

HUNTING PRACTICES AMONG TWO ETHNIC GROUPS LIVING IN THE LAGOAS DE CUFADA NATURAL PARK (LCNP), GUINEA-BISSAU: HOW ARE NON HUMAN PRIMATES PERCEIVED?

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Abstract

Although protected areas have several goals, these areas were created mainly to protect biodiversity. Hunting and bushmeat trade represent major problems for wildlife conservation in Lagoas de Cufada Natural Park (LCNP). One of the Park goals is to protect animal biodiversity in the area. The aim of this study was to assess the relationship established between local human communities and non human primates (NHP) in order to contribute to a successful biodiversity conservation strategy. The study of perceptions and attitudes of the Beafada community – the major ethnic group present in the Park (77, 4%) – and the Balanta – the second (8, 7%) – was important to understand how these could interfere or dictate hunting of NHP and bushmeat practices. This presentation was specifically focused on assessing hunting and bushmeat perceptions and practices. Observation, questionnaires survey (N=258) and in-depth interviews (N=40) were applied to different categories of Beafada and Balanta interviewees (villages chiefs, hunters and others) in 32 rural villages located inside the Park territory during the period of four months. Balanta ethnic group display more “environmental-friendly” hunting practices and are not so involved in the NHP bushmeat trade. They hunt mainly with dogs (and use traps) specifically for consumption. Balanta are not traditional hunters, however, among the Beafada there are professional hunters (hunt every day) and most men hunt sometimes more than once per week. Beafada men always use rifles and sell NHP carcasses, preferably in major cities (e.g. Buba or Bissau). All NHP hunted by Beafada are for bushmeat trade. NHP are perceived very differently by both ethnic groups and although Balanta perceive these mammals as edible, their practices are more conservation-friendly than the Beafada way of dealing with other animals: as merchandise/product to be sold. For both ethnic groups chimpanzee was considered a different NHP as it was considered highly not edible.

Keywords: Bushmeat, hunting habits, non human primates, ethnic groups

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1. INTRODUCTION

This study was designed to explore the links between livelihoods and protected areas where people use natural resources for their livelihoods. The main goal of this research was to assess the relationship developed by human local communities, the forest and other animals, especially non human primates (NHP). My main goals were to: 1) understand the relationships between resource use, protected areas and attitudes; 2) identify problems for biodiversity conservation; and, 3) suggest potential solutions.

A relationship assessment involves the measurement of attitudes and knowledge of perceptions and meanings given by locals to their surrounding biodiversity. Conservation efforts without considering local people may be doomed to fail as people attitudes towards conservation can make a difference (Casanova and Sousa, 2007). Such knowledge can be transformed in a biodiversity conservation tool, because social perceptions and attitudes are important to a full understanding of the basis of conservation programmes (Adams and Infield, 2003; Lee and Priston, 2005). Can chimpanzees (*Pan troglodytes verus*) and NHP be

sheltered from the intense deforestation and bushmeat trade (with pet market that accompanies bushmeat) presently occurring in this country (Casanova and Sousa, 2004, 2007; Cá, 2008)?

In order to assess the relationship developed by human local communities (Beafada and Balanta), through their perceptions and attitudes, regarding the forest and other animals, especially non human primates (NHP) in the LCNP, I incorporated both quantitative and qualitative methodology. The main research hypotheses of the present study are as follows:

- (a) Local attitudes towards the protected area will be a function of how restrictions on use and conflicts with animals impact on livelihoods;
- (b) Gender, ethnicity and cultural expectations and values will underlie attitudes and actions;
- (c) Finding mechanisms to improve understanding of the potential benefits of biodiversity conservation – via education and livelihood support – might enhance compliance with protection and conservation.

2. STUDY SITE: LAGOAS DE CUFADA NATURAL PARK (LCNP)

LCNP (11°43'N; 15°20'W) is located in the eastern region of Quínara, south region of Guinea-Bissau. Quínara covers the sectors of Buba and Fulacunda, the two principal conglomerations in the area. The Park covers an area of 89.000 ha (including water areas) with 5878 people distributed within 33 principal rural villages according to the last census conducted in 2007. The predominant ethnic groups are: Beafada (77.4%), Balanta (8.7%), Fula (3.6%), Manjaco (3.6%), Pepel (2.6%) and Bijagó, Mandiga and Mancanha [combined at 4.1% (IMBALI, 1997)].

LCNP was created in December 2000 (IBAP, 2007) by the Guinea-Bissau government and by the Portuguese State (with the participation of the European Union).

3. METHODS

This study was a combination of both quantitative and qualitative methodological approaches, which is becoming more common in Anthropology and other social sciences (see Barnard, 2000; Rapport and Overing, 2000; Kottak, 2004; Sampieri, Collado and Lucio, 2006). This combination increases confidence in the results presented, strengthening the completeness of the study by using complementary questions within a single study (Arksey and Knight, 1999).

The universe of this study was constituted by the population of the administrative region of Quínara living in the LCNP. However, since censuses usually do not take into account people's migrations, these are not reliable demographic data when applied to a population where frequent mobility is a feature.

The sample was constituted by individuals belonging to the two most representative ethnic groups: the Beafada community, which is the more expressive ethnic group present in the Park (77.4%), followed by the

Balanta [8.7% (IMBALI, 1997)]. Given the unavailability of reliable demographic data, the sample of this study was a non-random one (Quivy and Campenhoudt, 1998; Sampieri et al., 2006) translating in the impossibility of extrapolating the data to all population living inside LCNP.

The survey (N=258) was applied to both ethnic groups [Beafada (N=129) and Balanta (N=129)] where age-groups and gender intervals were as balanced as possible. Our goal was to collect a large amount of information regarding different aspects of the individual's livelihoods inside the Park including hunting and feed habits. In-depth interviews (N=40) were only applied to men as follow: villages chiefs (N=3 Beafada and N=5 Balanta), hunters (N=7 Beafada and N=7 Balanta) and farmers (N=10 Beafada and N=8 Balanta). We wanted to assess the interviewee's perceptions about the LCNP, the way biodiversity conservation was interpreted, and how natural resources are used. We also aimed to understand their hunting habits and practices.

Questionnaires survey was analyzed using SPSS statistics (version 18). In-depth interviews were analysed using the relational data-base software Atlas.ti (V6.2). This analysis included the calculation of the Weighted Rank Index - Top Five Animals for the trait *edible/not edible* animals.

4. RESULTS

4.1 Edible vs. not edible wildlife – reflections of economic or subsistence values?

When asked about which animals the respondents perceived as *edible*, ethnic group differences was clear (Figure 1.1). As *edible* animals, Beafada men and women chose only non-primate animals such as roan antelopes [*Kobus ellipsiprymus unctuosus* (first)], pangolins [*Manis tetradactyla* (second)], gazelles [*Kobus kob* (third)], turtles (*Kinixys belliana nogueyi*), mudskippers [*Periophthalmus argentilineatus* (only women)] and hornbills [*Bucorvus abyssinicus* (only men)] as the last animals on their top-five edible species ranking. Balanta, on the other hand, seemed to perceive primates as *edible* animals. However respondents indicated that the most *edible* animal for both men and women were the gazelles, followed by patas monkeys [*Erythrocebus patas* (second)], vervet monkeys (*Chlorocebus sabaeus*) and baboons (*Papio cynocephalus papio*) in third and fourth positions respectively (Figure 1.1a). In last, but still included in the Balanta list of top-five *edible* species the sooty mangabeys monkeys [*Cercocebus atys* (only women)] and the roan antelopes (only men) could be found.

The top-five *not edible* animals for both ethnic groups seem to be the opposite of the top-five *edible* animals. Beafada men and women chose, apart from hyenas [*Crocuta crocuta* (second)], only primates as *not edible* animals such as chimpanzees (first), patas monkeys (second), vervet monkeys (third), baboons and sooty mangabeys monkeys last (Fig 1.1b). Balanta seemed to perceive as *not edible* animals, hyenas (first) and

chimpanzees (second) as the Beafada, but also snakes [*Python sebae* (third)], pangolins (fourth) and bush babies (*Galago senegalensis*) in last position of *not edible* species.

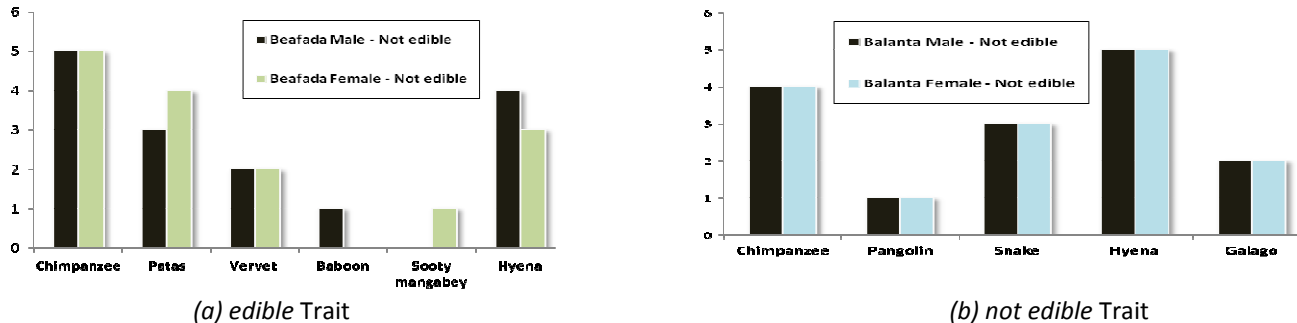


Figure 1.1: Comparing results from (a) *edible* trait and (b) *not edible* trait top-five weight rank index (WRI) of primates and non-primates from the survey questionnaire responses (N=258).

4.2 Income

In order to collect more detail economic information, during men's in-depth interviews, respondents were asked about how they would earn money to sustain their households. Opportunities and constraints regarding income were expressed in the networks through linkages with the term "money". According to the responses of the Beafada men (N= 20), most of them depend on cash crops (90%) to earn money, but apart from this activity, they also relied on fishing (40%) and hunting (45%) simultaneously as other important sources of money (see Figure 1.2).

According to the perception of Balanta men (Figure 1.3), cashew (85%) along with paddy (70%) and dry rice (65%) has become an important source of income. Nevertheless, other activities beside these three also constitute important sources of money: 1) Selling of crops [peanuts, tomatoes, mangoes, bananas (35%)] 2) Selling of domestic animals (15%) since Balanta do not slaughter domestic animals except for celebrations (weddings, births, funerals); 3) Fishing (15%); 4) Palm oil selling (12%); 5) Palm oil harvesting (11%); 6) Charcoal selling (8%); and finally, 7) Hunting (4%) was pointed out as the least activity practice by the Balanta men in order to get money.

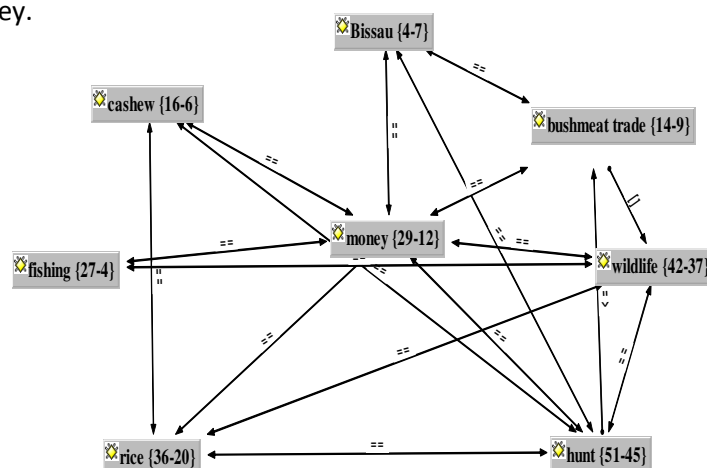


Figure 1.2: “Money” network according to the perception of Beafada men (N=20). For this and all subsequent figures representing networks extracted in Atlas.ti software, the signs in the arrows represent: == is associated with; [] is part of; => is cause of; <> contradicts; is a is a. Numbers in the {} represent: the first value, the number of links with other codes; the second value, the number of times the code was referred in the interviews.

Figure 1.3: “Money” network according to perception of Balanta men (N=20).

5. DISCUSSION

Cashew, dry and paddy rice seem to be the major sources of income for both ethnic groups Beafada and Balanta. However, other activities were mentioned by respondents because of their economic value for villagers' livelihoods such as hunting, fishing, crops selling and others. An important difference between these two ethnic groups is the fact that Beafada men rely more on hunting (Muslims are heavily involved in the bushmeat trade – see Casanova et al., in press) in order to get money than Balanta men do. The Balanta display more *environmental-friendly* hunting practices and are not as involved as the Beafada in the NHP bushmeat trade. Balanta do not have hunting traditions as professional hunters (they use mainly dogs to hunt and not guns); among the Beafada there are professional hunters who hunt every day with rifles.

6. CONCLUSION

NHP (chimpanzees not included) are perceived very differently by both ethnic groups and although Balanta perceive these mammals as *edible*, their practices are more conservation-friendly than the Beafada way of dealing with other animals: as merchandise/products to be sold. The bushmeat trade dynamics among these two ethnic groups is important to implement the most effective conservation measures near each of them, always taking into account their own particular needs and features.

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