

Record to threatened primate Southern brown howler, *Alouatta guariba clamitans* Cabrera, 1940 (Primates: Atelidae), at Luminárias, South of Minas Gerais State

Registro do primata ameaçado bugio-ruivo do sudeste, *Alouatta guariba clamitans* Cabrera, 1940 (Primates: Atelidae), em Luminárias, sul do estado de Minas Gerais

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Resumo O gênero *Alouatta* é representado atualmente no Brasil por 14 espécies e entre estes táxons está a espécie popularmente conhecida como bugio-ruivo (*Alouatta guariba clamitans*, Cabrera, 1940). Esta espécie está ameaçada de extinção no Brasil e atualmente está altamente suscetível a um surto epizootico de febre amarela, que também anteriormente em outras épocas veio a vitimar um grande número de indivíduos desta espécie. O presente estudo objetiva apresentar uma nova localidade de ocorrência de *A. guariba clamitans* para o município de Luminárias, sul do estado de Minas Gerais, acrescentando uma espécie ameaçada de extinção à fauna regional.

Palavras-chave: Primata; Extensão de distribuição; Sul do Estado de Minas Gerais, Febre amarela

Abstract *Alouatta* genus is represented currently in Brazil by 14 species and among these taxa is the species popularly called as howler monkey, *Alouatta guariba clamitans* (Cabrera, 1940). This species is

threatened with extinction in Brazil and is currently highly susceptible to an outbreak of epizootic yellow fever, which has also previously victimized a large number of individuals of this species. The current study presents new location occurrence record of *A. guariba clamitans* at Luminárias county, Minas Gerais State, adding a threatened species with extinction to Luminárias regional fauna list.

Keywords: Primate; Distribution extension; South of Minas Gerais State, Yellow fever

Introduction

Alouatta genus presents wide geographic distribution in the Neotropical region, with occurrence in Vera Cruz (Mexico), until Rio Grande do Sul State (Brazil) and Corrientes Province (Argentina) (GREGORIN, 2006). *Alouatta* shows huge sexual dimorphism (SCHULTZ, 1926; SCHULTZ, 1960; RAVO-

SA;ROSS, 1994). This genus had taxonomic reviews to show the better arrangements and nomenclature, with biometric data and statistical test. The use of molecular and cytogenetic methods, were helpful in understanding the relationship between primates groups and taxa definitions (LIMA;SEUÁNEZ, 1989;LIMA;SEUÁNEZ, 1991; SAMPAIO et al.,1996; OLIVEIRA et al., 2002;CORTÉS-ORTIZ et al.,2003).

Actually, *Alouatta* is represented by 14 species in Brazil, and within these taxa is the subspecies popularly known as southern brown howler, *Alouatta guariba clamitans* (Cabrera, 1940) (BICCA-MARQUES et al., 2011). This is a threatened species in Brazil (MMA, 2014).

Alouatta guariba clamitans have notable geographic variation in the pelage and some morphometrical variables (polymorphism) (see GREGORIN, 2006), what makes it difficult to identify this subspecies, which is similar to *A. guariba guariba*. Nevertheless, the occurrence area of these two subspecies do not overlap (BICCA-MARQUES et al., 2018), allowing a reliable identification.

This taxon is highly susceptible to yellow fever, with epizootic records in 1939 throughout Itatiaia National Park, where the primates were locally extinct (ÁVILA-PIRES; GOUVÊA, 1977). During 2008-2009, the same epidemic victimized a large number of individuals in Rio Grande do Sul State (BICCA-MARQUES, 2009; BICCA-MARQUES et al., 2017). Actually (2016-2017) a great number of primate was found dead, not only from *Alouatta* genus, in states of Paraná, São Paulo, Rio de Janeiro, Espírito Santo e Minas Gerais, and this fact has been

showed in national press (G1, 2017a; G1, 2017b; FOLHA DE SÃO PAULO, 2017).

In the present study, we report the first record of *Alouatta guariba clamitans* for Luminárias county, Minas Gerais state.

Materials and Methods

Three individuals of *A. guariba clamitans* were visualized and photographed on September 16, 2018, during a floristic study carried out in “Pico do Gavião” (21°36’11.59”S/44°56’16.60”W; Figure 1), at Luminárias county, south of Minas Gerais State, southeastern Brazil. The species identification was based on the color of the pelage and the area of occurrence (following BICCA-MARQUES et al., 2018).

These individuals were found in an emergent tree inside the forest. The “Pico do Gavião” region is located in Atlantic Forest domain, and its landscape is composed by rupestrian natural grasslands, seasonal semideciduous forests, cerrados *sensu stricto* (savanna woodlands), and anthropic areas. Record of *A. guariba clamitans* individuals were obtained in a fragment of Seasonal Semideciduous Montane Forest (IBGE, 2012). The weather of “Pico do Gavião”, according to Koppen’s classification is humid subtropical with dry winter and hot summer (CWA), with annual median precipitation of 1,529.7 mm and annual median temperature of 19.4 °C (OMETTO, 1981). The landscape has an irregular relief, with altitudes ranging from 1,130m to 1,230m.

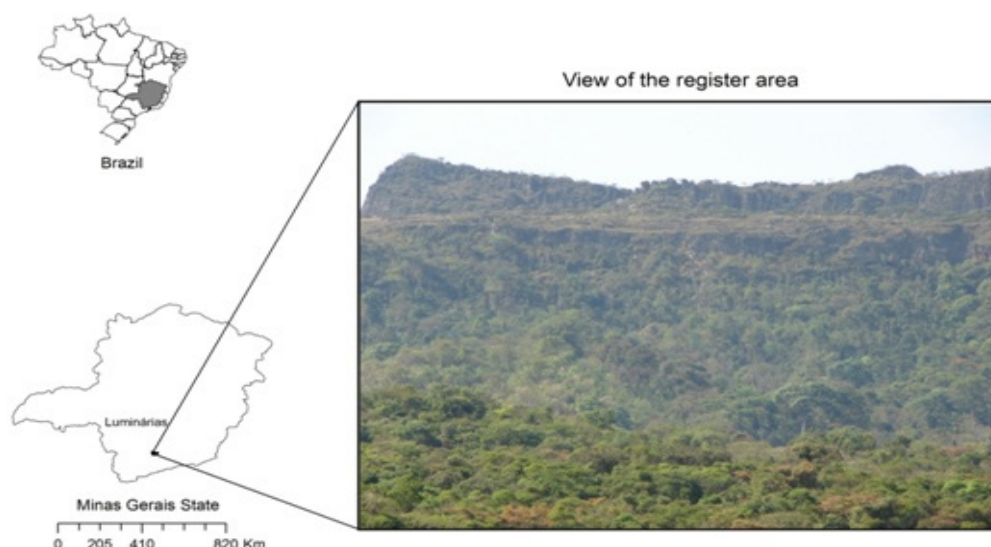
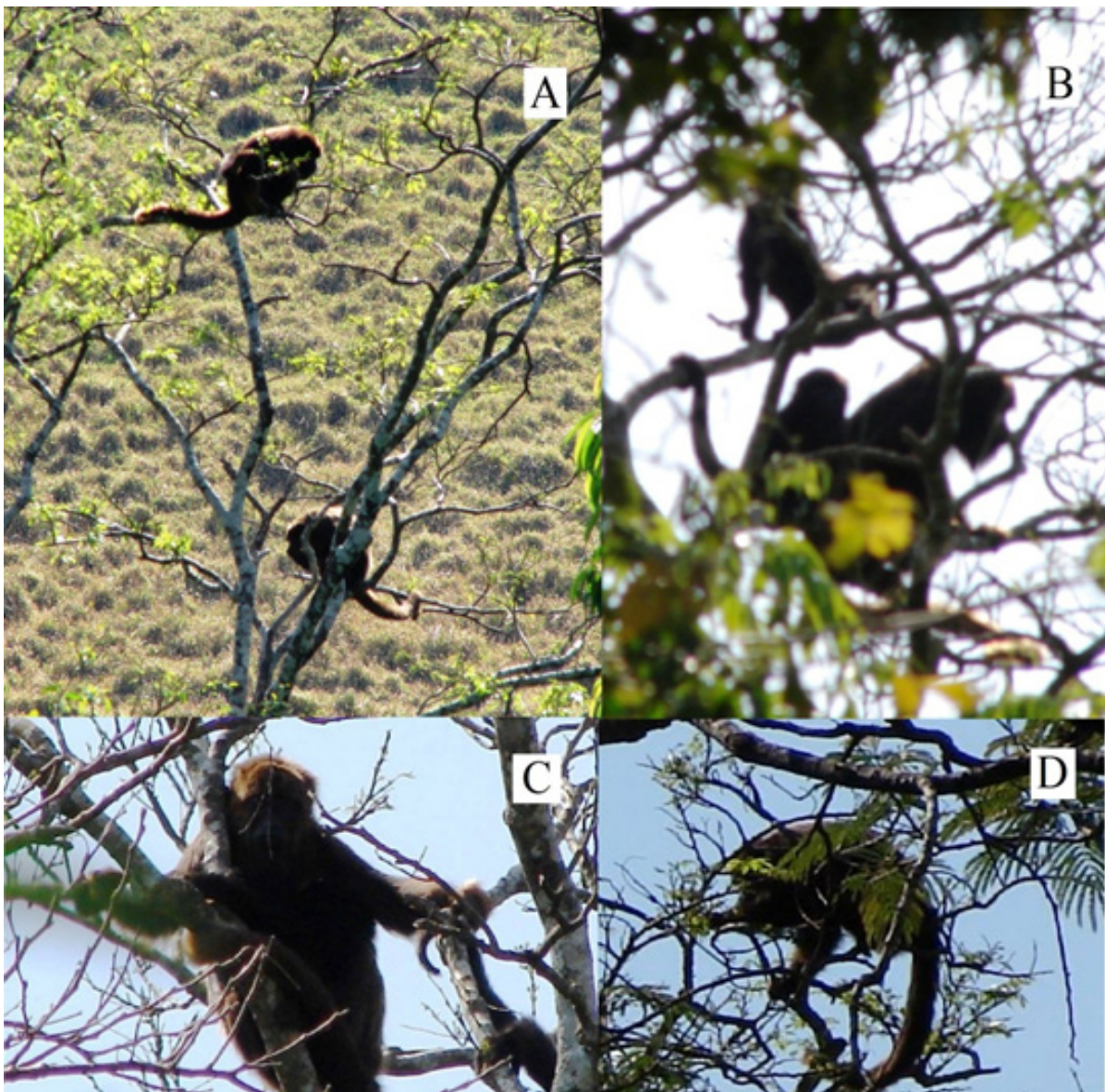


Figura 1. Register area of *Alouatta guariba clamitans* at Pico do Gavião, Luminárias county, south of Minas Gerais State, Southeastern Brazil.

Results and Discussion

Alouatta guariba clamitans is apparently not abundant in the study area, since these were the only records of the species during the 16 days floristic study carried out in 2008 (4 days in June; 8 days in September; 4 days in October) by the team of the Forest Ecology Laboratory of the Federal University of Lavras. The registered individuals (a male, a female, and a monkey cub) are presented in the Figure 2.

Bicca-Marques et al. (2017) mention that the population reduction, together with the effect of the high degree of habitat fragmentation, is a result of these epizootic outbreaks, which allows to suspect that the taxon in question may suffer a population decline of at least 30% in the three generations following the 2008 outbreak. This without considering the current outbreak (2016/2017), which leaves this species in a dangerous situation.



A= Couple, B= Female with monkey cub, C= Male, D= Female (Photo: Leandro Bortoli de Freitas).

Figura 2. Individuals of *Alouatta guariba clamitans*, (Cabrera, 1940) registered at Pico do Gavião, Luminárias county, South of Minas Gerais State, Southeastern Brazil. (Photo: Leandro Bortoli de Freitas).

The present record represent a new locality of occurrence of *A. guariba clamitans* to Minas Gerais State, and show the increase of spatial distribution of the specie to state, because in mastozoological studies conducted previously in south of the state (CERBONCINI et al., 2008; MACHADO et al., 2015; MACHADO et al., 2016; SANTOS et al., 2016), the specie was recorded only by Eduardo and Passamani (2009) e Rosa and Souza (2017). In this way we contributed and added this specie to the list of species that occurs in Luminárias region, considering that the knowledge about the composition of vertebrate communities of different areas is important to subsidize biology conservation projects (LAWTON, 1996).

By the mentioned facts, new studies involving the *Alouatta* genus are suggested to evaluate new locations, habits and relationship with the yellow fever epidemic, in order to subsidize effective emergency plans that may be extremely important for the future of primates of this genus.

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