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MASTOFAUNA OF THE ARACURI ECOLOGICAL STATION – RS

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Abstract: The Atlantic Forest is characterized as a biodiversity hotspot, with a high richness of mammals and a high number of endemism – around 289 species are known, of which 55 are endemic. Due to its fragmentation, about 22% of the mammals found in this biome are threatened with extinction. Thus, one way to protect these organisms and this biome is the creation and maintenance of Conservation Units. Thus, the objective of this work was to survey the mastofauna of the Aracuri Ecological Station, located in the municipality of Meus Capões - RS. Species were recorded using camera traps, direct observation and trace, in a three-day sampling effort. Eleven species were sampled, of which five are officially classified at some level of conservation threat: *Alouatta guariba clamitans*, *Leopardus guttulus*, *Puma concolor*, *Puma yaguaroundi*, and *Mazama americana*. As they live in the area, it is evident the importance of the Aracuri Ecological Station for the maintenance of the local mammals.

Keywords: Survey of mammals. Atlantic forest. Fragmentation. Ecological Station. Extinction threat.

INTRODUCTION

Most of the Atlantic Forest is located on the coast of Brazil, extending from the state of Rio Grande do Norte to Rio Grande do Sul. It has a great biodiversity of flora and fauna (SANTOS, 2010), second only to the Amazon in terms of mammal diversity. It is considered one of the planet's diversity hotspots, due to the intense fragmentation, forest degradation and high degree of endemism, which in the case of mammals reaches 30% (PAGLIA et al., 2012).

According to the Pilot Program for the Conservation of Tropical Forests in Brazil, the Atlantic Forest is home to about 289 species of mammals ((PAGLIA et al. 2012), 55 of which are endemic. Due to the high number of endemism, many species are threatened by extinction, reaching about 22% for mammals.

In Rio Grande do Sul, the Atlantic Forest encompasses the so-called Campos de Cima da Serra, a region that belongs to the Mixed Ombrophilous Forest, where extensive areas of fields predominate, with forest formations composed predominantly of Araucaria, known as the ''capões''. However, with the introduction of livestock and agricultural practices, many areas of native grassland were lost (CERVEIRA, 2005).

As the Atlantic Forest is considered one of the richest areas in biodiversity, the objective of this survey was to determine the composition of mammals at the Aracuri Ecological Station.

METHODOLOGY

The present study was carried out at the Aracuri Ecological Station, located in the municipality of Meus Capões, Northeast region of Rio Grande do Sul, under the geographic coordinates 28º12'55.6" and 28º14'05" of South latitude and 51º 9'15" and 51º10 '35" West longitude (Figure 1). The station is located in the Campos de Cima da Serra macro-region, under the Atlantic Forest domain (BRASIL, 2008). The vegetation is classified as Mixed Ombrophilous Forest.

The main phytophysiognomic types identified in this area are: forest with preserved araucaria; forest with altered araucaria; capoeira dominated by Araucaria angustifolia and capoeira dominated by broadleaved; broom with grouping of A. angustifolia and broom with predominance of Baccharis spp; hygromorphic field; waterlogged pasture (BRAZIL, 2008).

According to the Köppen classification, the climate fits into the Cfb type, which is characterized by being a humid temperate
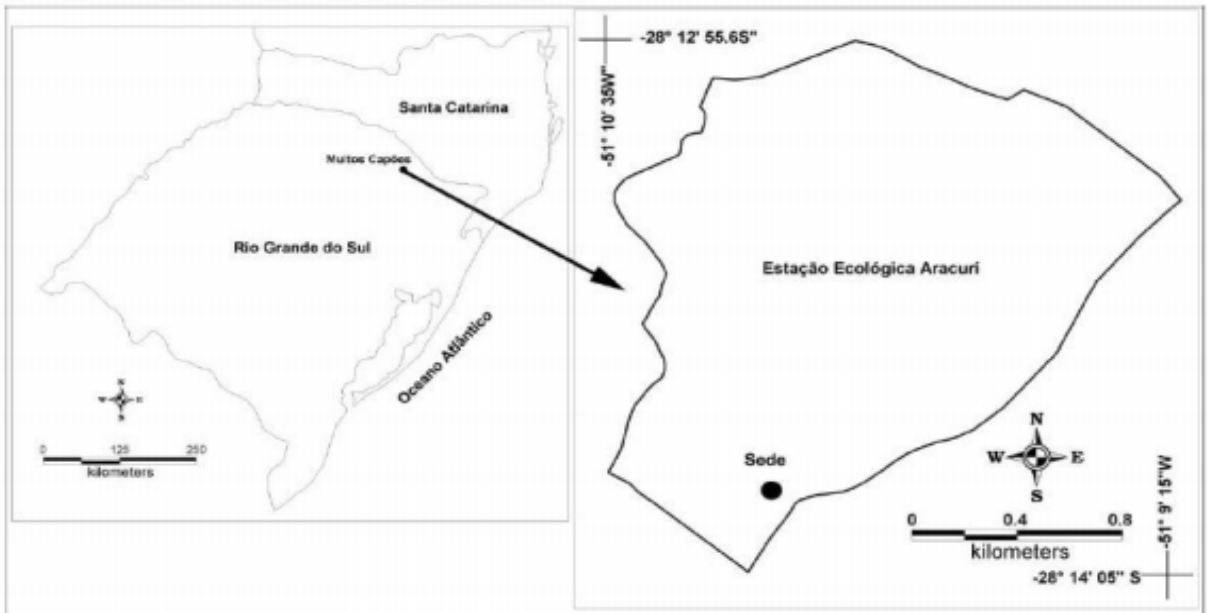
Figure 1. Location of the Ecological Station of Aracuri, Muitos Capões, RS (BRAZIL, 2008).

climate, with well-distributed rainfall throughout the year, ranging from 1,700mm to 2,200mm, with an average annual temperature between 14°C and 16°C. °C (NIMER, 1989).

Data were collected over a period of three days in May 2017 on the two main trails of ESEC Aracuri. The transect census methodology was used, which is based on the direct and indirect visualization of the animals through displacements through the area, without considering direction or time. The displacements took place at different times, in order to evaluate the largest possible number of groups, seeking to record mainly forest and/or arboreal species that are not captured in traps. Four camera traps, with night vision and motion sensor, were also installed at different points along the trails.

The direct records are based on the literal visualization of the fauna. According to the ecological station management plan, through this method it is possible to verify the presence of graxains, puma, armadillo, pelada, deer, wildcat, red howler monkey, and wild boar, an exotic species introduced in the region.

For the capture of small non-flying mammals, cage-type traps, Tomahawk® pattern, with dimensions 12x12x30cm in height, width and depth, respectively, were used. A total of 90 traps were used, with 30 traps per successional stage (initial, intermediate and advanced), every 10 meters along the trails. The traps were baited with slices of cassava with peanut butter and were checked daily in the morning.

The cages remained installed for three days, totaling the sampling effort of 270 traps. The captured individuals were determined to the lowest taxonomic level of the compliant species (GONÇALVES et al., 2014).

Given the difficulty of visualizing animals in a natural environment, some species were identified only by their traces, such as footprints, fur, feces, impact on vegetation, burrows and nests. This method is essential for the detection of cryptic animals, such as armadillos, which are rarely seen or captured in traps.

RESULTS AND DISCUSSION

In this study, 11 species of mammals were recorded (Table 1). Trace recording took place in two ways: vocalization, for primates, and feces, for felines. With the use of camera traps, records of the species were obtained.: *Puma concolor*, *Mazama americana* and *Sus Scrofa*; Photographs were also taken of *Didelphis albiventris*, *Lycalopex gymnocercus* and *Alouatta guariba clamitans* (Table 2).

Of the 11 species recorded, five are officially classified at some level of state conservation threat.: *Alouatta guariba clamitans*, *Leopardus guttulus*, *Puma concolor*, *Puma yaguaroundi*, e *Mazama americana* (MMA, 2008). Deforestation and poaching are believed to be the main causes of their vulnerability. In addition to the native species, an exotic species was sampled, *sus scrofa*, popularly known as wild boar, family representative: Suidae.

FINAL CONSIDERATIONS

According to the above, it is possible to conclude that deforestation and the fragmentation of the Atlantic Forest have produced serious consequences for the native biota, due to the drastic reduction of habitats and genetic isolation of populations (CERVEIRA, 2005). In addition to the reduction of habitats, the existence of reports of the action of hunters within the Aracuri Ecological Station, where many species of mammals are permanently persecuted in their natural habitats must be considered (MENDES, 2004), further affecting their distribution. Hunting, even on a small scale, causes sensitive effects on the population densities of several species, which, together with habitat fragmentation, is one of the main threats to the conservation of mammals (COSTA & DITCHFIELD, 2005).

Taxonomy	Common name	Method	Conservation Status
Alouatta guariba clamitans	Bugio-ruivo	Direct Observation and Photographic Recording	Vulnerable
Didelphis albiventris	Gambá-da-orelha-branca	Direct Observation	A little bit worrying
Lycalopex gymnocercus	Graxaim-do-campo	Direct Observation and Photographic Recording	A little bit worrying
Leopardus guttulus	Gato-do-mato-pequeno	Record	Vulnerable
Puma concolor	Puma	Photographic Record and Traces	In danger
Puma yaguaroundi	Gato-mourisco	Record	Vulnerable
Oligoryzomys flavescens	Rato-do-mato	Direct Observation and Photographic Recording	Pouco preocupante
Lepus europaeus	Lebre-europeia	Direct Observation	A little bit worrying
Dasypus novemcinctus	Tatu-galinha	Record	A little bit worrying
'*Mazama americana*	Veado-mateiro	Direct Observation and Photographic Recording	In danger
Sus scrofa	Javali	Photographic Record, Trace and Direct Observation	A little bit worrying

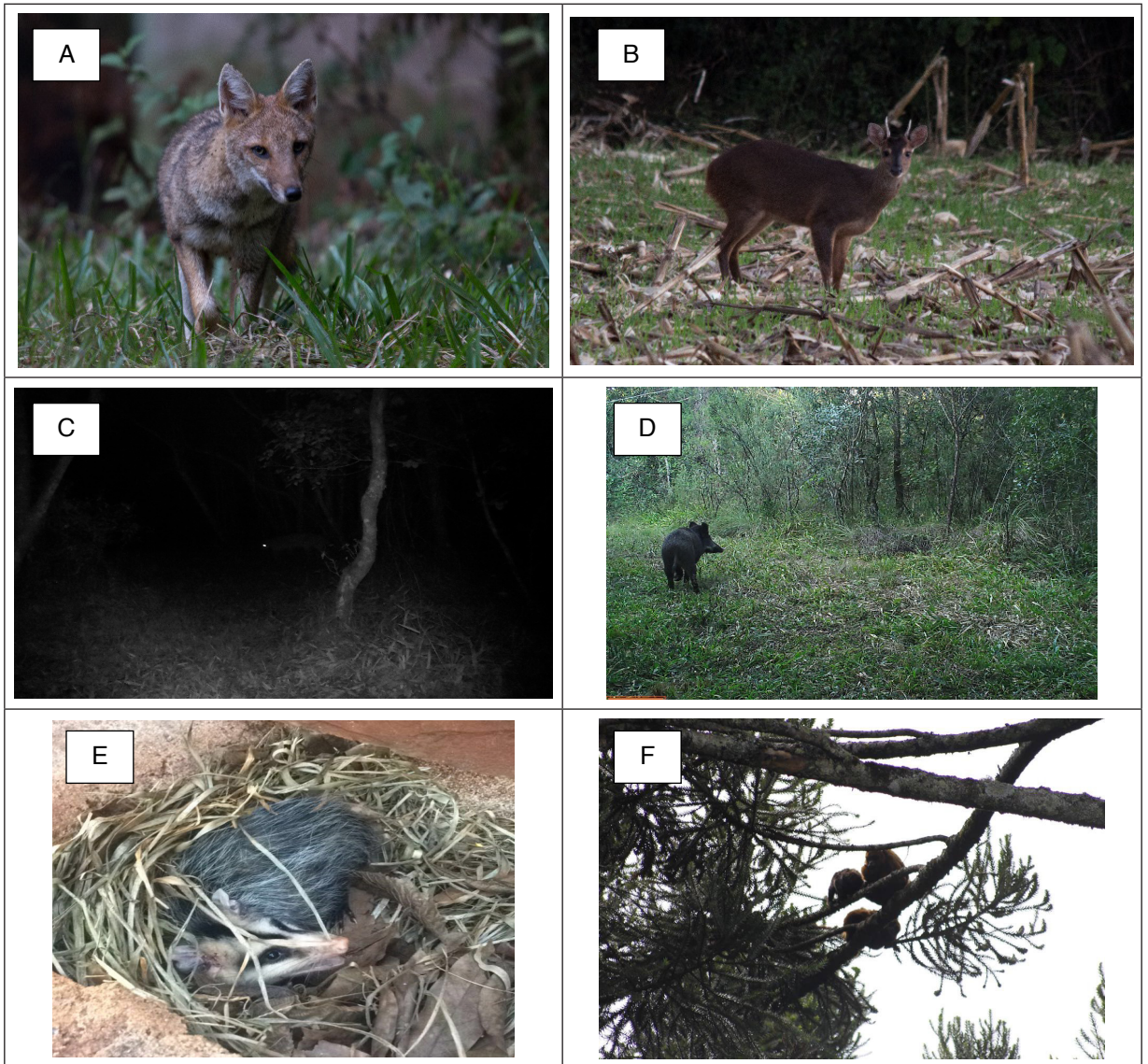Table 1. Taxonomy, observation method and conservation status of the individuals sampled.

Table 2. Species photographic record. A) *Lycalopex gymnocercus*; B) *Mazama americana*; C) *Puma concolor*; D) *Sus scrofa*; E) *Didelphis albiventris*; F) *Alouatta guariba clamitan*.

Even so, based on the results presented here, ESEC Aracuri is of great importance in the conservation of the local mammals. The occurrence of five endangered species (MMA, 2008) indicates that the UC is in good condition.

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