

# Capture and Preparation of Chiropterans in the Caatinga, Petrolandia, Brazil

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## Introduction

In beginning to understand the biodiversity in the Brazilian Caatinga there are many biologists working in the field to monitor the species in different locations of the Caatinga. The Caatinga is a large geographic area that has various different types of vegetation and environment. The part of Brazilian Caatinga in this study was the Northeastern part which consists of a semiarid region with temperatures and rainfall measures that give it the title of a “tropical seasonal forest” and is known as the larger portion of environments found within Northeast Brazil. This environment consists of many cacti and vegetation that can do well with very little rainfall. The Caatinga semiarid region has an area of 734, 478 km<sup>2</sup> and is spread over multiple states of Brazil. The bats in the Pernambuco state of Brazil Caatinga is poorly sampled and therefore is important to collect specimens on trips into the field.



Figure 1 - Caatinga environment of study area



Figure 2 - Abandoned House mist net location

## Objectives

The objective of this study was to monitor and collect some bat specimens of different species found in this specific region of the Caatinga within Petrolandia, Pernambuco.

## Methods

The method of capture in this study was with black mist nets. Mist nets (figure two and three) work by dividing a large net into five separated parts stretched out with two tall poles on each side. While flying at night the bats sometimes cannot see the net and fly right into them.

Figure 3 - Setting up mist net in other capture location.



The method for preparing the specimen for collection in the field is as follows:

- Ether in jar to kill specimen of study
- 10% Formaldehyde covered cotton ball goes into Mouth (to hold it open)
- Measure arm length, ears, legs, noseleaf (if exists on species)
- Weigh specimen
- Inject with fermaldehyde and cover body with fermaldehyde.
- Pin to stiffen in position

## Results

Throughout this week study in the field five specimens were collected and three different species. We captured *Desmodus rotundus* (figure four) a bat that feeds on the blood of cows, *Trachops cirrhosus* (figure five) which eats insects and mammals, and *Noctilio leporinus* (figure six) which eats insects and fish. The vampire bat was taken for both the collection as well as further study on rabies at the Universidade Federal do Vale do São Francisco.



Figure 4 - Sangivorous bat (*Desmodus rotundus*) caught at abandoned house mist net.



Figure 5 - Omnivorous bat (*Trachops cirrhosus*) caught at abandoned house site.

Figure 6 - Piscivorous bat (*Noctilio leporinus*) caught at pond nearby abandoned house in mist net.



Figure 8 - Fishing bat stuck in mist net by the pond.

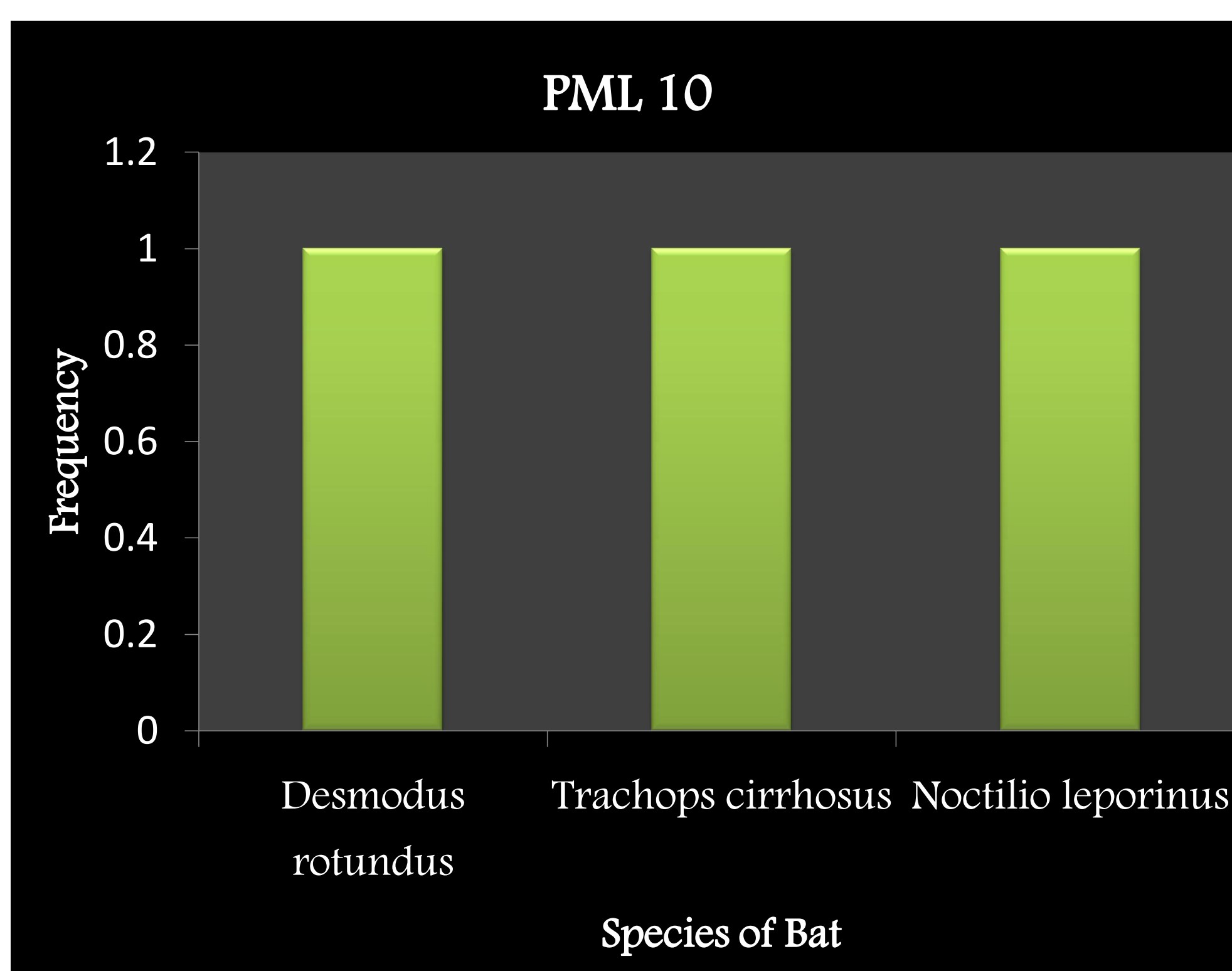


Figure 7 - Graph of the frequency of each species of bat.

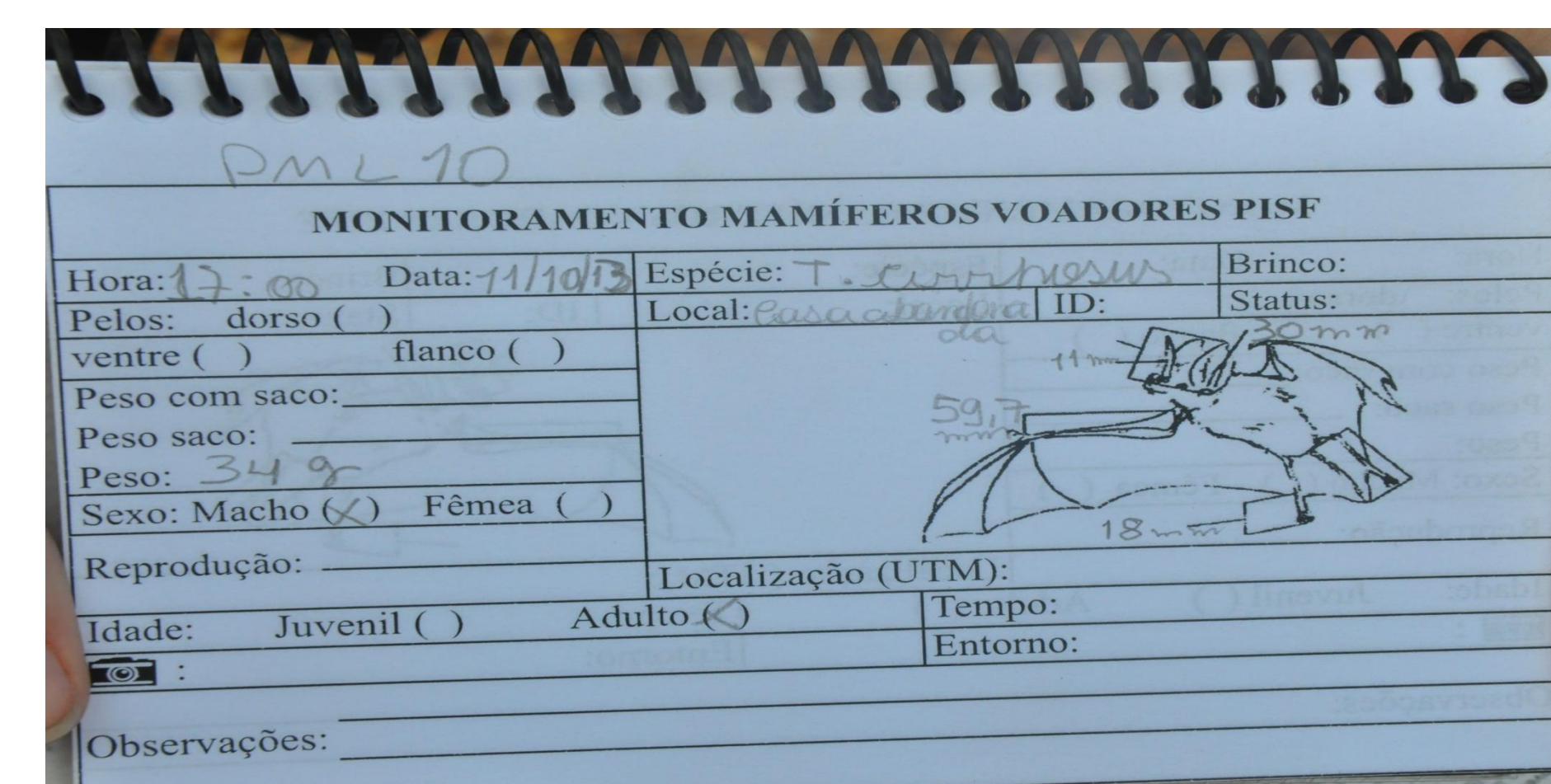


Figure 9 - Recording sheet.



Figure 10 - Preparing *Trachops cirrhosus* for collection.

## Conclusion

It is important to study the different species of bats within different areas of the Caatinga based on the differences of vegetation over such a vast amount of area. It is also of upmost importance to continually do studies on sangivorous bats considering many diseases are transferred from mammal to mammal via blood.

## References

- Albuquerque et al., 2012  
Astua and Guerra, 2008  
Reis et al., 2010

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