomes dos seus locais.

Santo. Despite the fact that no other information of the analyzed individual besides its location and collection identification number is provided by Woodman & Timm (2006), we consider this record as valid for the Atlantic Forest, since *L. spurrelli* is rarely mistaken with other lonchophylline bats (Griffiths & Gardner, 2007). The new *L. spurrelli* record furnished here substantially extends the occurrence approximately 850.8 km northeastwards, making this specimen from Ipojuca the most oriental record for the species. Moreover, both Bordignon (2006) and Woodman & Timm (2006) records extend the distribution area nearly 660 km towards south. This suggests that although this species is rarely captured, it has a wide occurrence area, as opposed to what was previously published (Fonseca et al. 1996), that there were only records for the Amazonian Forest.

Inventories of bat communities from Atlantic Forest in the state of Pernambuco are still scarce. Therefore, this study contributes in the expansion of the geographic distribution knowledge on *L. spurrelli*, information that was not available in the latest compilation about the Lonchophyllinae subfamily (Griffiths & Gardner, 2007).

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