

# Partial Report

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## Introduction

The Golden-headed-lion-tamarin (GHLT) is endemic to the southern Bahia region. Due to habitat fragmentation and its originally restricted distribution *L. chrysomelas* is considered a threatened species (Hilton-Taylor, 2000, MMA/IBAMA, 2003). In the area of occurrence of *L. chrysomelas* two different fitoecological physiognomy are found (Rylands *et al.* 1992; Pinto 1994): *Wet Forest*, with no distinct dry period and characterized by over 1000 mm of rainfall annually, high trees, and many epiphytes; and the *Mesophytic Forest* characterized by c. 1000 mm of rainfall annually and a distinct dry period (Gouvêa *et al.*, 1976).

The western area of occupancy of *L. chrysomelas* is dominated by pasture and the remaining populations of the species are found in small and isolated forest fragments (Pinto e Rylands, 1997). Such region is characterized by a high seasonality, trees are smaller and loses its leaves during the driest period (semideciduality), what does not happen in areas nearer to the coast where the other researches on GHLTs were conducted.

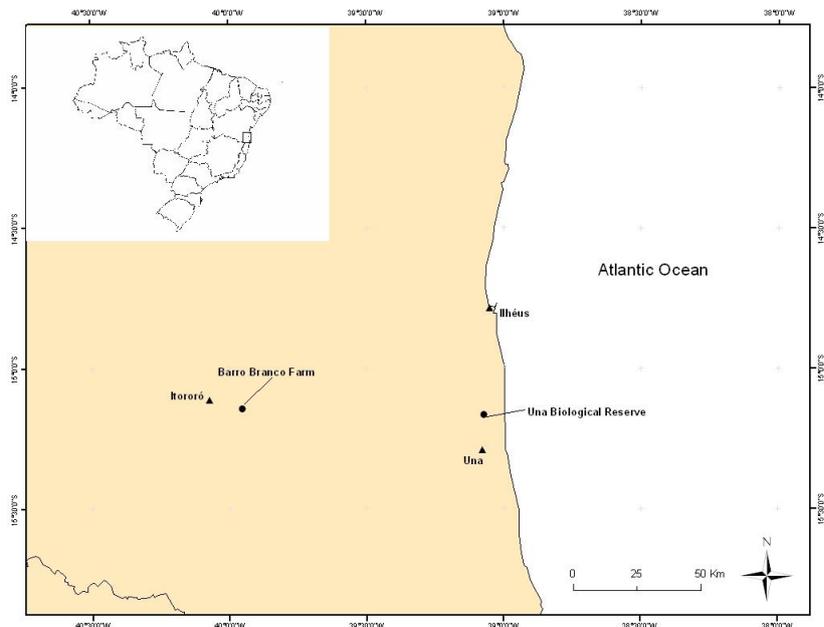
All the studies on the ecology and behaviour of *L. chrysomelas* were held in areas of Wet Forest, near to the coast, at the Lemos Maia Experimental Station (Rylands, 1982) and a long-term study has been conducted at the Una Biological Reserve (Raboy, 2002; Raboy and Dietz, 2004; Raboy *at al.* 2004). The species is frugivorous-faunivorous, fruits are the principal component of its diet, and the forage for animal preys (insects and small vertebrates) generally occurs in epiphyte bromeliads. Exudates are also consumed, in holes gnawed by *Callithrix kuhli* in *Parkia pendula*, but in lower proportions, probably due to the high abundance of fruits and flowers in the studied area. (Raboy, 2002). The home range varies between 40 ha (Rylands, 1982) and 123,4 ha (Raboy, 2002). Populations inhabiting western areas, in regions covered by mesophytic forest, have never been monitored.

The main objective of this study is to understand the ecology and behaviour of GHLT in a Mesophytic Forest and verify how differences in the habitat affect species ecology and behaviour by comparing results with researches conducted in Wet Forest. A better understanding of ecological needs of lion tamarins and how they distribute their time among different activities in different habitats is key to formulating conservation practices for the species.

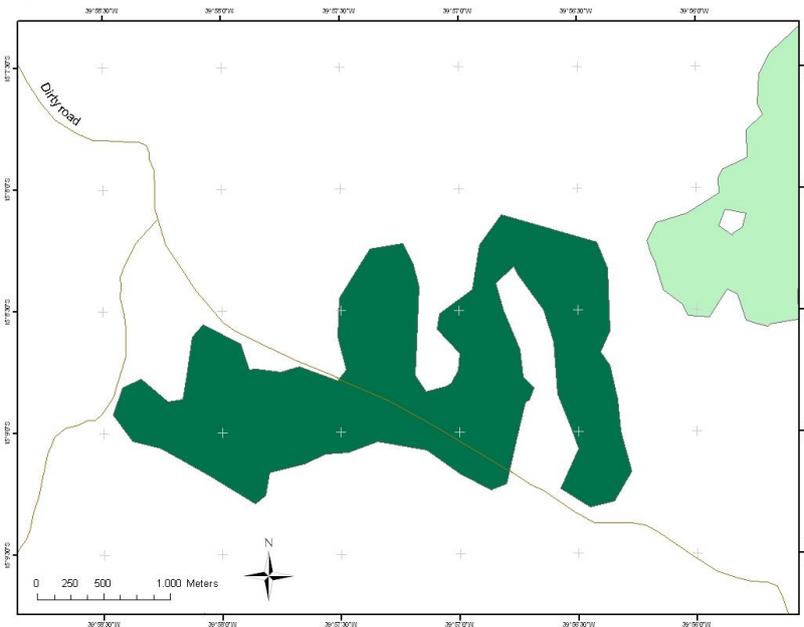
## Study Site and Subjects

During the first months we visited a lot of semidecidual forest fragments within the distribution area of *L. chrysomelas*, to choose the best place for the study. It was not an easy task, since the access to the fragments were often difficult due to bad conditions of the dirty roads or even to the absence of roads to get to the fragments. Moreover, some farm owners did not allow us to conduct the study on their properties. In July we chose the place for the study and since then the work with the tamarins have begun.

The study is been conducted in Barro Branco Farm, Itororó (Pictures 1 and 2). The area has approximately 350ha of semidecidual forest isolated by pasture and it has suffered intensive selective logging in the past. This situation is representative of most of the fragments on the region of semidecidual forest.



**Figure 1: Location of the study area and Una Biological Reserve.**



**Figure 3: Location of the study forest fragment. The white area is pasture.**

At least three groups of lion tamarins have been identified in the area and, at the beginning, we tried to capture two of them for radio transmitters. Unfortunately, the capture did not succeed. Apparently, lion tamarins were not attracted by bananas or any other fruit, and other animals, such as coatis (*Nasua nasua*) and tayra (*Eira barbara*), are abundant and eat all the fruits before the tamarins can get to it. So we decided to follow one group without radio transmitter.

In October we started to follow a group of golden-headed lion tamarins, with four adult individuals. After a period of habituation with the researcher, which lasted approximately one month, data collection started in November.

### Data Collection

Data on activities is collected using scans sampling (Altmann, 1974). The activity of each individual of the group is registered at 20 minutes interval. Position of the group is also registered

every 20 minutes, using GPS. The methodology is the same as used on studies with golden-headed lion tamarin in humid forest, so comparison can be more accurate. On each scan sampling, the activity of each individual, the height, type and width of substrate used are registered. The plants used in the groups' diet are marked and the location plotted in map for future identification.

### Preliminary Results

Until now, we have 90 hours of observation and 284 group scan samplings, totaling 941 registers. Ten different sleeping holes have been identified. We still don't have enough data to make any conclusive analyses of ecological parameters, such time budgets, home range, foraging, neither for comparison with the humid forest tamarins.

### Future work

We will keep monitoring the same group. One field assistant is about to be employed and we will make another attempt to capture the group, to fit one individual with radio transmitter. If we succeed, two groups will be captured. Data on fruit availability and climatic parameters are also being collected.

### Activities since February 2005 until January 2006

Activity	F	M	A	M	J	J	A	S	O	N	D	J
Visit of fragments and contact with owners	X	X	X	X	X	X						
Recognition of the area and attempt to capture						X	X	X	X			
Habituation									X	X		
Collect data on activity										X	X	X

### Initial budget of the project

Rate of exchange (2004)	£ 1	US\$ 1,80	R\$ 5,57
1 Radio-receptor	£ 560	US\$ 1.000	R\$ 3.120
2 radio-transmitters	£ 280	US\$ 500	R\$ 1.560
Field Assistant	£ 1.300	US\$ 2.340	R\$ 7.240
Field Material	£ 350	US\$ 630	R\$ 1.950
Office Material	£ 200	US\$ 360	R\$ 1.115
Travel / Spendings (fuel, food, maintenance)	£ 2.000	US\$ 3.600	R\$ 11.140
<b>TOTAL</b>	<b>£ 4.690</b>	<b>US\$ 8.430</b>	<b>R\$ 26.125</b>

Budget for 18 months

Total received at the time we get the money: £ 4.690 = R\$ 23.367,76

### Expenditure: February 2005 - January 2006

Fuel	R\$ 2.904,47
Spendings (food, field material)	R\$ 1.599,53
Car maintenance	R\$ 3.685,23
Administrative tax (IESB - 10%)	R\$ 2.336,76
<b>TOTAL</b>	<b>R\$ 10.525,99</b>

Obs: Radio receptor and radio-transmitters were bought with another source of money that could be used exclusively for that purpose (Primate Action Fund). Still left: R\$ 12.868,61

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