### 1.1. Object

The objective of the present master's thesis consists of identifying and comprehending the construction of identity by residents of the neighborhoods surrounding the Pedra Branca Massif through the activity of hunting in Rio de Janeiro in the decades prior to and surrounding 1974 (when the Pedra Branca State Park was established) as well as hunting's corresponding effect on the landscape.

Specifically, this study looks to reflect on the forms in which hunting has taken in Brazil from simple traps to group hunting techniques and hunting with dogs. Additionally, hunter motivations including dietary, economic and cultural subsistence are discussed. By studying hunter techniques and motivations together with socio-economical factors of the time period, this text treats and describes how a small population of marginalized citizens of the city of Rio de Janeiro constructed social and self identities through hunting in the Pedra Branca Massif.<sup>1</sup> These identities included garnering prestige as a "bread-winner", an important part of establishing gender roles, and the possession of specific knowledge of the "natural" landscape.

This research will then discuss how this mix of urban and rural landscape has been altered through these cultural practices. As Potter (2004) discusses, the relationship between human-actors and the land is constantly changing and evolving. Therefore, in addition to describing how hunting contributed to landscape transformation in Rio de Janeiro, this text also focuses on how changes in the socio-economic landscape, in turn, altered hunter motivations and identity.

<sup>&</sup>lt;sup>1</sup> A coastal mountain range located in the Western Zone of Rio de Janeiro, surrounded by urban neighborhoods and home to one of the largest urban state parks in the world at 12,500 ha; the Pedra Branca State Park (INEA website, accessed April 2011).

Summarizing, the object of the present dissertation can be organized into three central questions:

- What social, environmental and socio-economic forces drove a man to hunt?
- Historically, how has hunting transformed landscapes and specifically, the "urban forests" of Rio de Janeiro?
- What effects have changes in the cultural landscape, at varying scales through urbanization and globalization processes, had on hunting practices and the significance of place to hunters?

## 1.2. Relevance of the study

During the millennia prior to man's existence, geological and geomorphic processes continuously altered the face of the planet. Animals migrated and ecosystems responded to disturbances such as lightning, temperature change, or flooding. However, it was man, not the eagle, the sloth, nor the beetle that created the term landscape to describe the realm in which he carries out his existence. In addition, it is man who possesses the awareness, the capability, and the knowledge to utilize this landscape in a more or less sustainable fashion permitting efficient use of resources while avoiding unnecessary or unjust risk.

Man has not and does not always act in the best interest of sustainable landscape use, a problem that is exacerbated by extreme social inequality. It is this inequality that leads those living in poverty to indirectly abuse resources due to a lack of choice. For example, shanty towns (locally known as *favelas*) are constructed on hillsides in Rio de Janeiro, promoting deforestation and erosion. Meanwhile those with power follow a strikingly similar course of destruction, abusing resources directly, possibly out of fear of losing said power. Where hundreds of *favela* dwellers may settle in a few square kilometers, a luxury condominium may deforest an equally large area to be populated by one-tenth the number of residents as seen in figures 1 and 2. These two social groups describe population extremes between which exists the multitude. It is exploring this range of identities that we can begin to understand how cultural identity relates to land-scape value and it is this value that determines how resources are used.



Figure 1: Wealthy residences in the PEPB

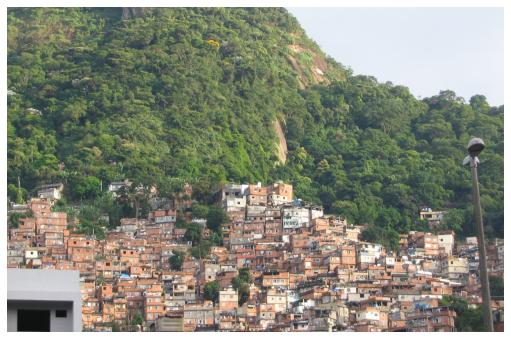


Figure 2: Rocinha favela on the Tijuca Massif

Additionally, while hunting has been practiced for millennia and studies abound attempting to understand how the prehistoric hunter subsisted from pole to pole, fewer have attempted to understand hunting by people as they transitioned from land-based economies to salary-based wage economies. The city of Rio de Janeiro, Brazil has experienced rapid urban growth over the past 60 years in. In

the four decades between 1960 and 2000, 108 million people, more than half Brazil's population, migrated from rural Brazil to the coastal cities in search of work with the percentage of Brazilians living in cities increasing from 15 percent to 62 percent between World War II and 1975 (Perlman 2010, p.48). Specifically, Rio de Janeiro's metropolitan<sup>1</sup> area increased from 2.9 million in 1950 to 11.8 million in 2010 (IBGE, 2010 census). However, those who arrived in Rio, "lured by the new radio broadcasts and, later, television, which depicted the city as a sun-kissed place where everybody seemed to have a maid," found an economic downturn, "due to deindustrialization; the move of the national capital (and its related jobs) to Brasília; and the move of business, commercial, cultural, and intellectual centrality to São Paulo" (Perlman 2010, p.51).

This population advance changed local societies as traditions brought from the countryside met with the realities of living in an enormous city and among a corresponding population of urban poor. These migrants settled in wide-ranging neighborhoods from the *favelas* in the center of the cities to populating the outer urban/rural "fringe" - perhaps in an attempt to recapture a small part of the life they left behind in the predominantly rural interior. This unprecedented migration may have seemed like a "cancerous growth," but according to Pearlman, these migrants "actually kept the place going, by doing all of the low-income jobs that a city needs to get done" (Economist, 2010, p.81). Today, as in the past, Rio de Janeiro continues to grow while preparing for the World Cup in 2014 and later the Olympic games in 2016. In addition, "virtually all of the projected population growth on the planet in the coming decades will be urban growth, will be in the cities of the "global South" (Asia, Africa, and Latin America), and will be concentrated in informal settlements" (Perlman 2010, p.41). A close look at how the Pedra Branca Massif helped sustained social structures during rapid urban growth yields a better understanding of how forest resources, people's daily lives, and the

<sup>&</sup>lt;sup>1</sup> The metropolitan region of Rio de Janeiro constists of the following municipalities: Rio de Janeiro, Belford Roxo, Duque de Caxias, Guapimirim, Itaboraí, Japeri, Magé, Maricá, Mesquita, Nilópolis, Niterói, Nova Iguaçu, Paracambi, Queimados, São Gonçalo, São João de Meriti, Seropédica, Tanguá and Itaguaí" (Lei Complementar Estadual no 133, 2009 Art 1<sup>0</sup>). These boundaries were altered multiple times over the time period discussed, yet the population increase is still dramatic.

city were, and continue to be, interlinked in a system of systems. A spatial analysis of the daily lives of those people who live, work, and depend on the Pedra Branca Massif, even those based in the past, assists in better predicting how growth will and perhaps should alter this space today and in the future.

In addition, these hunters possess a specific and difficult to attain traditional knowledge of forest resources and behaviors, not readily available in current literature. Protecting this knowledge goes beyond preserving a traditional way of life or cultural activity. It also helps to understand the implications of local and state policies regarding the use of the Pedra Branca state park for those small populations still subsisting on the land today. Preserving the oral histories of Rio de Janeiro's hunters reveals an understanding of how marginalized sections of societies adapt to their circumstances to not just survive, but to culturally subsist within the socio-economic reality in which they find themselves.

### 1.3. Research Methodology

The primary method of research was capturing oral histories and memories through semi-structured interviews of both men and women possessing some connection with hunting in the years surrounding 1974, when the Pedra Branca State Park was established. As Pollack (1992, p.201) discusses, memories can belong to individuals or to groups and tend to focus on key characteristics or events in the life of the person or group. In addition, these memories will frequently involve strong characters who leave a mark in social memory. Finally and most geographically relevant to this study, memories often entail a specific place. This place can be home and hearth, as described by Tuan (2001); special, for example, due to memories of warmth and security or the opposite extreme of parental abuse. On the other hand a place may have a special meaning because it is outside of the normal routine. Pollack (1992, p.202) points to childhood vacations and postings in foreign countries as examples. Hunting fills a role in both areas, as a diversion from daily life and as a contribution to the hunter's table, attributing resources that enable an inviting, warm, and welcoming home to family and friends.

The interviews also serve the purpose of presenting residents' perceptions of the landscape and how it has changed over time. Descriptions of landscape transformation over the past half century are captured in the specific details that

the interviewees provide. Their awareness of habitat alterations as agricultural plots were replaced by forested park or urban growth and of faunal composition as species declined, departed, or thrived provides a local historical knowledge that cannot be found in a library. Indeed, Vandebroek et al. (2011, p. 2) state that local knowledge "systems" are important and useful "for community health, nutrition, education and cultural heritage, conservation and other societal challenges".

In collecting oral histories, 15 men and three women ages 43 through 79 were interviewed. The residents interviewed reside in four neighborhoods: Camorim, Vargem Grande, Pau de Fome and Campo Grande – all bordering the Pedra Branca State Park. No dominant racial group was observed. However all hunters were men and no one knew of a woman hunter. Hunter occupations varied; there were multiple small scale farmers, to include one interviewee's deceased father who was a subsistence farmer. In addition there was a carpenter, an inspector for the state, and other day laborers. During the interviews with women, both husbands and their fathers were discussed and four of the men interviewed discussed deceased friends or fathers who had hunted. In total, the details of 18 hunters, all male, and the perspectives of three women are used to discern the characteristics of hunting in the Pedra Branca Massif during the decades prior to the 1970s. A copy of the questionnaire as well the acceptance term used in the interview process (TCLE) can be found in the annex.

Additionally, reports on animal trafficking are utilized to compliment the interview data. Multiple field studies were performed observing the presence and absence of fauna and in the search for vestiges of hunting activity. Finally, multiple texts on hunting and identity construction were utilized to analyze and draw conclusions from interview data.

The decades prior to the 1970s were chosen for a number of reasons. First, hunting is an illegal activity in the municipality of Rio de Janeiro creating a nearly insurmountable obstacle to the solicitation of truthful data from current hunters, regardless of their motivations. Therefore, an elderly population, protected by subsistence clauses in previous federal laws, was chosen with the goal of interviewing hunters who were willing to discuss their prime years as hunters. Secondly, the establishment of the Pedra Branca State Park on June 28<sup>th</sup>, 1974 through state law no. 2,377 provides a historical marker for interviewees to utilize in recalling specific memories tied to hunting. One of the driving forces for creat-

ing the park was the rapid growth of the city. This incredible urban growth meant unprecedented increases in the informal housing sector. The state park was also critical to the state's ability to supply its residents with fresh water (INEA, 2011). In addition to the establishment of the park, this time period marks the arrival of wide-spread access to electricity and refrigeration. Therefore, those residents living in poverty or on the urban/rural border in the years prior to the 1970s had little access to fresh meat, an important factor in hunter motivations as will be seen in later chapters. The arrival of "progress" and urbanization to the West Zone of Rio de Janeiro stimulated the creation of jobs and slowly and steadily diminished the dependence on farming and hunting by the inhabitants of the Pedra Branca Massif.<sup>1</sup> Management plans for the State Park describe the urban advance over the Pedra Branca Massif stating:

As áreas de Campo Grande e a parte mais ocidental de Jacarepaguá, que abrangem igualmente as encostas do maciço, caracterizam-se como zonas de transição rural-urbana, apresentando trechos de ocupação rarefeita entremeados em segmentos onde se pratica uma pequena agricultura com fins comerciais, em franco processo de decadência e sem condições de resistir à expansão urbana. [Translation... "The areas of Campo Grande and the western-most part of Jacare-paguá, which similarly approach the slopes of the massif, show stretches of sparse occupation interspersed among segments of small scale commercial farmers who are in a clear process of decline without the ability to resist urban expansion"]<sup>2</sup> (Programa de Trabalho para o plano de manejo do PEPB, 1979).

Finally, this time period is marked by the "Economic Miracle" as the Brazilian Economy transitioned from a predominantly agricultural economy into a major industrial power over the period 1964-1979.

In summary, the 1970s in Rio de Janeiro, Brazil experienced intense cultural and socio-economic change. For this reason, it is a significant period in Brazil's history and reveals substantial details about today's Brazilian society.

<sup>&</sup>lt;sup>1</sup>It must be stressed that Barra da Tijuca's boom occurred from 1970 on.

<sup>&</sup>lt;sup>2</sup> Translated by author.

### 1.4. Area of study: Pedra Branca Massif

The Pedra Branca Massif is a coastal mountain chain located in the geographic center of the municipality of Rio de Janeiro in the region labeled the "Western Zone" of Rio de Janeiro, Brazil. It is dominated by the Pedra Branca State Park or *Parque Estadual da Pedra Branca* (PEPB) shown in figure 3. The park is 12,500 hectares and was established in 1974 by law no. 2,377 in part to contain the rapid westward expansion of Rio de Janeiro that began in the 1970s.

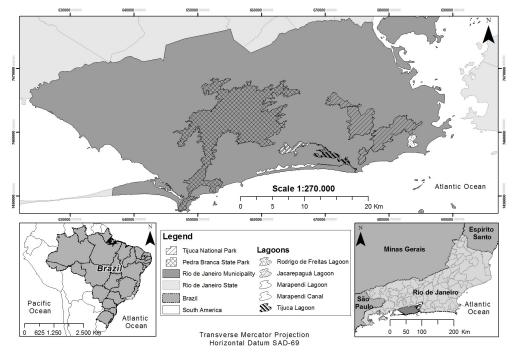


Figure 3: Rio de Janeiro Municipality. (Oliveira, 2010).

According to Fernandez (2011), this time period saw an intense urbanization into the Western Zone of Rio de Janeiro with many small scale rural farmers caught in the middle. As can be seen from figure 4 on the next page, the park, outlined in red, is heavily forested and contains remnants of the Atlantic Coastal Forest that once covered nearly the entire area known today as the state of Rio de Janeiro. However; today only seven percent of the original Mata Atlantic Coastal Forest Biome remains in all of Brazil according to the SOS Mata Atlantica Foundation. Seemingly, on all sides of the park boundary, the city awaits permission to continue expansion and re-territorialize this urban forest for *other* uses.

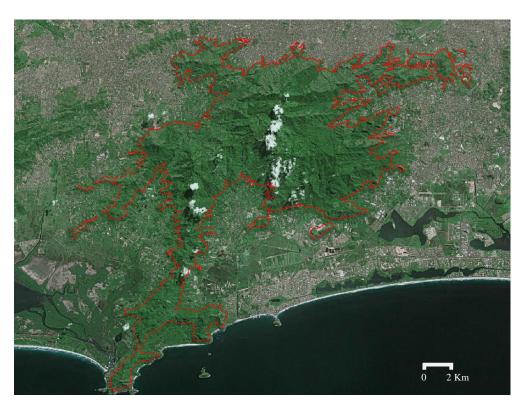
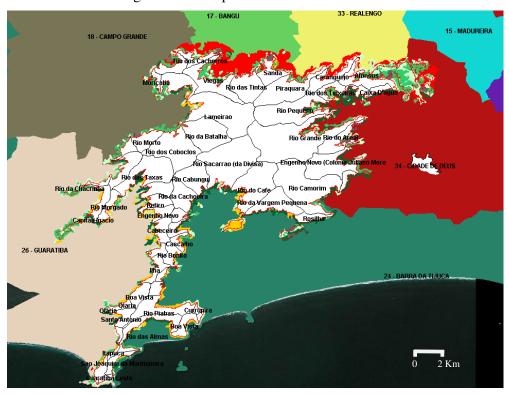


Figure 4: Arial photograph of PEPB (UERJ – Guia Digital do PEPB).

Over the past 400 years, the area currently defined by the PEPB has been exploited by Portuguese Colonial Plantations who exported sugar cane, then limited quantities of coffee and finally it was an important source of energy during the 20<sup>th</sup> century as the city grew at an ever increasing rate. For example, as steam engines took the place of water driven mills, the production of vegetable-based charcoal was important to sustain the industries that helped sustain the city's growth (Corrêa, 1936). Additionally, after slavery was abolished, the former plantations were parceled and small scale agriculture transformed the landscape into banana farms and pastures. Their goods were then sold in Rio's markets or utilized for subsistence, especially in the case of newly freed slaves (Ibid).

Another important factor in establishing the park was safeguarding the city's water supply. As can be seen in figure 5, PEPB contains various river basins which help to both control flooding and sustain the city's demand for water. The park encompasses hillsides ranging from 100 meters to the tallest point in the municipality; the Pedra Branca peak measuring 1,024 meters (INEA, 2011). The neighborhoods surrounding the PEPB consist of middle and low income families and therefore a mix of formal and informal housing. There are even luxury con-



dominiums interspersed along the border of the park illustrating the exchange value for this land through real estate speculation.

Figure 5: PEPB river basins (UERJ – Guia Digital do PEPB).

This place where urban-meets-rural is an ideal location to understand how urbanization and globalization processes transform the landscape. The relationships between human and nature can be understood through analysis of the interactions between the city and the forest. In other words, an understanding of the social metabolism of the city and how it is fed by various resources, including the forest, can be discovered through a study of how these resources are utilized and why certain resources are chosen above others.