



# UPDATES IN LIMOEIRO REGION MEDIUM AND LARGE SIZED MAMMALS SPECIES LIST, SOUTHEAST OF GOIÁS STATE, BRAZIL

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## INTRODUÇÃO

The Brazilian Cerrado is the second largest Neotropical ecosystem (Sano & Almeida, 1998) and one of the 25 biologically richest and most endangered hot - spots in the world (Myers *et al.*, 2000). It presents a high diversity of mammalian species (194 species) (Eisenberg & Redford 1999), several of them confirmed under some threat of extinction (IUCN, 2008). The conversion of natural vegetation in consequence of agricultural expansion and cattle ranching has fragmented habitats and reduced wild animals' population. The majority of Cerrado mammal surveys have focused on protected areas; however, to assess basic information on species conservation and status, and to formulate adequate management strategies, it is essential to study how the mammal fauna deal with the highly human - influenced, non - protected landscapes (Marinho - Filho & Machado 2006; Lemos *et al.*, 2011). In the center of Cerrado, the southeast of Goiás state is intensely impacted by human action, presenting in general less than 15% of its original surface covered by natural vegetation (Cavalcanti & Joly, 2002). A first approach on regional mammalian fauna, based on direct observations, and signs and tracks, registered 23 species, including large flagship carnivores like the maned wolf *Chrysocyon brachyurus* and the puma *Puma concolor* (Lemos, 2004). However, the diverse fauna of medium to large sized Cerrado mammals, including rare and se-

cretive species which are hardly recorded, require a targeted inventory method to be confirmed, such as the use of cameras traps. These not so recent technology has proved to be highly efficient to record elusive, terrestrial Neotropical mammals (Trolle & Kéry, 2005; Sanderson & Trolle, 2005).

## OBJETIVOS

The objective of this study is to update the previous Limoeiro Region medium and large sized mammals' inventory, adding new data mainly from camera trapping, but also from traditional methods.

## MATERIAL E MÉTODOS

This study was conducted in the Limoeiro Region (18°22'S, 48°07'W), a typical cattle ranch area with a mixture of human - created and natural vegetation types at the Municipality of Cumari, southeast of Goiás State, Brazil. The climate has two well - defined seasons, one wet (from September to March), and other dry (from April to August) (Sano & Almeida, 1998). Most of the area (85%) has been covered with pasture for at least ten years. However, it still contains small patches of original vegetation, such as semi - deciduous forest and cerrado *sensu stricto*. All natural habitats were used by the cattle at some period, and

the stock of around 15.000 heads of *Bos taurus* of the farms undoubtedly have a great impact on the vegetation. Besides fragmentation, recreational hunting by cowboys has been a normal practice in the region previously and contributes to the decrease of many mammals species; however, hunting has diminished significantly within recent years, according to some questionnaires carried out in the area. Field work was carried out, not systematically, from 2003 to 2011. This inventory was based on 1) direct observation (night search and opportunistic sightings), 2) camera trapping, 3) signs identification (tracks, scats, and holes/dens) (Becker & Dalponte, 1999; Lima & Borges, 2004), collection of road killed animals, and sporadic interviews. Six camera - traps were trapped randomly along trails, inside or in the border of patches of natural vegetation, next to the water and food sources, and remained on field for not determined space of time.

## RESULTADOS

Our study recorded 27 species, belonging to 15 families and eight orders, at Limoeiro region: *Cabassous unicinctus*, *Dasyurus novemcinctus*, *Euphractus sexcinctus*, *Callithrix penicillata*, *Cebus* sp., *Coendou prehensilis*, *Cuniculus paca*, *Dasyprocta azarae*, *Hydrochoerus hydrochaeris*, *Lycalopex vetulus*, *Cerdocyon thous*, *Chrysocyon brachyurus*, *Leopardus pardalis*, *Puma yagouaroundi*, *P. concolor*, *Galictis cuja*, *Lontra longicaudis*, *Eira barbara*, *Conepatus semistriatus*, *Nasua nasua*, *Procyon cancrivorus*, *Mazama* sp., *Tamandua tetradactyla*, *Myrmecophaga tridactyla*, *Pecari tajacu*, *Sylvilagus brasiliensis*, and *Didelphis albiventris*. The *Ozotoceros bezoarticus*, *Tapirus terrestris*, *Tayassu pecari*, and *Alouatta caraya* were mentioned in several questionnaires answered by local people, but were never recorded by other methodologies.

At least seven of these 27 species are listed under some threaten category, while one is *data deficient* (IUCN, 2008). Although sampling effort for each method haven't been the same, direct observation was the method that recorded more species (24 [85.7%]), followed by carcasses encounters (22 [78.5%]), camera trapping (20 [71.4%]) and signs (18 [64.2%]). The effort applied in camera trapping (one year) was much lower when compared to the other methods (about eight years). Despite that, although being the most expensive methodology, it also result in a significant success.

## CONCLUSÃO

Despite the high altered degree of the area, it still holds a great number of medium and large sized mammals, including top chain predators, such as maned wolf and puma. All the sampling methods derived very similar results in matters of number of species recorded; although none of them had register all of them. We highly recommend a combination of methods to better survey areas richness. We also suggest carrying out the inventory for at least one cycle of seasons, in order to increase the chances of registering naturally rare and elusive species. Studies like this are of fundamental importance, as it provides data to subsidy the formulation and implementation of management and conservation strategies in areas of interest. In this sense, inventory of species constitute the first step to know how medium a large sized mammals use altered habitats.

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