

Wageningen University - Department of Social Sciences

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# **The Case for Bio-centric Development:**

**An Ethnographic Study of the Tambopata Macaw Project,  
Ecotourism & Volunteer Tourism in the Peruvian Amazon**

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Photo: Scarlet Macaw chicks from an artificial nest near Tambopata Research Center.

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## **An Ethnographic Study of the Tambopata Macaw Project, Ecotourism & Volunteer Tourism in the Peruvian Amazon**

**By  
Elisabeth Gish**

**An International Development Studies MSc Thesis  
Presented to the Rural Development Sociology Department of  
Wageningen University  
August 31, 2009**



**For Jeff,  
the artist, lover, philosopher, friend, playmate, and partner  
who encouraged and helped me to realize this dream**

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\* \* \*

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## APPENDICES

Appendix I: List of the Tambopata Macaw Project’s Primary Study Species

Appendix II: Interview Guides

Appendix III: Tourist Survey

Appendix IV: Coding Spreadsheets<sup>1</sup>

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<sup>1</sup> Appendix IV: Coding Spreadsheets will not be attached to electronic copies of this thesis.

## CHAPTER 1

### **An Introduction to the Tambopata Macaw Project, the “Mutually Beneficial Triumvirate” & Bio-centric Development**

Achieving conservation and development has proven extremely challenging. The central concerns of social and economic development projects have been human health and wellbeing, while conservation movements have traditionally strived to preserve every other species on Earth. Existing paradigms in development theory and practice are inherently anthropocentric, and conservation initiatives have been heavily criticized for ignoring the needs of human populations. Many new concepts and catch phrases (e.g. “sustainable development,” “ecological modernization,” and “integrated conservation and development programs”) have been proposed over the past several decades to reconcile the incompatible foci of conservation and development as each has been formulated (see Chapter 4). However, new conceptions of both the object and objective of development are necessary if we are to maintain and meet the needs of all species on this planet. This is an urgent task as accelerating anthropogenic changes – many of them wrought in the name of development – threaten the viability of the diversity of life forms, ecosystems, and environmental cycles regulating the biosphere.

This thesis uses the Tambopata Macaw Project (TMP) as a case study to explore an approach I call “bio-centric development.”<sup>2</sup> Rather than making humans the object of development, as do current approaches covered in the literature, the purpose of the bio-centric approach is to improve the health and well-being of non-human species, their habitats, and larger environmental entities like ecosystems. In addition to its alternative objectives and outcomes, the bio-centric approach is also different in its ecocentric grounding. This orientation grants equal importance both to humankind and to non-

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<sup>2</sup> I thank Dr. Jeanine Pfeiffer for suggesting the term “bio-centric” after reading a description of my conceptualization of development, written for a December 2008 research proposal.

human species, and emphasizes non-material human gain and qualitative change rather than quantitative economic growth.<sup>3</sup>

TMP has conducted research in the Tambopata province of southeastern Peru for the past two decades with a focus on monitoring macaws, parrots, and parakeets and developing new techniques to address the challenges macaw populations face. As this case study demonstrates, although human beings are not the primary object of bio-centric development significant human benefits may result as a side-effect of such work. For example, the TMP actively supports ecotourism, environmental education, and the capacity-building of young scientists (from local communities, other areas of Peru, and abroad).

Part I of this chapter introduces my research and defines terms that will be commonly used throughout the text. Part II provides relevant background information about the conservation status of macaws, tourism in the Tambopata province of Peru, and the co-evolution of the Tambopata Macaw Project and its principal sponsor the ecotourism company Rainforest Expeditions (RFE). A brief history of the Tambopata Research Center and Posada Amazonas are given here, as these two RFE lodges were the primary sites for my fieldwork,<sup>4</sup> and their stories provide tangible examples of the more abstract conservation, development, and ecotourism principles discussed throughout the thesis. Thus, this chapter provides conceptual links to the themes of volunteer tourism and ecotourism, scientific research and conservation, and bio-centric development explored in depth throughout this thesis. It concludes with a brief description of the contents of each chapter that follows.

## **PART I: MSc THESIS RESEARCH**

### **Thesis Topic Selection & Preparation**

Frustrated by the seemingly inherent anthropocentrism of development studies (see Chapter 4) and still seeking a field site for my thesis research, I turned to the realm

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<sup>3</sup> The concept of bio-centric development is fully explained in Chapter 4.

<sup>4</sup> A full discussion of study site selection is detailed in the 'Fieldwork' section of Chapter 3.

of environmentalism for my MSc internship. As a Research Associate/Intern at Earthwatch Institute, I discovered a host of conservation research projects focused on studying and improving the health of non-human species and environmental aspects (like ecosystem functioning), which seemed to be achieving development in the process. The Tambopata Macaw Project is a particularly interesting example as it enables an examination of how several different actors (institutions/organizations, individuals, and groups) with complementary, and sometimes conflicting, interests function together to achieve common goals.

I dedicated a significant portion of my 400+ internship hours at Earthwatch Institute (EWI) to conducting an evaluation of “Macaws of the Peruvian Amazon” (EWI’s marketing title for TMP) for its Research Department. EWI has sponsored the Macaw Project since 2001, providing about 30% of its total funding, and sending over 300 short-term volunteers who supplied more than 13,000 hours of data collection labor (Brightsmith, Stronza, & Holle, 2008a: 2835). The Earthwatch mission is “to engage people worldwide in scientific field research and education in order to promote the understanding and action necessary for a sustainable environment” (EWI, 2007: 2). To achieve this, EWI sells “expedition” packages to people who join scientists in the field as volunteers who assist with data collection. Researchers gain supplemental funding and short-term labor for their projects.

My internship work included reviewing dozens of EWI internal documents (funding proposals, field reports etc.) and published articles on TMP research. The objective was to evaluate how information from these sources matches criteria for EWI’s new project performance indicators, called Measures of Success (MoS), to assist the Research Department in assessing both their project portfolio and the MoS themselves. (After many incarnations, a finalized set of MoS was developed based on the evaluation work of the RA/Interns and EWI Research staff.) The majority of EWI-funded projects focus on natural science investigations and conservation of threatened species and ecosystems. However, several of the MoS, are designed to measure how successfully projects are handling human issues like capacity-building and enhancement of local livelihoods. These are essentially development objectives.

My evaluation of the Macaw Project for Earthwatch highlighted some of the ways TMP is contributing to development by focusing on conservation. Such development activities are intended to enhance conservation by meeting human needs through ecotourism ventures like the Posada Amazonas project (see ‘The Native Community of Infierno, Tambopata Eco/tourism, & Posada Amazonas’ section, this chapter) and providing young scientists, biology students, and veterinarians with opportunities to gain new skills, fieldwork experience, and in some cases even design their own studies.

I realized TMP would make an excellent case study for my thesis because I wanted to study a non-anthropocentric approach to development. After contacting Donald Brightsmith, TMP Director and the original Principal Investigator for EWI funding, I decided spend four months in Peru conducting fieldwork for my thesis. This time was divided into two weeks as a EWI expedition participant, six weeks as a full-time TMP volunteer assisting with biological data collection and monitoring activities, and two months dedicated to interviewing people for my thesis research (see the ‘Fieldwork’ section, Chapter 3).

### **Thesis Research Focus, Objectives & Approach**

The Tambopata Macaw Project conducts ongoing field research on the macaw, parrot, and parakeet species (*Psittacidae* family) found along the Tambopata River in Southeastern Peru (see Appendix I for list of TMP’s primary study species). From its inception, TMP has focused on monitoring Psittacine populations not only to increase scientific understanding of the species studied but also to develop techniques that aid the birds’ reproductive success (Brightsmith, 2001b). These results have been disseminated widely to support conservation efforts in other areas. TMP has also deliberately used the research as a platform to develop the scientific capacities and conservation awareness of Peruvian and foreign volunteers who work with the project (Brightsmith et al., 2008a: 2840; Nycander et al., 1995: 442).

The for-profit tourism company Rainforest Expeditions (RFE) was founded a few years after the Macaw Project by its first research director, Eduardo Nycander, and former TMP assistant Kurt Holle. The lodges and concession lands now held by RFE house the TMP and provide its primary study sites. RFE is the project’s most important

sponsor as it offers free and reduced-cost services (such as room, board, transportation, electricity, and internet access for TMP's research staff and long-term volunteers) which make ongoing research in such remote sites possible.

Labor for TMP's monitoring activities is provided by volunteers interested in participating in biological field research. This includes both foreign and Peruvian students and scientists who dedicate a minimum of six weeks full-time work, and short-term volunteers who join Earthwatch Institute's 10-12 day "Macaws of the Peruvian Amazon" expedition. The TMP and its linkages offer an example that can be unpacked and analyzed to better understand the relationships between tourism, conservation, scientific study, and development in this case.

### ***The "Mutually Beneficial Triumvirate"***

The *Biological Conservation* article "Ecotourism, conservation biology, and volunteer tourism: A mutually beneficial triumvirate" describes the relationship between Rainforest Expeditions, the Tambopata Macaw Project, and Earthwatch Institute and analyzes how this arrangement supports conservation and generates income, funding, and other benefits for all partners (Brightsmith et al., 2008a). The article is co-authored by conservation biologist Donald Brightsmith (Director of TMP and EWI Principal Investigator), ecotourism entrepreneur and former TMP volunteer Kurt Holle (Rainforest Expeditions co-owner), and anthropologist Amanda Stronza (a tourism specialist who has extensively researched and written about the Posada Amazonas lodge, co-owned and co-managed by RFE and the Native Community of Infierno). The authors note that RFE as a for-profit tour operator, Earthwatch Institute as a volunteer tourism organization, and the research scientists of the Macaw Project "each have different interests and priorities," and ask "what are the costs and benefits of such programs for all three? What are the tradeoffs between business and conservation?" Ultimately, these authors seek to "determine how such interactions can aid conservation biology, ecotourism companies, and conservation on the ground" (2833). Their analysis is largely quantitative, based on counting and comparing the economic costs and benefits to each party in terms of dollars and labor hours spent.

### *Re-conceptualizing the Triumvirate & Adding Development*

This MSc thesis is a complementary investigation of the non-economic benefits and tradeoffs of the “mutually beneficial triumvirate.” It expands upon the relationship outlined by Brightsmith et al. (2008a) by offering an ethnographic exploration the triumvirate and the relationships between its various sides. My research also includes development as a fourth major aspect of analysis. Adding qualitative detail and the voices of individual actors from all sides of the triumvirate, my research reveals aspects of the triumvirate that do not appear when looking through the lens of quantitative, economic analysis. Attention to the interactions between the various groups of social actors involved (TMP researchers, and RFE staff, guides, and tourists) show the tensions, tradeoffs, and benefits of combining scientific research with tourism and taking an active development approach to conservation. Ultimately, I use this case study to propose that the triumvirate represents a fundamentally different approach for development theory and practice, and provides an example of what could be called “bio-centric development.”

My conceptualization of the triumvirate differs slightly from that of Brightsmith et al. (2008a) and my focus provides alternative perspectives on the triumvirate. The co-authors discuss the triumvirate in terms of three organizational efforts. While this thesis references many published works authored by RFE’s owners and TMP researchers, my analysis is founded on the varying views of actors who compose the social groups involved in the triumvirate. In Brightsmith et al. (2008a), the ecotourism side of the triumvirate is Rainforest Expeditions (RFE), treated as a corporate entity with RFE co-owner and article co-author Kurt Holle as its representative. This thesis uses the perspectives offered by RFE staff, guides, and tourists to represent the ecotourism side of the triumvirate. In both studies the Tambopata Macaw Project (TMP) is the conservation biology side of the triumvirate. However, whereas TMP Director Donald Brightsmith speaks for the organization in their study, in my research TMP is represented by a diverse array of TMP researchers, both paid staff and volunteers, which include Tambopata locals, Peruvian nationals, and foreigners (including Dr. Brightsmith and myself). The greatest difference is that while Earthwatch Institute is the volunteer ecotourism side of the triumvirate in Brightsmith et al. (2008a), I focus on TMP’s own long-term volunteers to investigate the volunteer tourism side of the triumvirate.

### ***Research Approach***

Interviews with TMP staff and volunteers, and RFE tourists, guides, and staff focused on actors' experiences with and opinions of both TMP and RFE, and their perspectives on the relationships between the two. This approach provided material for a multi-perspectival analysis of each side of the triumvirate and how its parts fit together. My research aims were: 1) to elucidate the benefits, tensions, and tradeoffs resulting from the interrelationships between TMP, its principal sponsor the ecotourism operator Rainforest Expeditions, and the volunteer/tourists who work as TMP assistants; 2) to understand what motivates the actors involved to participate; 3) to evaluate whether TMP provides an example of bio-centric development. From the ethnographic material collected to investigate these topics, patterns emerged that draw attention to additional themes.<sup>5</sup>

While I did not interview any Earthwatch expedition participants or ask any questions about EWI during interviews with other actors, EWI was mentioned by several interviewees and came up in many casual conversations with TMP staff and volunteers and RFE guides and staff. Earthwatch is linked to both scientific research and tourism in the social world of RFE and TMP. Earthwatch expedition teams are some of the most important tourists received both for the research funding and labor they provide TMP and for the lucrative bookings these large groups guarantee for RFE several times each year. Guiding these groups is an honor bestowed upon RFE guides, and TMP Director Donald Brightsmith has considerable influence in who is selected for these groups. He prefers using guides who have previously worked as TMP volunteers themselves.<sup>6</sup> Given this reality and my intimate understanding of Earthwatch from working as an intern there, EWI does factor into my analysis of certain emergent themes discussed in the results and conclusions chapters.

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<sup>5</sup> The process used to identify these emergent themes is explained in the 'Grounded Theory Methods' section of Chapter 3; results related to these themes will be analyzed and discussed in Chapter 6.

<sup>6</sup> Volunteer opportunities with TMP for RFE guides are explained in the 'Human Development' section, Part I of Chapter 5.

As my first foray into social science research, the information gathered by my fieldwork resembles a pilot study: I was still learning the ropes and testing and modifying interview questions throughout my time in Peru; I did not have the opportunity to interview respondents on multiple occasions, applying a more standardized research methodology. Much research remains to be done. This thesis provides a framework for future research on this “mutually beneficial triumvirate” and other projects that might exemplify a bio-centric approach to development.

### **Definition of Terms**

To make this thesis more accessible to readers, this section provides basic definitions of terms that are central to my research and frequently used throughout the text, thus they require immediate explanation in this introduction. Some are specialized and site-specific, and others have meanings that vary considerably in their usage by different social scientists. In general, the terms used in this research and the organization of actors into social groupings are derived from the definitions, divisions, and distinctions drawn by people at the field sites.<sup>7</sup> For example, the term “*guacamayeros*,” defined below, is a site-specific term that describes both the specialized labor of TMP researchers and their classification as a social group through local language use. The entries given here also indicate which terms are explained in greater detail with appropriate scientific citations in later sections. Larger theoretical concepts used for analysis in this thesis, such as “ecotourism” and “development,” that require more in-depth discussion and literature review are described in Chapter 4.

#### **“Actor”**

As used by the actor-oriented approach to development, social actors are people (individuals or collectives) or organizations with some “means of reaching and formulating decisions and of acting on at least some of them” (Hindess in Long, 1992: 23). My research focused primarily on the motivations, actions, and perspectives of individual actors (rather than those of formal collectivities or organizations) as revealed

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<sup>7</sup> For a complete explanation of these social groups see ‘The Demographics, Composition & Logic of the Social Groupings Used,’ Chapter 3.

through interviews and participation in daily life. However, my research follows the categories used by these actors to organize themselves into the social groups which compose the triumvirate.

This thesis is also grounded in the actor-oriented approach (AOA) to development studies (see Long, 1992). Based on the results of my research, I propose that the definition of the term “actor” should be expanded to include non-human subjects who are social actors in the human realm, such as the *Chicos* of the Tambopata Research Center (described in the following definition entry). A more in-depth discussion of this proposal and AOA are offered in ‘The Actor-Oriented Approach & Expanding the Concept of “Social Actor”’ section of Chapter 4.

### **The “*Chicos*”**

The *Chicos* are wild macaws that would have died from starvation and were taken from nests as chicks by Tambopata Macaw Researchers during the early 1990s and raised by hand at the Tambopata Research Center (TRC). Following fledging, at about 100 days of age, they were released into the wild. Since their release, they have integrated with wild macaw populations: eating the wild foods and clay which are the basis of macaws’ natural diets, mating with wild macaws, and successfully fledging chicks. However, because they are not afraid of humans, some individuals still return to TRC to beg or steal food, interacting with tourists, researchers, and RFE staff and guides. The raising of the *Chicos* and the supplemental feeding techniques developed by TMP in this work are a major part of TMP’s bio-centric development activities.<sup>8</sup>

### **“*Colpa*” or “(Clay) Lick”**

*Colpas* or clay licks are areas of exposed earth where vertebrate species are known to go to intentionally eat soil (see photo, Figure 1.1 below). This behavior is known as geophagy, and has been observed in many kinds of birds including parrots, geese, cockatoos, and pigeons. In addition, a wide variety of mammals, including humans, “have been found consuming soil on all continents except Antarctica.” Scientists

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<sup>8</sup> These activities are described in detail with scientific references in the ‘Macaw Development’ section, Part I of Chapter 5.

who study this behavior are still debating the reasons for soil consumption, which likely vary between species and clay lick sites as the chemical composition of soils varies in different locations (Brightsmith & Aramburú, 2004: 534-535). Explanations for such behavior include the Tums™ (antacid) theory that clay aids digestions by binding to toxins in animals' stomachs, and the salt theory that soil offers a source of sodium otherwise lacking in animals' diets. Much TMP research focuses on Tambopata's clay licks and their use by macaws, parrots, and parakeets.<sup>9</sup>

Licks are used as sites to monitor the populations of particular species, and soil analyses have been conducted to compare the composition of preferred feeding sites with other nearby soil types. Traditionally used as hunting grounds by local people, prominent *colpas* are now tourism destinations where visitors can predictably see a variety of wildlife.<sup>10</sup> The Department of Madre de Dios in Peru contains unknown numbers of *colpas*. There are dozens of highly visible *colpas* along the region's river banks (most commonly used by birds) and countless others in forest clearings (more commonly frequented by mammals).

**Figure 1.1: Photo of Red-and-green, Scarlet, and Blue-and-yellow Macaws in flight above a clay lick on the upper Tambopata River.**



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<sup>9</sup> A more scientific explanation of *colpas* is provided in 'The Tambopata Research Center' section, this chapter.

<sup>10</sup> This is analyzed in Chapter 6, 'Changing Human Use of Macaws & Colpas: from Hunting to Research and Tourism.'

### **“Guacamayero”**

The Spanish word for macaw is *guacamayo*, and the Macaw Project’s Spanish name is the *Proyecto Guacamayo*. Thus, in the Spanish-speaking world of TMP and Rainforest Expeditions, Macaw Project volunteers and staff are known as *guacamayeros* (which literally means “macawers”). *Guacamayar* (to macaw) is a verb used in everyday speech to describe the specialized labor of TMP staff and volunteers.

Becoming a *guacamayera* enabled my automatic integration into that world. It gave me an identity and role familiar to all RFE guides, staff, and tourists, and to TMP volunteers and staff. This provided an ideal basis for building rapport and gaining insider perspective on how the lodges’ function, the dynamics between scientific research and tourism, and the perspectives of various actors on the themes I sought to investigate. However, it also positioned me squarely as part of the Macaw Project, and undoubtedly influenced the way people saw me and what most chose to share with me. From the beginning, I disclosed to everyone I met that my ultimate purpose was to conduct fieldwork for my MSc thesis and I would be conducting my own research full-time during the latter part of my stay.

The various roles *guacamayeros* play and their interactions with other social groups are central to my research. The activities and daily life of *guacamayeros* are illustrated through an ethnographic narrative of my experience in Chapter 2 and description of my fieldwork in Chapter 3. Chapters 5 and 6 present and analyze the perspectives expressed by *guacamayeros* interviewed, comparing and contrasting these opinions with those of other social groups.

### **“Native”**

Native is a term that has been displaced in academia and popular use by more politically correct terms like “indigenous.” However, “native” is the term most frequently used in Madre de Dios to describe the region’s tribes and original inhabitants. This preference is evident in the name of the region’s organization of indigenous peoples: “The Native Federation of Madre de Dios” (FENAMAD *La Federación Nativa del Río Madre de Dios y Afluentes*, see <http://fenamad.org/home.htm>). “Native” is used to

distinguish these original peoples from the settlers who have colonized this part of the Peruvian Amazon. In keeping with attempts to represent the peoples studied in their own terms and using in their own language, I respectfully adopt the term “native” in this thesis.

### ***“Local”***

The definition of “local” is a matter of debate in social studies, linked to questions about locality and globalization in an age of increasing mobility and interconnection. Its definition has implications for the authenticity of claims to use rights over resources such as macaws, clay licks, and the forest surrounding RFE’s lodges (all of which are located in protected areas). Residents of Tambopata have long used waterways to access resources far from all human settlements. Therefore, “local” takes on particular connotations in relation to the resources of the multiple field sites along the Tambopata River that are encompassed by this study. Furthermore, many national and international actors, as well as local ones, are involved in the conservation of these resources and the construction of knowledge about them. Issues surrounding local knowledge, practices, and participation arose during my fieldwork and are highly relevant to the themes of this thesis.

In this study, I consider “locals” to be all people from Puerto Maldonado or the numerous small communities within a forty kilometer radius of Puerto Maldonado, and those who self-identified as being long-term residents of this area. I distinguish these “locals” from individuals who self-identify as being from other regions of Peru (nationals) or from other countries (foreigners). I do not consider locals (or any other categorization used to identify people) a homogenous group, but rather recognize that each person has a multi-faceted identity and a variety of interests.

Due to the special nature of the relationship between RFE and the Native Community of Infierno,<sup>11</sup> in some cases I identify Native Community of Infierno (NCI) members specifically to distinguish them from other locals. As it has been the community most directly involved with RFE and TMP, NCI is the only community in which I spent

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<sup>11</sup> This relationship is fully explained in ‘The Native Community of Infierno, Tambopata Eco/tourism, & Posada Amazonas’ section, this chapter.

time (besides the town of Puerto Maldonado) and from which I interviewed multiple people.

### *The Importance of Social Context*

Of those interviewed for this research, six were from the Native Community of Infierno. All RFE staff members (n = 13) are locals, as are about half of the guides (n = 10 of 18 total), and half of the Macaw Project FTLs (n = 3 of 6 total). The remaining RFE guides and TMP paid staff are from elsewhere in Peru, but they live full-time at the lodges while working for several months at a time. The two TMP lead researchers interviewed, Director Donald Brightsmith, and Project Manager Alan Lee, are both foreigners who have spent significant portions of the past decade living and working in Tambopata (other lead researchers and the Project Coordinator are Peruvian). The majority of TMP volunteers interviewed are foreigners (n = 9 of 12 total), and three are Peruvians nationals from outside Tambopata.

Distinctions between foreigners, Peruvian nationals, and locals, and between different kinds of locals (those from Puerto Maldonado vs. NCI) are relevant to this thesis for a variety of reasons. First, people at the field sites sometimes used these differences in explaining their responses to interview questions and conceptualizations of categories like “tourist.” Secondly, in certain sections of my analysis I note differences in the response patterns of people from different locations. The identities of foreigner, national, and local cut across the primary categories used to distinguish social groups in this research (guacamayeros, RFE staff, guides, and tourists) and in some cases seem related to variations in response patterns within groups. For example, the different sentiments expressed by NCI members vs. locals from Puerto Maldonado about social changes around hunting and food practices as a result of ecotourism.<sup>12</sup>

As shown in the definitions of terms described above, certain terms central to this thesis are only intelligible through an understanding of the social context in which they are used. The importance of social context is integral to the ethnographic methods

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<sup>12</sup> These are described and analyzed in the ‘Hunting & Local Food Traditions’ section of Chapter 6.

employed in this research.<sup>13</sup> The rest of this chapter is dedicated to providing readers with the background information needed to understand the theoretical frameworks, results, arguments, and analysis presented in the rest of the thesis. Chapter 2 provides an overview of the social context of the Tambopata Macaw Project and Rainforest Expeditions written in the form of an ethnographic narrative.

## **PART II: CONTEXTUAL BACKGROUND**

### **Geography, Protected Areas, Biodiversity & Tambopata Tourism**

Tambopata is one of three provinces in the Department of Madre de Dios, which lies within the south westerly corner of the Amazon forest. The area receives over 2800 mm of rainfall annually and is characterized by moist tropical/subtropical vegetation. Seasonal patterns are dictated by dry and wet periods, with dry season typically lasting from April to October. The region is a mosaic of floodplain and *terra firme* forests (Brightsmith & Aramburú, 2004: 535).

#### ***Protected Areas***

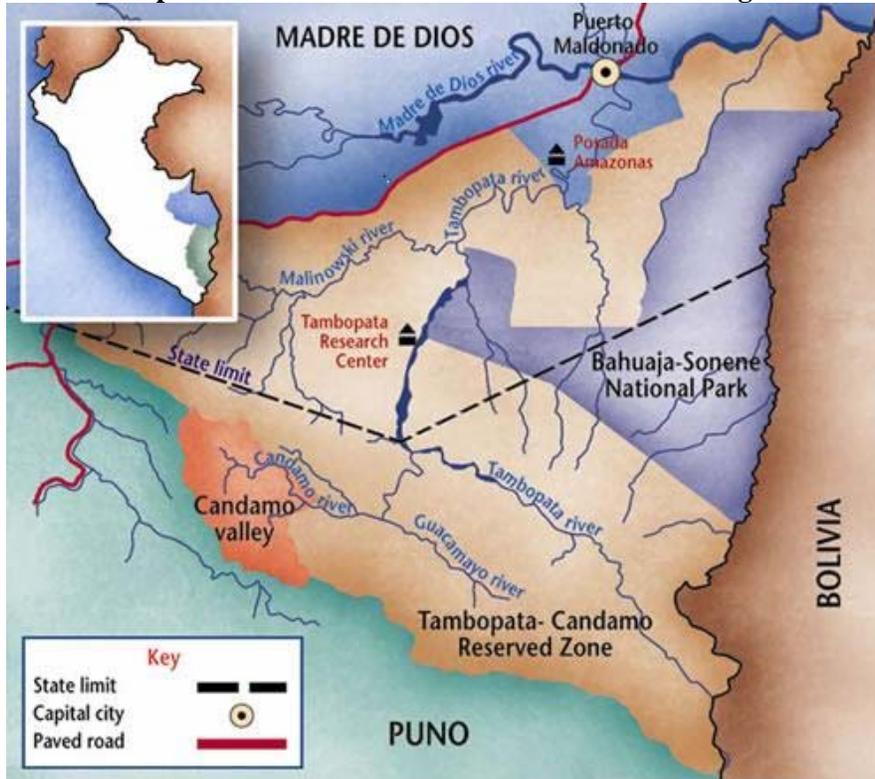
Madre de Dios is a mega-diversity hotspot and much of the region is covered by a complex of protected areas zoned for different levels of human use and conservation. The Peruvian system of natural areas' management includes 11 distinct classifications of natural protected areas, with various levels of use permitted in different kinds of areas (Matsufuji & T. Bayly, 2005: 64). The three largest protected areas in Madre de Dios are the Manu Biosphere Reserve (in Manu province), and the Tambopata National Reserve and the Bahuaja-Sonene National Park (in Tambopata province).

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<sup>13</sup> Chapter 3 contains a detailed description of these methodologies.

The 537,000 hectare Bahuaja-Sonene National Park lies on Peru’s southwestern border with Bolivia (as shown in Figure 1 below) is at the highest level of protection with human use highly restricted. National reserves are one step down in terms of protection. They are characterized by management practices, “development of sustainable use alternatives,” and direct use of wildlife resources (Matsufuji & T. Bayly, 2005: 64). Reserves allow for significant use by local populations settled in the area including: subsistence logging, subsistence use of forest products and commercial use with concession, subsistence and commercial hunting of wildlife, subsistence fishing and sport fishing with concession, and subsistence agriculture. Commercial logging is not allowed, but petroleum extraction and mining are allowed “subject to exigencies of the specific contract” (65).

**Figure 1.2: Map of Tambopata Protected Areas with Tambopata Research Center & Posada Amazonas lodges marked.**



Credit: Image used with permission of TMP Project Manager Alan Lee.

### *The Tambopata National Reserve*

The 274,690 Tambopata National Reserve (TNR) on the Park's northeastern side is the next step down in terms of protection level. The area was established in 1990 as the Tambopata-Candamo Reserved Zone and designated as a national reserve in 2000. The TNR is named after the Tambopata River, which takes its name from the quechua word “‘Tambo’ (*deposito*) and ‘Pata’ (*borde, elevacion, promontorio*)” because the river originates in the Andes. In the language of the region's native Ese 'eje people, this area is called Bahujaja (Matsufuji & T. Bayly, 2005: 67).

Northeast of the TNR is an official Buffer Zone that cushions the protected areas from the impacts of Puerto Maldonado and its surrounding human settlements. The Buffer Zone is a mixed use area populated by many small communities, farms and tourist lodges are interspersed with small private reserves, and activities like mining, hunting, and logging are permitted.

### *Biological Diversity*

Biological inventories of the flora and fauna found in the area now covered by the Tambopata National Reserve have been carried out since 1976. The results show that the area's “biodiversity is arguably unequalled anywhere else in Amazonia.” This relatively small area hosts 7% of the world's bird species and 4% of its mammals, many of which are “highly endangered in the rest of their range” (Kirkby et al., 2000: 7). Tambopata is especially famous with birdwatchers, as the location of the largest single-site bird list in the world with 572 species recorded in a 50 square kilometer area. For comparison, only 914 bird species have ever been sighted in all of Canada and the United States (Stronza, 2005: 4).

### *Eco/tourism in Tambopata*

Before 1993, tourism options in Tambopata were limited and “only a small enclave of neotropical biologists and conservationists frequented the forests” (Stronza, 2005: 5). Tourism figures from 1987 estimate just over 6,500 tourists visited the area (5). By 1998 the number of visitors to enter the Tambopata-Candamo Reserved Zone had risen to 14,000. The growth rate in the number of tourists visiting Madre de Dios from

1995-2000 was 22% per year, with the majority of this growth in Tambopata (Kirkby et al., 2000: 6).

The Department capital, Puerto Maldonado, is the hub of human activity and settlement. Its rapidly growing population is estimated at around 50,000 people (EWI, 2009: 7). The tiny Puerto Maldonado airport is touted as the “gateway to the Amazon” in tourism literature and most visitors arrive on daily flights from Lima and Cusco. Transport is also possible overland via Cusco (approximately 15 hours drive) depending on weather and road conditions, and from many other locations through the Department’s numerous navigable rivers. Most travel within Tambopata is by boat. Continuous hard rain can cause the Tambopata River to rise by two meters or more in just 24 hours. Its currents are ever changing the course of the river, creating new islands and shoals, blocking areas previously deep enough to pass and cutting new channels. Water levels and weather substantially affect travel times.

The majority of tourism companies offering jungle stays in the area operate lodges only reachable by boat, situated along the banks of the Tambopata and Madre de Dios rivers which intersect in Puerto Maldonado. Guests purchase tour packages that include transportation, meals, lodging, guide services, and activities that feature the regions’ flora and fauna (like guided wildlife walks). Rainforest Expeditions is one of the largest, oldest, and most well-established tour operators of this kind. Clay licks along river banks where macaws, parrots, and parakeets feed in large flocks are among the region’s principal tourist attractions.

### **Macaws’ Conservation Status, TMP “Macaw Development,” & Clay Licks**

Macaws, parrots and parakeets belong to the *Psittacidae* family of birds. *Psittacidae* contains the highest proportion of species in danger of extinction of any large bird family in the world (Brightsmith et al., 2003). Of twenty-two known species of macaws, fourteen are classified as extinct or threatened on the 2009 International Union for Conservation of Nature and Natural Resources (IUCN) Red List of Threatened Species. Five macaw species are extinct: *Ara atwoodi* (Dominican Green-and-yellow Macaw), *A. erythrocephala* (Jamaican Green-and-yellow Macaw), *A. gossei* (Jamaican Red Macaw), *A. guadeloupensis* (Lesser Antillean Macaw), and *A. tricolor* (Cuban

Macaw). Four macaw species are critically endangered: *Anodorhynchus glaucus* (Glaucous Macaw), *A. leari* (Lear's Macaw), *Ara glaucogularis* (Blue-throated Macaw), *Cyanopsitta spixii* (Spix's Macaw). Four macaw species are endangered: *Anodorhynchus hyacinthinus* (Hyacinth Macaw), *Ara ambiguus* (Great Green Macaw), *A. rubrogenys* (Red-fronted Macaw), *Primolius couloni* (Blue-headed Macaw). One species of macaw is vulnerable (*Ara militaris* (Military Macaw). Population trends are decreasing for all known species (<http://www.iucnredlist.org/search> + macaw).

The primary threats faced by macaw species are habitat loss, hunting, and collection for the pet trade. Macaws are particularly vulnerable to such threats because their naturally low reproductive rates inhibit the recovery of populations in decline. (Brightsmith, 2001b). Thus, the tragic state of Earth's macaw species is a direct result of human actions which have exacerbated the challenges macaws have always faced, such as finding adequate nesting sites.

Despite their charisma, until the 1990s macaws were the subject of relatively little scientific study and much about their natural history and reproductive ecology is still unknown. Like the Wildlife Conservation Society project in Manu from which it grew, the Tambopata Macaw Project has focused on building a basic understanding of macaw behavior and ecology by monitoring clay lick use and nesting success. TMP research has been oriented not only to understand but also to ameliorate the problems faced by wild macaws, much as traditional development projects intervene to address challenges faced by human populations.

### ***TMP 'Macaw Development'***

The three major factors limiting macaw reproductive success rates are: 1) lack of suitable nesting cavities, 2) successful fledging of young only occurs at about 60% of nests "as predators and parasites combine to kill many chicks," 3) even at successful nests where several eggs are laid, usually only one chick will fledge and the other chicks starve from malnutrition (Brightsmith, 2001b). The TMP initiatives described in the 'Macaw Development' section of Chapter 5 directly address these factors. TMP's macaw development work includes experimental techniques in artificial nest box design, hand-

raising and supplemental feeding of chicks to increase survival rates, and monitoring of macaw chick growth and health that includes veterinary care for the young birds.

Only one of the six macaw species found in Tambopata is threatened (*Primolius Couloni* or the Blue-headed Macaw). However, the new techniques developed through TMP's nest work with three non-threatened species<sup>14</sup> are being applied by projects attempting to bring populations of critically endangered species like Bolivia's Blue-throated Macaws back from the brink of extinction. TMP's hand-raising techniques are also being used to re-introduce macaw species to former ranges where their populations have been locally eradicated. This kind of active development approach, rather than a passive conservation approach, is essential if remaining macaw species are to survive.

Protecting large tracts of habitat is vital if remaining macaw species are to avoid extinction in the wild, however, TMP's approach is to more directly target the challenges macaws face. While macaw development techniques are one aspect, targeted conservation campaigns and human development projects like Rainforest Expeditions' collaboration with the Native Community of Infierno (NCI) are the other side of this coin. Because of the role soil plays in macaw's diet, especially as it is fed to young chicks, clay licks are among the most important resources for macaw conservation in Tambopata.

### *Clay Licks*

Tambopata's human inhabitants traditionally used clay licks and macaw nest sites as convenient places to hunt. Interviews with NCI members conducted by TMP Director Donald Brightsmith showed that the "most common use of macaws in this area has been for food." Hunting has contributed to lower densities of macaws in NCI as compared to the national park further upstream (Brightsmith, 2001a: 2). Results of a ten and a half month, in-depth survey of forest resource extraction by nine Infierno households (11% of the community) showed that macaws are still hunted and eaten by some (Piana, 2000: 16; 24). NCI members are certainly not the only Tambopata residents to hunt macaws, as

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<sup>14</sup> *Ara ararauna* (Blue-and-yellow Macaw), *A. chloropterus* (Red-and-green Macaw), and *A. macao* (Scarlet Macaw).

many non-native locals mentioned eating macaws and other bush meat during interviews (see 'Hunting & Local Food Traditions,' Chapter 6).

Unfortunately, even subsistence hunting can damage macaw populations because of their natural reproductive traits. As described by Charles Munn, one of the first scientists to study clay licks, because “macaws naturally occur at low densities and have low reproductive rates” it appears that “moderate hunting is sufficient to extirpate large macaws from large regions of the Amazon where the forest cover is still mostly intact” (1992: 57). This concern by scientist-conservationists from outside the area about declining macaw populations prompted the establishment of the Tambopata Macaw Project and stimulated a change in the primary use of Tambopata River clay licks from hunting grounds to a research and ecotourism resource.

As mentioned by several people interviewed for this research and respondents from Piana's study (2000), macaws may taste good but they provide little meat. As described by one RFE staff member:

Humans, we are not so dangerous for the macaws, I believe, because there are very few people who hunt macaws. For example, a shotgun cartridge costs, I think, 1 sole [~.30 U.S. cents] and a macaw is very small to feed a family. So they prefer to kill a wild pig over a macaw. (S1)<sup>i</sup>

On the other hand, most tourists in the Amazon are interested in seeing wildlife, macaws are large, brilliantly colored birds easy to spot, and tourism is fast becoming a primary economic activity for Puerto Maldonado. In a talk at the Tambopata Research Center in January 2009, Donald Brightsmith explained to the audience that he has never told members of the Native Community of Infierno not to hunt macaws, but he has explained their reproductive traits, emphasized their greater non-consumption value as a tourist attraction, and told them “macaws don't breed like chickens, so manage them wisely.” Macaw protection along the Tambopata River, and especially at the licks where TMP and RFE operate, is in part a product of this economic reality.

### **Historical Background: Tambopata Macaw Project & Rainforest Expeditions**

The shared history of the Tambopata Macaw Project and Rainforest Expeditions have created a unique set of conditions, explored throughout this thesis, in which

scientific study and ecotourism are intimately and inextricably linked in a relationship that facilitates both conservation and development. These circumstances are embodied in their flagship lodge, the Tambopata Research Center (TRC). A result of their co-evolution, TRC symbolizes the symbiotic relationship between conservation biology research and ecotourism in this case (see ‘Tambopata Research Center’ section below). As RFE has grown, the number of lodges it operates has expanded. In 1996, RFE entered into an innovative alliance with the Native Community of Infierno to construct the jointly owned and managed lodge Posada Amazonas (see ‘The Native Community of Infierno, Tambopata Eco/tourism, & Posada Amazonas’ below). Most recently, RFE established Refugio Amazonas lodge on a 200 hectare concession parcel that was heavily logged and hunted in the past; although this forest is now beginning to recover, fewer animals are spotted there than at the other two lodges. Macaw Project research teams operate at all three lodges.

Fieldwork for this thesis was conducted at Tambopata Research Center and Posada Amazonas. Posada is located twenty-six kilometers from Puerto Maldonado (Brightsmith & Aramburú, 2004: 535) on the shores of the Tambopata River within a private reserve communally owned by the Native Community of Infierno. TRC is located several hours further upriver inside the 275,000 hectare Tambopata National Reserve (TNR) on the border of TNR and the 537,000 hectare Bahuaja-Sonene National Park (Brightsmith et al., 2008). Both of these areas were designated as nationally protected shortly after TRC was established, and RFE owners were granted a concession to continue operating TRC for the purposes of scientific research and tourism.

### ***Tambopata Research Center***

In 1985 participants of Wildlife Conservation International’s (now the Wildlife Conservation Society (WCS)) training in macaw research techniques at Manu National Park extended their research to the Tambopata region (Munn et al., 1991: 44). Among the initiators of this effort were Charles Munn, a scientist from the United States of America, and Eduardo Nycander, a Peruvian architect from Lima who became enamored with macaws while doing research for his thesis on Machiguenga architectural styles in Manu National Park (Munn, 1994). The Colpa Colorado (referred to as the Tambopata Clay

Lick in literature of the time) was selected as a study site by Munn, Nycander, and others from WCS who conducted research from 1985-86 and 1989-91 (Munn et al., 1991: 43).

### *Macaw Research at the Colpa Colorado*

The Colpa Colorado is located on the edge of the Amazon in southeastern Peru at 13°07' S, 69°36' W, at an elevation of 250 meters above sea level. The lick is “a 500 m long, 25- to 30-m high dirt cliff along the western edge of the upper Tambopata River, formed by the river’s erosion of uplifted Tertiary age alluvial sediments” (Brightsmith et al. 2008b: 1-2). The nearest human settlement is 40 kilometers downstream (Kirkby et al. 2000: 13). There are no roads or airstrips in the vicinity, and river transportation is the only option for access to the area. A boat trip of seven to ten hours (depending on weather conditions, direction of travel, and motor power) is required to reach the lick from Puerto Maldonado which is the nearest large town.

The Colpa Colorado is an excellent site for studying a feeding behavior called geophagy, “the intentional consumption of soil by vertebrates” (Brightsmith & Aramburú, 2004: 534), because a wide variety of macaws, parrot, and parakeet species arrive daily at the Colpa Colorado to feed where they can be seen relatively easily. A lick with an unusually high level of activity, it “may be visited by up to 1700 psittacines of 17 species per day” (Brightsmith et al., 2008b: 2). It is commonly touted as one of the world’s largest parrot clay licks, and usually it does offers a much more impressive spectacle than the other numerous clay licks along the rivers of region.

### *Clay Lick Tourism*

TRC was built in 1989 on the western bank of the Tambopata River just downstream from the Colpa Colorado as a headquarters for ongoing macaw research. Although it continued to receive WCS funding for a few more years, 1989 is also cited most frequently in literature and lore as the year the Tambopata Macaw Project was official founded. The lucrative potential of coupling ecotourism with research at TRC was clear to its founders from the beginning (see Munn et al., 1992; Nycander et al., 1995; Nycander & Holle, 1996).

Operating tours under the name Tambopata Nature Tours, TRC received its first non-researcher guests in April of 1990, hosting fewer than 100 tourists that year (Munn et al., 1991: 43-44). TRC tourism steadily increased and in 1992 Eduardo Nycander and Kurt Holle founded the company Rainforest Expeditions (RFE). Funding to support ongoing macaw research was becoming increasingly difficult to find and RFE's founding was motivated partially to secure a continuous, reliable source of financing for TMP activities (Brightsmith, 2002: 5).

From island observation points opposite the Colpa Colorado, tourists and researchers enjoy open views of the lick and surrounding foliage where birds perch. Such great accessibility and abundance is good both for tourists hoping to see and photograph the birds, and for researchers who are able to collect data more consistently at the lick than by searching for birds in the forest. Feeding behaviors and numbers fluctuate, but follow seasonal cycles and weather patterns that can be forecasted thanks to years of scientific study by the TMP. RFE guides are able to set reasonable expectations about the level of activity at the lick during any given month, and allow their guests to stay in bed and sleep if it is raining in the morning because it is known that feeding will be minimal in rain.

### *The Native Community of Infierno, Tambopata Eco/tourism, & Posada Amazonas*

#### *The Ese Eja*

With the exception of “sporadic contacts during the 17<sup>th</sup> and 18<sup>th</sup> centuries,” the Andean mountain range and “poor navigability” of Madre de Dios’ rivers created a geographical isolation that protected the region from colonization until the 19<sup>th</sup> century (Stronza, 2000: 40). In her PhD Dissertation on the Posada Amazonas collaboration between the Native Community Infierno and Rainforest Expeditions, Amanda Stronza describes how: “Though Tambopata is home to many migrant and ribereño [river dwelling] populations from throughout other parts of Peru and the Amazon, it is the ancestral homeland to only a few indigenous groups who remain. Among these are the Ese Eja.” The self-denominated term Ese Eja means ““true people”” (2000: 42). Historical records indicate that Ese Eja peoples have lived on the Tambopata River since

the 16<sup>th</sup> century (43). The Bawaja Ese Eja population from whom Infierno's native members descend may have numbered more than 1,000 at that time, but today fewer than 200 remain (44).

The rubber boom of the 1800s brought many settlers to the region from other parts of Peru, and "migrants from Bolivia, Brazil, and as far away as Japan" (Stronza, 2000: 43). Since the 1940s the Peruvian government has viewed the Amazon "as an outlet for migration from the highlands" with the hope that "the rainforest would generate development and incorporate the area into the country as a whole" (Gray in Stronza, 2000: 41). In 1960s, the Peruvian government passed legislation making it possible for indigenous peoples to claim land rights, and native peoples began claiming "legally titled indigenous territories known as 'native communities'" (44).

#### *The Native Community of Infierno*

The Native Community of Infierno (NCI) was founded in 1976 and granted legal title to a small portion of the Bawaja Ese Eja's historical territory, 9,558 hectares situated about 40 kilometers upriver from Puerto Maldonado on both sides of the Tambopata River (Stronza, 2000: 44-45). In founding NCI, the Ese Eja joined with ribereños "peoples of indigenous Amazonian descent who were born in Tambopata, Puerto Maldonado, Tahuamanu and other areas in the Amazon, including Bolivia and Brazil" and Andean migrants from Cusco, Puno, and Arequipa who had been living in area for many decades (45). Accounts of why the Ese Eja decided to include non-native peoples in their community vary. Some elders recount government coercion to incorporate the migrants. Scholars report that representatives from the government entity in charge of granting land titles (SINAMOS or *Sistema Nacional de Apoyo a la Movilización Social*), informed Ese Eja leaders that twenty households were required to qualify for official community title, but there were only fourteen Ese Eja households "living in dispersed settlements called Chonta and Hermosa Grande" (45-46). Whatever the circumstances, NCI was incorporated by peoples from a variety of backgrounds and since its founding its members have inter-married. Thus, despite its name, NCI is a community as much migrant and *mestizo* as it is native.

### *NCI & Eco/Tourism*

Rainforest Expeditions is not the first tourism company to enter into an agreement with the Native Community of Infierno. Explorer's Inn lodge was constructed in 1976 on a parcel of riverfront property very close to that owned by NCI, and the Peruvian government granted the company rights to create a 5,500 hectare reserve in the surrounding forest to be used for tourism and tropical ecology research (Yu et al., 1997: 132). After a trail system and buildings were established, it was discovered that reserve granted to Explorer's Inn "overlapped almost completely" with the territory that been "previously and permanently assigned" to the neighboring NCI. To address this conflict, "Explorer's Inn agreed to pay Infierno US\$ 1 for each tourist, to provide employment for some members of the community and to fund a cooperative ethnobotanical study," and NCI agreed "to respect the boundaries of the reserve and forego hunting macaws on a clay lick located downstream from the lodge." However, Explorer's Inn failed to pay its per-tourist dues to NCI, and in 1993 "Infierno reclaimed its land and hired a surveyor to demarcate boundaries, leaving Explorer's Inn with only 15 of its original 5500 hectares". The co-authors of the article from which this story is excerpted assert that "it is unlikely that Infierno will ever enter into a similar agreement in the future," although they do note the cooperative venture NCI entered into with Rainforest Expeditions in 1996 (132).

In fact, the collaboration between Rainforest Expeditions and NCI represents an entirely different kind of agreement and approach to ecotourism which can be contrasted with that described by the co-authors of the article cited above. The article by Yu ("an American field biologist"), Hendrickson ("the American owner" of the Tambopata Jungle Lodge), and Castillo ("the Peruvian Chief of Manu National Park" for INRENA) describes the multiple challenges faced by Tambopata lodges trying to establish protected areas for tourism purposes. They recount problems with unstable concession rights and extortion by settlers infringing on property granted to lodges. For them, even providing local employment opportunities is nearly impossible as local people are "mostly unable to fill specialized jobs as managers, administrators, guides, *motoristas* (riverboat pilots), or cooks" (Yu et al., 1997:134)

The co-authors note that "local colonists [the people of Puerto Maldonado and its surrounding communities], who are after all, in their own fashion, landowners" do not

wish “to step down the social and economic ladder and take on the structured life of laborers.” This language choice belies their orientation towards local people as they refer to the native Ese Eja as “colonists” and cite the experience of Explorer’s Inn trying to hire NCI members as proof that local people are incapable of providing suitable labor for tourism lodges (134). The co-authors conclude:

Significant environmental conservation in the Peruvian Amazon will necessarily run counter to the interests of local inhabitants. Ecotourism can bring about temporary truces in the conflict between conservation and development by transferring some of the benefits of conservation to local inhabitants, at least over the short term. (137)

In their opinion, the greatest long-term challenge to successful ecotourism and conservation is the lack of State government “enforcement of local land titles and park boundaries.” A good critique would likely conclude that the approach these authors describe is not even ecotourism. However, this approach can be contrasted with Rainforest Expeditions’ ecotourism practices and how they have overcome the short-term labor challenges described by Yu et al (1997).

#### *Rainforest Expeditions’ Ecotourism Approach*

Rainforest Expeditions’ (RFE) policy has been to contentiously hire “Peruvian nationals to fill all staff positions, including guides.” Until 1997, they were “the only company in the region to hire Peruvian guides” (Stronza, 2000: 75-76). RFE’s approach is to provide intensive training and continued capacity-building for all its employees, helping local people to cultivate the skills needed to fulfill the kind of specialized labor tourism positions require. An excellent example is the innovative guide course Rainforest Expeditions has developed over the past 14 years and offers annually.

The intensive one-month guide course provides training in ecotourism practices and education about natural history, biology/ecology, the Peruvian parks system, conservation and endangered species, and the most commonly encountered plant and animal species in Tambopata. 40 participants are chosen from an applicant pool of over 100 individuals and includes not only current RFE guides and staff members, but also people currently guiding elsewhere, new tourism graduates and those completing a

practicum requirement to finish their degrees, and other interested individuals (such as park guards). Three places are always reserved for members of the Native Community of Infierno. The course is taught at RFE's lodges and the sites where RFE tourist activities take place. It concludes with written and oral examinations, which not all participants pass. Based on course performance, about twenty people are offered positions as new RFE guides for the coming season.

The ethics embodied in these Rainforest Expeditions' practices likely influenced the decision by the members of NCI to enter into an agreement with RFE despite their previous bad experience with Explorer's Inn. In addition, as noted by Yu et al. (2000), NCI members, like most people, prefer the idea of ownership to simple wage work for others' profit. As a guide from NCI explained to a group of RFE tourists enroute to Posada Amazonas, collaborating with RFE offered the community the chance to be "not just employees but owners of the lodge" (G16).

#### *The Posada Amazonas Collaboration*

After much negotiation, in May of 1996, the members of Infierno "signed a legally binding contract to begin building and co-managing Posada Amazonas" lodge with RFE. They named the joint venture the "Ke'eway Association in Participation," reflecting the agreement's spirit of active partnership. Under the arrangement, responsibility for management and all decision-making about the lodge is split 50-50 between the partners, and the profits are divided 40% to RFE and 60% to NCI. Built on land owned by NCI and designated as a communal reserve, NCI members will become full owners of Posada Amazonas lodge and everything it contains when the twenty-year agreement expires and can decide whether or not to renew their contract with RFE. Until then, NCI members cannot enter into agreements with competing companies (Stronza, 2005: 6). However, since the agreement was signed they have developed a number of independent additional projects, managed both communally and by individual households.

In the thirteen years since the Posada collaboration began, NCI members have been involved in a variety of ways: positions on the board governing NCI relations with RFE (*El Comité de Control de Ecoturismo*), as RFE guides, in the position of coordinator

between RFE and NCI (a liaison between RFE and the *Comité*), through the Department of Projects set-up to help NCI invest portions of Posada earnings into community development projects, as lodge staff, and as recipients of annual payments to each NCI member for Posada profits. NCI members have studied English and business administration in Cusco and Lima, participated in international exchanges about ecotourism and for specialized positions like cooking, and one has become a world famous birder who guides the kinds of ornithologists and academics who write books about the birds of Peru. NCI members have gained the experience necessary to initiate a number of individual or family-run ecotourism projects and the community is currently planning to establish another lodge independent from RFE. The benefits of participating in ecotourism have been many, as have the tradeoffs.

The NCI is not the focus of this thesis. However, the active collaboration of its members with RFE plays a significant role in the ecotourism side of the “mutually beneficial triumvirate.” I interviewed six NCI members during my research and coordinated an environmental education workshop for NCI students. Thus, the material presented in the Results chapter and my analysis is informed by perspectives offered by NCI members.

\* \* \*

The following chapters establish my research and theoretical frameworks, analyze the results of my fieldwork, and describe my conclusions. Linking citations are used throughout the thesis to guide readers to related sections within the thesis text. Chapter 2 is an ethnographic narrative of one day spent working as a *guacamayera*, providing a detailed description of the social contexts of the Tambopata Macaw Project and Rainforest Expeditions. This understanding of the activities undertaken and interactions that take place between the various groups of social actors is used to help readers understand the results and analysis presented in later chapters. Chapter 3 describes my research methodology and framework. Chapter 4 explains the theoretical frameworks used in this thesis, including a detailed explanation of the concept of bio-centric

development, and summarizes relevant debates in environment, development, and tourism studies. Chapter 5 addresses results related to my original research questions, and Chapter 6 describes some of the themes that emerged through the research process. Chapter 7 presents some conclusions that can be drawn from this case study.

## CHAPTER 2

### A Day at Tambopata Research Center in Ethnographic Detail

This chapter contains a description of one day working as a *guacamayera* at Tambopata Research Center (TRC). Following Max Gluckman's approach to the ethnographic case study, this chapter provides a detailed ethnographic account of real activities and interactions described as empirically as possible. Due to the repetitive nature of the biological research and tourism activities I was studying, there was no discrete, exciting "event" (like Gluckman's description of the bridge inauguration ceremony in his book *Analysis of a Social Situation in Modern Zululand* (1958)) that would allow me to unpack and analyze the social relations in which this act was embedded. Rather, I selected a typical day in February 2009 and wrote the narrative below over the course of a few days immediately following the day described.

This detailed first-person description places readers in my shoes at the time it was written, conveying the sights, sounds, and emotional tones of my experience as an ethnographer conducting fieldwork, a biological research assistant, and a tourist in the Amazon jungle. The events related below illustrate the social context in which this research took place and give readers a first person glimpse into the social worlds of the Tambopata Macaw Project and Rainforest Expeditions. This chapter describes the components of the "mutually beneficial triumvirate" as they are experienced at the field site, a messy mix of components that are defined and socially constructed in relationship to each other. The details of this context provide examples that offer conceptual links to the themes discussed in the following chapters of this thesis, such as the tensions created by combining scientific research and tourism, and the appreciation and understanding fostered by direct participation and hands-on experience in biological fieldwork. In addition, attention should be paid to how the activities of the *guacamayeros* mirror those of development interventions designed to increase the health and well-being of human populations.

\* \* \*

## ***Colpa Duty***

### ***04:02 – Lice***

I awake scratching my head. My alarm won't beep for another 33 minutes, but the lice I caught from a *gringa* friend who is studying with the shaman of the native community downriver itches me into consciousness. Nine days ago I realized there were knits in my hair and requested a bottle of shampoo and a fine tooth comb be sent upriver; it still has not arrived. I am critical of development, and came here to study conservation as an alternative approach. However, my lice infestation reveals the limits of my ecocentric beliefs and development critique – I want to kill them quickly, by modern means. (I had a patch of skin fungus growing on my arm which my friend and fellow *guacamayero*, from a native tribe in the area of Manu National Park, suggested I treat it with tree resin. Unfortunately, when I asked about indigenous medicinal solutions for lice he smiled and shook his head, drawing one fist from his forehead to his crown in a shaving motion.) I look at the clock, 25 degrees Celsius. I take out my earplugs to ensure I will hear the quiet tone of my alarm and manage to doze off again.

### ***04:35 – Wake-up***

Beep beep, beep beep, beep beep—the soft alarm on my digital watch wakes me from a fitful sleep. This watch has become the lifeline marking my days, from which I count and record the minute of each monitoring activity conducted as a volunteer *guacamayera* on the Tambopata Macaw Project. Grasping for my headlamp in the dark, I un-tuck the bug net from my bunk bed and check the floor for any wayward Wandering Spiders. (Members of the *Phoneutria* genus, known to be highly aggressive and venomous, are regularly encountered in the researcher's quarters of TRC). I stumble out and carefully wind my way in the dark through the angled rafters that join thatched roof to floor, grateful for the red and white reflective tape that helps illuminate them, and head downstairs to the bathrooms. There is no breakfast at this hour save toothpaste and coffee.

At 05:00 we meet in the equipment room. We grab backpacks, folders with data sheets, mechanical pencils, insect repellent, rain ponchos, binoculars, a telescope and

tripod, and foldable stools and head for the riverbank. We are going to the “tourists’ port” with its wooden stairs and rocky beach where tourists are collected for transportation by boat to the *colpa* observation point (as opposed to the “staff port” just upstream where we convene on days when no tourists are present, clambering down the eroding bank into the boat). Rubber boot marks filled with water several inches deep form the short muddy path through which we slip and slide, headlamps bobbing in the dark, until we reach the pebbled main trail. Firm ground is always a relief here, easing our passages. Arriving at the clearing by river’s edge, the dim light of a cloudy dawn greets us. We are early. We turn off our lights and wait.

After several minutes the *jefe de campo* (camp boss, field leader for TMP research) restlessly strides back up the path searching for the boat driver, the tourists, and their guides. The sound of an outboard engine starting just upstream is followed by the boat’s arrival at the tourist port a minute later. We are on the boat by 05:12. It is growing lighter by the minute. Three tourists and a guide appear, the others are coming just behind they assure us.

By 05:25 the *guacamayeros* are chafing to get going, the *jefe* is chatting with the motorist at the back of the boat and chiding the absent guide. The tourist in front of me speaks Spanish, and is swiveled around in her seat looking back and listening. “We are ten minutes late,” I explain that we want to be on the island across from the clay lick (*colpa*), with the boat gone, before the first bird arrives so as not to disturb their activity. “Damn tourists,” she says with a grin. A sharp call pierces the air, and the *jefe* notes scarlet macaw is the first bird of the day, instructing the *guacamayera* holding the *colpa* folder to record 05:28 as the arrival time for this species. It is fully light now, and the three straggling tourists and their guide finally appear.

The boat takes us a few minutes upstream, leaving the *jefe* and two *guacamayeros* at the point of the island where they will record the total number and time of all *Psittacidae* (the bird family that includes macaws, parrots, and parakeets) species arriving to area. The rest of us disembark further upstream, clambering up the footholds dug into the bank, ever eroding from the rise and fall of the water. The guides and tourists head left; we take the path to the right.

### ***05:41 – The Colpa***

We arrive at our observation point and set up the tripod. We are stationed about 175 meters from the face of the great lick, opposite its southern end across a narrow channel. Birds are beginning to arrive in singles and pairs. As they glide by, their dark silhouettes provide clues to their identities. Awkward, rubbery flight, wings that seem too small to support their fat bodies, looking “as if they are going to fall out of the sky” as one *guacamayera* described it to me, means it is either a Mealy or a Yellow crown parrot. Large body narrowing to a long tail and slow wing flaps means it is one of the three species of large macaws found in the area. We monitor fifteen psittacine species daily and must be able to distinguish between each of them. Without sufficient sunlight to illuminate their colors however, often it is not until their voices are raised in distinctive calls that we are certain of the precise species.

We record the arrival time of the first member of each species and watch them gather in the vegetation above the lick. They fly in mainly from the West, South and North. Generally large macaws arrive in singles and pairs, smaller macaws in groups of three to five, the parrots in scraggly flocks, the smaller parakeets in twittering flocks. They squawk and chatter in their various languages, landing and taking flight again, pairs preen each other and play, the branches of small trees are weighed down under the burden of dozens of parrots whose feathers add new shades of green to the foliage. Macaws cluster in tall trees on the bank above the lick, looking like giant flowers in brilliant shades of blue, red, and gold. The birds intermingle though often roughly segregate by species, all the Mealy parrots perched in the same few trees with some Blue-headed parrots and Yellow-crowns mixed in, the larger macaws clumping together. As more and more birds arrive, the sound grows louder and the calls become increasingly difficult to differentiate.

Finally, a group of two dozen Chestnut-fronted and Red-bellied macaws takes flight, calling loudly, they rapidly head north, flying low, upstream, scanning the lick area for any signs of danger, predators lurking in the bushes or eagles flying high above. Like jets performing in an air show, they make a synchronized turn just beyond the far end of the lick and veer back. This is known as “the dance” in TMP lingo, a phenomena once an almost daily occurrence that one researcher noted has been declining in frequency over

the years as more vegetation grows on the face of the lick. We record the time and species participating on the monitoring sheet. After a few more passes the birds settle in the vegetation below the lick, closer than before to the exposed sections of the bank riddled with beak marks. Feeding will soon commence.

### ***06:52 – Scientific Protocol***

As soon as the first bird lands on the lick we begin to count. Suddenly dozens of Mealy and Blue-headed parrots with two species of small macaws interspersed throughout are on the main section across from the tourists' observation point. A mixed flock of parakeets mobs another section on the left side closer to us, and a few White-bellied parrots alight on a section with a small area of exposed clay mostly obscured from view by vegetation. Every five minutes we scan the face of the lick from left to right and record the number of each species of bird, and at which section they are feeding during that minute. Birds are constantly landing and taking flight, ducking out of view and reappearing from under foliage that blocks our view. At first this frustrated me, because there is so much movement, and peering through the telescope from 175 meters away, it is difficult, if not impossible, to know whether a bird is being counted twice, another missed entirely. I keep reminding myself of the Project Manager's words: "It's an index, not an exact count."

By 07:00 new arrivals into the area have ceased. The *guacamayeros* who are monitoring arrivals 500 meters south on the point radio to ask how activity is going down on our end at the lick. The scientific protocol of the TMP requires us to wait to call the boat until fifteen minutes after the last bird has left the lick. However, there are still Dusky-headed parakeets and Mealy parrots feeding on section 1B, and Cobalt-wing parakeets on 1A. We cannot call the boat yet. We are prisoners on the island, our movements dictated by bird behavior, and we are all thinking about breakfast. "Okay, keep me informed," crackles the voice on the radio. He radios again after 8 minutes. The numbers are dwindling but there are still a few birds feeding. Finally, there are a series of flushes where a large percentage of birds fly from the lick to the surrounding vegetation and then take flight again, leaving the area completely. The lick is empty. After fifteen minutes without activity we call the boat.

## **Breakfast**

### **07:49 – Food!**

“*Platos! Platos guacos,*” (plates) the cook’s friendly voice crackles over the radio receiver downstairs in the equipment room, announcing that the food is ready. The last tourists have been fed and now the staff can eat. Hungry, as always, the research team hurries to the kitchen at the other end of the lodge to see what there is for breakfast. We take our plates, cups, and silverware from the plastic dish strainer in the staff lounge where they are stored and line up at the large metal table in the kitchen with its row of pots. No matter what time of day, the first pot is almost always rice, and the second chunks of meat covered by red or yellow sauce. Breakfast is no different, but on a good day, there are also rolls and pancakes and hot chocolate. By no means a vegetarian, I am still unaccustomed to the large quantities of meat in the RFE staff diet, and avoid eating it for breakfast when I can. I choose cold pancakes and warm rolls instead even though I will eat them dry as we do not get the butter or jam reserved for tourists and guides.

The staff dining area is constructed like the rest of the lodge. It consists of a wooden floor, a thatched roof with deep eaves to keep out the rain and provide a protected area for hanging clothes, and square wooden beams for eaves and roof pillars. In the place of exterior walls, sugar cane stalks are nailed to a meter high railing. In some sections the canes are placed side by side without gaps to create a full screen, in others they are spaced half a meter apart. All around, the jungle is visible. Dusky titi monkeys, Squirrel monkeys, and Saddle-backed tamarins often come to eat bamboo shoots in the foliage just meters from the lodge.

Two rectangular tables with benches on either side in are placed short-side to the interior wall of the staff bedrooms. There is a double sink along the rail where we wash our own dishes. Like all water at the lodge, the water in these sinks is unheated. We use the solid, gritty green dish soap that comes in a plastic tub (common to all Latin American countries I have visited). It requires a puddle of water on top to get it foamy and leaves hands and dishes feeling slimy, like they are never fully rinsed. The other side of the dining area contains two couches at right angles to each other facing the television,

which is always on at mealtimes. Electricity (and internet access) at the lodge is provided by a generator that is only turned on for an hour or two to aid breakfast and lunch preparation, and from 5:30-9:00 p.m. to provide supplemental lighting, internet communication, and the chance to charge batteries.

[Everything must be charged, from tourists' cameras and flashlight batteries, to the batteries that power the Macaw project equipment. Laptops are needed for data entry. Car batteries power small televisions for video nest monitoring, the video cameras themselves have battery packs, the recorders for taping activities in the nest have batteries. The digital cameras used to document chick growth with photos need batteries. The radios that are our lifelines to call for boat pickup on the island and to ask for help while we are out on the trail must be charged. Most *guacamayeros* also have some combination of personal camera, ipod, laptop, and headlamp batteries to charge. After an electrical surge burned out several of the power strips it is hard to find space on the surge protectors most nights.]

*Guacamayeros* sit together at one table in the dining room, the staff at the other. Banter in Spanish bounces back and forth between the tables, but as half the *guacamayeros* are usually foreigners, there are currents of English too. *Guacamayeros'* conversations in either language is dominated an ongoing dialogue about climbing adventures, the chicks and the nests, activity at the lick, and interesting wildlife spotted throughout the day.

## **Nest Check 1**

### ***09:15 – Crop Sample Assistant***

After breakfast and a little rest, I go to check a nest near the lodge with two other *guacamayeros*, a Peruvian veterinary student and a North American college graduate with a Bachelor's degree in biology. The artificial nest, called Hugo, was constructed of wood and hung 30+ meters up in a tree during the 1990s to provide extra nesting sites for large macaws. This year Hugo is home to the oldest chick being monitored by the project. At 84 days old and the same size as a full-grown adult, this probably would be our last opportunity to weigh and measure, and take crop and feather samples from the chick. A

*guacamayero* doing video watch using a camera mounted inside the nest to monitor behavior had radioed earlier to say he saw no sign of the chick this morning, and he thought it had already fledged!

Hugo is occupied this year by a Scarlet macaw pair. The female is wild, but the male is a *Chico* named Tabasco. From 1992-1995, Tambopata Macaw Project staff took 32 Blue-and-yellow, Red-and-green and Scarlet macaw chicks which would have died of starvation because their parents were not feeding them, hand-raised and released them back into the wild. The Chicos successfully integrated with the wild macaw population, mating with wild birds and eating wild foods. The hand-raising and release of the Chicos was successful, yet because of their exposure to humans they do not have natural predator fear responses with people. Thus, such experiments will not work in areas where there are human settlements nearby and the birds might be targeted for hunting or capture. For *guacamayeros* who climb nests to check on chicks and lower them to the ground for weighing and measuring, this lack of fear also means that Chico parents tend to be more aggressive than wild birds in defending their nests and may attack climbers. Tabasco is no exception and even his wild mate has learned to be quite aggressive with climbers.

We all crane our necks up to the nest above. Now that Hugo appears to have literally flown the coop, it will be very difficult to distinguish chick from parents. Besides being more awkward in flight, with a slightly shorter tail and smaller beak, chicks' eyes are dark while adult macaws have a yellow iris. These slight differences are difficult to detect at a distance. There is one macaw on top of the nest, peering down at us. I tie the climbing rope we have brought with us to one end of the *drisa* (a thin rope the thickness of laundry line that is always left on the tree), looped over the two branches high above. The vet and I begin to pull rope. We grab the other end of the *drisa* (which is tied to a nearby tree) above our heads and pull down to the forest floor, raising the climbing rope tied to the opposite end up meter by meter as we go. Another macaw pops its red head out from the nest entrance above and looks at us.

### ***09:35 – Pulling Rope***

The other *guacamayero* wiggles into his climbing harness and when the end of the climbing rope has reached waist level he hooks the upper ascender, with a nylon strap

attached that functions as his “arm” onto the rope. The arm connects to the harness around his waist and legs, and will hold the full weight of his body once he is off the ground. The vet pulls on the other end of the rope to tighten it a bit and walks with the backpack containing the remainder of the rope around with the tree, circling it four times, then anchors the rope to another tree with a piece of nylon strap and a carabineer.

It is now safe to begin climbing and the climber hooks on his lower ascender, with the “legs,” (long straps connected by a safety strap to the harness with loop holes at the bottom for your feet) and jumps to push each ascender up as high as it can go while he is standing on the ground. Then sitting down in the harness, he swings back and forth a meter off the ground while getting his feet into the legs. Shifting his weight from the harness to the legs by standing up with his feet in the nylon strapping, he pushes the upper ascender (with his “arm” and the harness attached) another half meter higher on the rope. Then sitting in the harness again, he pulls up the lower ascender attached to his legs. Repeating this motion about 60 times he ascends up the rope to the nest.

I am taking photos with his camera as he climbs. Although he has worked on the Macaw Project downstream at the other lodges for several months, he is a new to TRC (the only site at which nest monitoring is currently taking place). He wants pictures of himself climbing, and also documentation of the anticipated fight with the macaw parents. A guide and tourist arrive while he is ascending. Every tourist who visits TRC gets a presentation by one of the *guacamayeros* that includes general information about macaw conservation, the history of the Tambopata Macaw Project, and explains the ongoing research. During nesting season, researchers often allow guides to bring tourists to nests being climbed so they can see wild macaw chicks when they are lowered to the ground. I had invited this tourist to accompany us after interviewing her for my thesis research.

As the climber arrives at the level of the nest, the parents are calling loudly. The one on top of the box is opening its wings in a threatening pose and leaning forward, beak open in the ready-to-bite position. The other is out of the nest and hanging on the rope itself above his head, wings beating and head bobbing. Macaws have incredibly sharp beaks and double tendons in their jaws enabling them to open hard seed coverings or easily shred a rope should they chose to bite through it, an unpleasant option for a

climber hanging thirty meters above the forest floor. He waves his arms and tries to shake the taught rope above him, managing to discourage the bird enough that it moves to the top of the nest with its mate.

He ascends a bit more and opens the door at the base of the nest box. “Hugo is not in there,” he yells down. The vet yells back, “Are you sure he’s not on the wall in the upper part of the nest, above the camera?” He pokes his head inside the nest and checks. “Nothing there.” We call back to base on the radio, and report to the *jefe* that Hugo is not in the nest. He replies that the climber should check the eye color of the macaws on top of the nest, as it could be Hugo with one of his parents. He ascends a little higher to get eye-level with the birds, the macaws lunging at him from the nest roof. “They both look dark to me.” We figure that having just fledged, Hugo would not be too far from his parents and must be in the trees nearby, but he is not visible to us from the ground or to the climber up in the tree.

After a few minutes of scanning the trees for signs of the juvenile macaw we decide he is gone. We apologize to the tourist and her guide and they leave as the climber descends. My assistance as an extra pair of hands to hold the chick while the vet takes crop and feather samples will not be needed here or at the next nest. I return to the lodge, leaving them to finish pulling the rope down so they can continue to their next nest check.

## **Data Entry**

### ***10:30 – Helping with the Backlog***

From dawn till dusk, year round, there are 4-12 *guacamayeros* working full time to collect data for the Tambopata Macaw Project. It takes entire seasons or years for the patterns to become apparent, and then longer to become statistically significant. The patience of nature and the biologists who study it astounds me. Data entry is a monotonous and vital part of the work volunteers do. I am working on the arrivals for December 2008, squinting to discern the handwriting and faded lettering of volunteers past, highlighting inconsistencies on both the paper copy and the spreadsheet I am creating on the clunky old laptop sacrificed to the jungle for this project. I listen to Bob

Marley on my iPod and think about my boyfriend who is thousands of kilometers north, while entering the data line by line. A single morning yields hundreds of lines of data: December 7, 2008, 6:01, SCMA (Scarlet macaw), Total 3, 1 single, 1 pair, direction East. I may be slower than average, but for every hour of data recorded takes me about half that time to enter. After two and a half hours, the computer battery is sucked dry and I have only entered 1.5 days worth of arrivals.

## **Lunch**

### ***13:15 – Food!***

Lunch is rice, chicken, and a few scraps of leftover lettuce and tomato fished from the bottom of the salad bowl leftover from the tourist buffet. In the staff diet, meat is plentiful, greens are sparse. I have taken to eating the hot pepper and onions soaked in vinegar as it is often the only vegetable available at a meal. The only *guacamayera* who does not rush to the kitchen at the call of “*platos*” is the vegetarian who knows there will be little she can eat anyways, and she usually sits quietly eating plain bread or rice. After so many hours of doing nest video watch and gazing at the macaw chicks, which when young look remarkably like plucked chickens, it is more and more difficult for me to enjoy the wings and thighs so often served up here.

The subject of conversation at the tail end of lunch is usually will it rain this afternoon and, if not, when should we leave for climbing. The veterinarians who can only take crop samples from the chicks after they have been fed by their parents dictate the schedule, usually opting for later in the afternoon to increase the likelihood that the chicks’ crops will be full. Climbers and those who must hike along to carry rope and assist with sampling are relieved to have an hour or so to rest and digest before heading out. However, this afternoon I am going to Ayahuasca, the farthest nest from the lodge with a vet and another climber. It is a few kilometers hike up to the nest, so we decide to leave at 14:15. We have just enough time to lie down and rest our eyes before we must be off again.

## **Nest Check 2**

### ***14:29 – The Hike***

The trail to the port leads us out of the forest momentarily to the banks of the muddy Tambopata River. We turn right and plunge back into the shade of the canopy. I look at my watch, shocked to think it was just this morning I sat at the port in the darkness, and boarded a boat headed to the island for *colpa* duty. Time has stretched out, making hours feel like days. I heft the large hiking backpack with 80 meters of climbing rope to which we trust our lives each time we ascend that weighs about 15 kilos. The waist and chest buckles are broken, leaving all the weight to pull on my shoulders, I try to shift it around as I walk by putting my hands inside the straps and pushing out, but it remains the same heaviness. The vet carries a large plastic bucket with tight-fitting lid filled with veterinary supplies: a small Styrofoam cooler for storing the crop samples, various scales and measuring devices, the booklet for recording data, a towel to cushion the chicks as they are lowered down to the ground in the bucket. The bucket is awkward to hold, and as she walks she keeps changing its position, from one hip to the other, clasping it in front. The handle periodically gets caught on vines and branches sticking out into the path, their sudden grasp and her forward motion wrenching the bucket from her hands. The other *guacamayera* carries a small backpack with the climbing harness and gear, the lightest load as she has to save her energy for climbing.

We walk fast along Trail A, skirting the top of the river bank which drops off steeply to form the vertical face of the clay lick as we climb from floodplain to *tierra firme* forest. We clamber over fallen trees and rotting logs, careful to check for species of ants that may sting or bite if disturbed. The only pauses are to note freshly dug dirt around holes made by some burrowing creature and to examine tracks. A large tapir has proceeded us up the trail. We have all heard the story of a *guacamayero* who went looking for a tapir up on Trail A in January, followed its tracks, found it, and it charged him full-speed, veering off just meters before colliding with him.

About 2 kilometers from the port the trail is flooded. Although we have climbed to higher ground, Ayahuasca nest is located in a large depression known as “the bowl.” When it has been raining hard for days the water can be chest deep and the rope must be held overhead to keep it dry. The vet stops to pee before we begin our trek into the water.

All us girls are wary of the small organism that lives in the water here and can swim up into your urethra, especially, it is said, if you pee in the water or go swimming while menstruating.

We turn left onto a side trail that is completely flooded, recognizable only by the gaps in the vines that hang down and the occasional pink flagging which luckily, today at least, is visible above the level of the water. After a few meters, the water is to the top of the rubber boots and with another step it plunges inside. The first time the cool swamp water fills my boots it prickles my hair follicles, stinging a bit as it separates sweaty calf from the pants legs that are tucked inside.

**Figure 2.1: Photo of myself and another *guacamayera* in “the bowl” on the hike to *Ayahuasca* Nest.**



We continue on, shuffling our feet to feel roots and vines amongst the mud along the floor, stepping over branches and other submerged obstacles. A patch of high dry ground gives us the opportunity to empty our boots by leaning forward and bending one knee and raising the foot until the heel almost touches the butt. The climber, who knows the trail best, warns that it will be over the boot again. Soon we enter the water again and this time rushing into my boots it feels nice, a cool relief in a sweaty afternoon. We slosh

onwards, for several hundred meters through a series of rises and hollows until we reach the tree with the nest.

### **15:20 – Ayahuasca Nest**

Shallow water surrounds its base, embracing the great buttress roots. Luckily, within a few meters there is a patch of ground from which the water has recently receded where we set the packs and the vet prepares her workstation, a rain poncho with handkerchief on which to set the chicks. The cloth has holes in all four corners that can be drawn up around the chick and the scale's hook inserted, suspending the body for weighing.

When the climbing rope has been pulled and the climber is suspended above, preparing to ascend, we tie up the end of the rope so it does not drag in the water while the *drisa* floats nearby. Half way up the rope, she cries out, "Ouch! Something stung me, hard." We all fear the sting of the Bullet ant (for which the *Bar Isula* at TRC is named), said to possess the most powerful sting of any creature in the world, a sting which supposedly hurts worse than being shot and induces a 24 hour fever. *Isulas* are abundant in the forests surrounding TRC, especially wandering on the trunks of trees and sometimes our ropes and packs. "How bad is it? Will you be all right? You can come down and I can climb if you need," I say. After a minute she decides it must have just been a sweat bee or wasp, she's okay, and keeps climbing.

She has ascended with one end of the *drisa* connected to the pulley on her harness and once at the level of the nest, she shouts that she is sending down the *drisa*. When it reaches us, I grasp the carabineer on the end of the *drisa* and lock it onto the bucket handle. The vet stands to the side and pulls the other end of the *drisa*. As she tugs the bucket rises, swinging back and forth. She squints to keep muddy spray from the wet *drisa* out of her eyes while watching the bucket's rapid ascent to make sure it does not get tangled in the climbing rope or the other side of the *drisa* on which she is pulling. "Okay, just a minute" the climber calls out when it reaches her, grabbing for the bucket that dangles from the pulley behind her. When she has the bucket securely fastened to her harness she calls down again and the vet releases the tension from her end of the *drisa*.

As the climber begins to reach her arm into the nest, the chicks' squawking can be heard from the ground. It is a natural cavity that makes for an awkward job, requiring the climber to hold themselves against the tree trunk, while reaching one arm in to the hilt, groping blindly for chicks who do not want to be extracted. After a few minutes she has managed to grab each of them and wrestle them into the bucket, at more than 50 days old they are getting big and increasingly difficult to handle.

She yells down that she is ready and I wade over to the *drisa* again, grasping it at waist level in both gloved hands. With full control of the weight of the bucket on the rope, I yell up "Okay, I got it" and she unhooks the bucket from her harness, releasing the handle and its contents to my care. I control the speed of the bucket's descent by closing my grasp on the *drisa*, slowing how fast it runs through my hands. As it comes spinning down, the bodies of two scarlet macaw chicks are visible, pressed against the sides of the plastic bucket. The vet unhooks the bucket and we wade over to the workstation.

The chicks are screeching, as usual in these circumstances. Yet as I open the lid of the bucket, I reel back, shocked by the force of the voices emanating from these chicks whose strength makes my eardrums ring. The vet laughs at my reaction and so do I. Impressed by their vigor, I lift one chick from the bucket, replace the lid, and place him on the poncho. The chick has a mohawk of short red feathers on its head, all of its wing feathers, and most of its tail feathers are coming in, but grey downy fluff punctuates the red feathers on its back and belly.

### ***15:45 – Health Check & Crop Sample***

I hold the chick as the vet takes photos from the front, top, right side, and under the right wing. Trying to remove my hands from the picture, the chick feels their absence and lunges forward in a get-away attempt, running away from us. The chick doesn't make it to the edge of the poncho before the vet grabs and places it in the center of the cloth, lifting it up for weighing. I record the figures dictated by the vet. Weight 940 grams, culmen 35.4 millimeters, tarsus 33.3 millimeters, wing 17.2 centimeters, tail 11.7 centimeters. The vet rubs its feathers the wrong way checking for parasites, inspects old botfly wounds and declares the chick parasite free. As she prepares the tube for the crop sample, I hold the chick in my hands, using my thumbs to scratch its head, massaging to

calm it down. For all its screaming in the bucket, the chick is quiet on the poncho, only occasionally softly calling “ra-ah” in a talkative tone.

With lubricant on the tube, the vet puts one finger into the chick’s beak and pushes the tongue to the side, inserting the tube into its throat with the other hand while I hold its body and wings still. It kicks and squirms, trying to avoid the intrusion, surprisingly strong for its small size. Once the tube is down the throat and into the crop, I lean the chick to the side while the vet massages the contents of its full crop, trying to push some of the contents into the tube. After several seconds she removes the tube and there is a small sample in the end of the tube, its parents have been feeding it some sort of seedy fruit and clay from the lick. I loosen my hold on the chick but do not release it, massaging its crop and neck half a minute more, dictating the exact time to the vet so she can record it on the plastic bag containing the crop sample. She removes the second chick from the bucket, while I replace the first one. It grabs for the top of the bucket with its beak, a final act of resistance, and I reposition, inserting it head down and setting it right side up at the bottom of the bucket. We repeat the procedure with the second chick and send them back up to the climber who places them back in the nest while they squawk loudly.

The climber descends wearing a bug net on her head. She dangled for about thirty minutes while we sampled the chicks, long enough for the mosquitoes and sweat bees to discover and begin to bother her. It is 16:25 already. We decide it is too late to climb the tree’s other nest, which requires re-installing the climbing rope using a different set of *drisa* cords on the other side of the trunk. It is just a nest check anyhow to ensure that no eggs have been laid since the last time it was checked, but it is the end of nesting season, chicks are already fledging and the likelihood of new eggs is slim.

### ***16:37 – Return to TRC***

On the walk back we go a bit slower, sloshing in our boots until we reach dry ground again. Then I fully remove my boots and dump out their contents, ringing out my socks and pants as best I can, and continue on my way still with considerable squishing. Down the trail a bit we meet up with another *guacamayero* who is doing a census count of all the parrots seen or heard in a ten minute period at a certain point. We continue on,

and he catches up to us when his census is complete. We can smell *huanganas*, wild pigs, near the trail. They are so close on the other side of the bamboo and foliage in certain areas that we can hear their snorting and the gnashing of their teeth. It must be a large herd of white-lipped peccaries. They can be aggressive and we do not have a machete, but they frighten easily and when they finally hear us they squeal and run off away from the trail. Whenever this happens, my human evolutionary response of relief at evading a possibly threatening encounter is tinged with a tourist's disappointment at not catching a glimpse of peccaries.

\* \* \*

This ethnographic narrative includes detailed descriptions of daily life, TMP research activities, and social exchanges that cannot be reproduced or explained through analyses of interview and survey responses. However, the ethnographic account given here provides the contextual information needed to help readers interpret the results and analysis of interview materials contained in Chapter 5 and Chapter 6. Chapter 3 and Chapter 4 explain the theoretical lenses I will use to analyze these results and the methods used to collect them. Using the relevant background given here, readers are encouraged to think critically about my analysis and draw their own conclusions.

## CHAPTER 3

### **Methodology: Ethnography, Grounded Theory, & Research Framework**

This MSc thesis is based on four months of ethnographic fieldwork with the Tambopata Macaw Project (TMP) in Southeastern Peru. My research explores the mutual benefits, tensions, and tradeoffs arising from the relationships between the TMP, its primary sponsor the ecotourism company Rainforest Expeditions (RFE), and the volunteer/tourists who assist with Macaw Project research. I sought to understand the motives of the actors involved and how this triumvirate contributes to both conservation and development. Finally, I wanted to use this case study to illustrate a bio-centric approach to development, and propose a theoretical re-conceptualization of development itself.

My methods were largely anthropological and based on ethnographic experience: participant observation in daily life at the lodges; immersion in the Macaw Project first as a volunteer collecting biological monitoring data for ongoing research, then as an independent researcher working on my own thesis, and finally as coordinator and instructor for an environmental education workshop. I also conducted over sixty in-depth interviews ( $n = 67$ ) with people whose lives are touched by the TMP: RFE tourists, guides, and staff, and the volunteers and staff of TMP.

#### **Research Questions**

While I arrived in Tambopata with particular research questions in mind, I modified these questions during my first month in Peru to integrate my burgeoning knowledge of the study site. The questions of primary interest to me continued to change over the fieldwork period as I developed more nuanced understandings of the social worlds in which I was engaging. Given more time in the field I would followed grounded theory methods (see the ‘Grounded Theory Methods’ section, this chapter) to further explore a number of new themes that emerged through my interviews. These new themes (see Chapter 6), such as the tension between traditional ecological knowledge and

scientific knowledge, are addressed in this thesis. However, much more research is needed on these subjects.

The following research questions are mixture of my original research questions and those developed through the research trajectory. These questions are answered through an analysis of my results in Chapters 5 and 6, and in Chapter 6, Conclusions.

1. How does the ecotourism, conservation biology, and volunteer tourism ‘mutually beneficial triumvirate’ function?
  - How does conservation biology (TMP) contribute to ecotourism (RFE)?
    - How important is TMP to ecotourism at RFE?
  - How does RFE ecotourism contribute to TMP’s conservation biology?
  - What distinguishes RFE from other ecotourism projects?
    - What makes RFE ‘real ecotourism’ rather than ‘green washing’?
    - What motivates staff and guides to work for RFE?
    - Why do tourists select RFE over other tourism operators?
  - Are *guacamayeros* considered (volunteer) tourists by RFE staff, RFE guides, and *guacamayeros* themselves?
    - Why do long-term volunteer/tourists participate in TMP’s conservation biology research?
  
2. How does the ecotourism, conservation biology, and volunteer tourism triumvirate contribute to conservation and development?
  - How do RFE staff, guides, and *guacamayeros* view conservation and development?
  - What are the primary conservation achievements of TMP and RFE?
  - What are their primary development achievements?
  
3. Does the Tambopata Macaw Project (TMP) provide a model of bio-centric development?
  - What forms of bio-centric development has TMP achieved?
  - What motivates TMP researchers and volunteers?

## **Fieldwork**

Fieldwork was conducted on the Tambopata River in the Department of Madre de Dios, Peru from January-April 2009. I lived and worked at two of Rainforest Expeditions' lodges, the Tambopata Research Center (TRC) and Posada Amazonas. Ongoing parrot research is being carried out at both lodges and each hosts tourists year round. The Macaw Project is the "Research" for which TRC is named and it still serves as headquarters for the Project. Initiated in 1996, Posada Amazonas is an innovative joint venture project – a lodge co-owned and operated by Rainforest Expeditions and the Native Community of Infierno (NCI or Infierno) that is situated on 3000 hectares of NCI communally owned land (Stronza, 2000). I also spent time in Puerto Maldonado and Infierno, working with local people and TMP staff to coordinate and offer an environmental education workshop about the Macaw Projects for NCI students.

By spending time in these various sites and taking on a variety of roles, I experienced different aspects of the Tambopata Macaw Project and Rainforest Expeditions. Ethnographic methods and qualitative interviews were used throughout my time in Peru to open up the three sides of the ecotourism, conservation biology, and volunteer tourism triumvirate, allowing me to investigate how actors in each of these sectors view their (and each others') contributions to conservation and development.

## ***Various Social Roles***

During my first two weeks, I participated as member of a fourteen-person Earthwatch expedition team. As volunteer tourists<sup>15</sup> at TRC we supported the Tambopata Macaw Project by contributing about 6 hours per day of volunteer work to scientific monitoring activities. However, as paying guests<sup>16</sup>, we were also treated to tourist activities, such as guided walks in the forest, and received premium living conditions, staying in the guest rooms and eating "tourist food" from the buffet in the dining room.

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<sup>15</sup> EWI calls their participants "expedition team members." I refer to them/us as volunteer tourists because the theme of volunteer tourism is a major focus of this research. A review of the concept and the field of volunteer tourism studies are included in Chapter 4.

<sup>16</sup> EWI charges over \$2500 per person for the 12-day expedition. I used credits earned by working as an intern at EWI to cover these expenses.

When the Earthwatch trip ended, I shifted into a position as a full-time volunteer for the Tambopata Macaw Project. I moved into the dorm-style accommodations that house researchers and RFE guides at TRC and ate meals with staff and researchers in the staff lounge off the kitchen. My work schedule changed drastically, from EWI volunteer's one shift per day to the three shifts (early morning, late morning, and afternoon) customary for long-term volunteers. The TMP researcher's day begins, like most RFE employees, before the first birds rise at dawn and ends around dusk. It is the intensity of this schedule and the living conditions that mark the experience and create the identity of the *guacamayeros* of the Tambopata Macaw Project.

### ***Various Field Sites***

After six weeks as a *guacamayera*, I dedicated March and April to conducting structured interviews for my thesis, switching from the Tambopata Research Center to Posada Amazonas for the last month. This move was a strategic choice. There are significant differences between the two lodges in terms of the operation of the Macaw Project and its level of involvement in tourism at each site, the intensity of interactions between *guacamayeros* and guides, and the greater number of Native Community of Infierno members at Posada. I wanted to more contact with people from NCI to facilitate coordination of an environmental education workshop for NCI students.

In addition, I wanted to focus on interviewing guides. Many more guides pass through Posada than TRC because they move with their assigned tourists and Posada hosts many more guests. The physical structure of the lodge at Posada Amazonas facilitates greater interaction between researchers and guides and creates a different social atmosphere than at TRC. At TRC, researchers occupy the entire top floor of one bungalow (where there are dorm rooms, computers, and a lounge area) and a large equipment room and veterinarians' office downstairs. By contrast, at Posada, *guacamayeros* live in a single cramped room in the guide house and use a tiny storage room as an office. As a result, much more time is spent in communal areas like the lounge of the guide house and the lodge's main dining room/bar. These living conditions increased opportunities for social interactions and conversations that built rapport with guides and staff. By April, most of the nights I stayed in Puerto Maldonado were spent

hanging out with RFE guides. This also gave me greater understanding of guides' daily life and experiences by exposing a larger portion of the social context framing their responses to interview questions.

### **Ethnographic & Grounded Theory Methods**

Both ethnographic and grounded theory methods were used during this research. This combination produced both transcripts and detailed notes from semi-structured interviews and field notes and observations based on participation in daily life as a *guacamayera* living in the lodges of Rainforest Expeditions. My ethnographic experience provided knowledge about the social context in which this rich mixture of qualitative material was generated and informed my analysis of it following grounded theory methods and the actor-oriented approach to development studies.<sup>17</sup>

### ***Grounded Theory Methods***

Grounded theorist Kathy Charmaz explains how researchers using these techniques: “start with areas of interest to them and form preliminary interviewing questions to open up those areas. They explore and examine research participants’ concerns, subsequently seeking participants whose experiences speak to these questions” (2002: 676). Multiple sequential interviews are best because “the logic of the grounded theory method calls for the emerging analysis to direct data gathering in a self-correcting, analytic, expanding process,” in which “early leads shape later data collection” (682). Such repeated interaction also enables the researcher to follow up these leads in later interviews and “fosters trust between interviewer and interviewee, which allows the interviewer to get closer to the studied phenomena” (682). Unfortunately, given my research limitations (see ‘Limitations of the Research,’ this chapter) I was not able to conduct multiple interviews. However, the ethnographic methods of participant observation allowed me to establish the kind of rapport Charmaz describes and I used emergent themes from earlier interviews to ask questions in later interviews and to direct the research trajectory.

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<sup>17</sup> The actor-oriented approach to development studies is described in ‘The Actor-Oriented Approach & Expanding the Concept of “Social Actor”’ section of Chapter 4.

In terms of analyzing data, grounded theory relies on rigorous coding techniques. Interview material is read and re-read, line by line, and researchers' write memos to themselves about emergent themes which they use to create categories for coding the material. Thus, resulting theories are grounded in the material itself, rather than being driven only by the researchers' interests (Charmaz, 2002: 683-689). I used these methods to analyze over 180 pages of typed field notes and interview transcripts. After initially coding by hand, I transferred the information into spreadsheets organized by individual responses to questions from the interview guides used for each group (see Appendix IV). Categories based on repeated responses were identified, which guided my analysis of the material and its emergent themes. This enabled me to construct a partially quantitative analysis of qualitative material. This thesis is intended to make a theoretical and practical contribution to development studies by analyzing a project that takes a bio-centric approach, rather than the anthropocentric approach common to most development initiatives.

### ***Ethnographic Methods***

The three dimensions of ethnographic research emphasized by Marvasti (2004) are participant observation, attention to the larger social context of the data being collected, and the ultimate representation of the subjects and study site (35-37). Ethnographic methods complement data collected in interviews because, as Gray and Campbell (2007) note about their participant observation during a period of fieldwork, "daily interactions with all actors provided additional context for the interviews and informed the overall argument" of the final research write-up (468). In my own fieldwork, immersion in the situation being studied helped me to interpret the larger social context and information gathered during interviews. Throughout my time in Peru I kept detailed field notes about daily interactions, comments, events, etc. to capture the essence of my impressions as a participant observer. I referred to these frequently to aid in analysis of material collected and decide what new avenues to explore during interviews.

### *Participant Observation*

Participant observation is the paradoxical mix of two “seemingly contradictory activities: participating and observing,” simultaneously being detached and yet “involved in the topic under study” (Marvasti, 2004: 36). My roles as an Earthwatch expedition volunteer tourist, a *guacamayera*, and NCI workshop organizer enabled me to assume positions already familiar to people of the TMP and RFE. I believe these circumstances enabled me to become involved to a greater extent than is possible in most participant observation. This is because, as discussed in Chapter 5, the volunteer positions assumed by *guacamayeros* automatically incorporate outsiders. In the view of many people interviewed, the experiences *guacamayeros* undergo convert them into researchers who are insiders in the “Rainforest Expeditions family.” In the antiquated terms of ethnographic history, the *guacamayeros* of the TMP were my “tribe” – the culture I studied – and in working for TMP I became a *guacamayera*. This position and my own inclination to actively engage in social settings made me less a detached observer and more an active participant in life on the Tambopata River.

### *Social Context*

As described by Tedlock, “Ethnography involves an ongoing attempt to place specific encounters, events, and understandings into a fuller, more meaningful context” (in Marvasti, 2004: 36). In early interviews and while discussing my research interests with residents of Puerto Maldonado and Tambopata River communities I heard several critical comments about TMP sharing more of its results in the academic arena than the local one. In the past, TMP researchers have given talks in NCI and Puerto Maldonado universities but these engagement activities have diminished in the past several years. Given this social context, I coordinated an environmental education workshop for NCI students and encouraged the *jefe de campo* to offer a talk to TRC staff. My efforts to stimulate TMP local outreach were related to my role as a participant observer, my awareness of the greater social context in which TMP and RFE operate, and my desire to give something back to the people who so generously shared their thoughts and lives with me. Rather than being a detached observer, I was an active participant who intentionally

intervened in the larger social context in which TMP and RFE operate to affect a particular change.

### *Ethnographic Representation*

Ethnographic representation, such as that constructed in this thesis, is usually the result of ethnographic fieldwork and presents one of the greatest challenges in this genre of sociological/anthropological research. The ethnographic manuscript “describes in great detail a people’s way of life for its readers,” however this portrayal is a highly sensitive matter:

Since readers rarely experience the described culture directly, there is great potential for misunderstanding or misuse of the research findings. To use the metaphor of a painted portrait, contemporary ethnographers are very sensitive to how their use of light will create a particular impression of their subject matter. (Marvasti, 2004: 36-37)

In my own research process, I have struggled with doubts about whether or not to recount certain events and opinions (my own and others) in this thesis. I am hesitant to describe actions or opinions that might reflect poorly on Rainforest Expeditions, the Tambopata Macaw Project, or the people who supported my research by granting me access to their lives and sharing their opinions with me. In a few cases, certain actions or circumstances I witnessed conflicted with my own environmental ethics and values or highlighted tensions and conflicting interests between various actors I studied. In this thesis, I do my best to represent these situations in a balanced manner by including multiple perspectives.

In an age of increasing interconnectivity and exchange of information, the problem of ethnographic representation, its implications, and its repercussions have become further magnified. For example, renowned social scientist Jared Diamond is currently facing a \$10 million dollar defamation lawsuit by Papua New Guinea informants who Diamond described as “active participants in clan warfare during the 1990s” (Glenn, 2009). This affair is:

emblematic of ‘a fundamental ethical issue that anthropologists will have to face for decades to come.’ The rise of the Internet means that whatever

scholars write about their field informants—no matter how remote those people might seem—will inevitably be read by the communities they have described. ‘While this should always have been important to us [anthropologists] ... it is a topic we can no longer ignore in a world where their ‘informants’ are more connected than ever before to the flows of media and communication in which ‘we’ depict ‘them.’ (Golub in Glenn, 2009)

This is especially true of my thesis, as most of the *guacamayeros* and people of RFE whom I depict have access to online resources, and several expressed an interest in reading the results of my research. Ethnographic representation takes on a new dimension in a globally linked age and in a situation where the ethnographer is describing the activities and approaches of researchers with academic affiliations and influence far superior to her own.

### **Interviewing Approach**

While in Peru I conducted sixty-seven interviews with Macaw Project scientists and volunteers, Rainforest Expeditions’ (RFE) guides, staff, and tourists, and local people. In many cases these categories overlap in a single individual, for example guides who have worked with TMP or RFE staff members who are also locals. The sample of interviewees is not representative, but rather were selected based on theoretical sampling, “sampling to develop the researcher’s theory, not to represent a population” (Charmaz, 2002: 689). Purposeful sampling “to identify research participants that presented ‘information rich cases’” (Patton in Gray & Campbell, 2007: 468) is another way to describe the technique I followed.

Semi-structured interviews were based on interview guides (see Appendix II) developed for each group (*guacamayeros*, guides, staff, and tourists) while in the field, after familiarizing myself with the situation and dynamics on the ground. In this process, Dr. Amanda Stronza provided valuable feedback and offered insight on the relationship between research and interview questions, encouraging me to pose some of my research questions to interviewees directly. I also followed her suggestion to ask about favorite memories as a way to tap into more the more obscured opinions, values, and motivations

of *guacamayeros* and tourists. Most questions were open-ended and directed towards the specific themes addressed in my research.

*Guacamayero*, RFE guide, staff, and tourist interviews were conducted throughout the fieldwork period. Most took place in the common areas of TRC and Posada Amazonas lodges while RFE guides, staff and *guacamayeros* were working full-time. A few *guacamayeros* and guides were interviewed during their days off in Puerto Maldonado. Participants decided whether the interview would be conducted in Spanish or English and most elected to speak in their native tongue. I am a native English speaker and I am conversationally fluent in Spanish having lived in Costa Rica. However, the vocabulary, slang words, and accents used in common speech vary greatly by country and even between different localities in the same country. Thus, I started by interviewing foreign *guacamayeros* and tourists in English, and conducted interviews in Spanish after I had been in the field for several weeks and become comfortable with the specific way Spanish is spoken at the field sites.

Interviews lasted from twenty minutes to an hour and a half, averaging about forty-five minutes. Tourist interviews were generally shorter, and questions closely followed the interview guide, whereas interviews with the others followed the course of their own thinking on the themes raised by my initial questions and I asked more follow-up questions. I also modified the questions asked to these groups through the course of my research, adding new questions and asking for reactions to statements made by previous interview participants.

My approach to interviewing is captured by the following statement by Kvale and Brinkmann (2009):

... interviewees' statements are not collected—they are co-authored by the interviewer. The interview is an inter-subjective enterprise of two persons talking about common themes of interest. ... His or her questions lead up to what aspects of a topic the subject will address, and the interviewer's active listening and following up on the answers co-determines the course of the conversation. (193-193)

I began interviews with a basic explanation that my research is about the relationship between TMP and RFE and how they are contributing to conservation and development,

and asked introductory questions about why tourists had chosen RFE as a tour operator, or how long a person had been working with RFE or TMP. These questions often elicited a personal narrative that addressed some of my planned direct questions. In such cases, I altered the order of my questions to follow the flow of conversation. During some interviews I abandoned many of my planned questions to pursue a topic mentioned by the interviewee, eliciting more detailed information by summarizing their statements and asking for more information in a conversational style.

Questions were also modified to accommodate interviewees' time constraints and overlapping membership in multiple groups. For purposes of analysis, despite such overlapping membership each interview is assigned to a primary group and counted only once in the total of sixty-seven interviews. Tourist couples interviewed together either generally agreed on answers or one person dominated the conversation, and thus are counted as a single interview.

### ***The Demographics, Composition & Logic of the Social Groupings Used***

The categories used in this research to group social actors are mostly derived from the divisions and distinctions drawn by people at the field sites. The social worlds of Rainforest Expeditions and the Tambopata Macaw Project are organized by lodge and by the roles played by people in various positions. The social categories of tourist, guide, staff member, and *guacamayero* used in this thesis are borrowed from this manner of organization. In order to analyze the work of *guacamayeros* as an example of volunteer tourism, in this thesis I distinguish between *guacamayeros* who are lead researchers or paid Field Team Leaders (FTLs) and those who are in volunteer positions. Such distinctions are not generally made by RFE guides, staff, and *guacamayeros* themselves. A brief description of each social group category is provided below followed by demographic information (relevant to the themes explored in this thesis) about the composition of groups of interviewees. The numbers of individuals with overlapping membership in multiple groups is also noted.

#### ***RFE Tourists***

A selection of tourists staying at the Tambopata Research Center (TRC) were

interviewed and surveyed from February to mid-March to gain perspective about their experiences and opinions about ecotourism, Rainforest Expeditions, and the Tambopata Macaw Project. These tourists were usually on 4-8 night itineraries, which include: airport pick-up and a few hours' upriver boat trip to spend the first night at one of the RFE lodges closer to Puerto Maldonado (Posada Amazonas or Refugio Amazonas); followed by another half day boat ride to TRC, 2-3 nights at TRC with an early morning visit to the clay lick and guided wildlife walks in the forest; and a final overnight stopover at a downriver lodge enroute to the airport the next morning. Of the thirteen interviews conducted with tourists:

- 3 of these were single interviews with couples (for a total of 6 respondents).
- 2 interviews were with people with a professional interest in TRC as a site each was filming or photographing for a book on parrots and a European television show on "Amazon life."
- 12 were foreigners from North America and Europe, and one was Peruvian-Danish residing in Denmark.

In addition to interviews with these individuals, I experimented with conducting a survey of TRC tourists (see Appendix III) using a similar set of questions.

I administered the survey three times (twice in March to groups of four individuals in the dining room at TRC, and once in April to a couple at Posada Amazonas who had just returned from staying at TRC). Of the ten surveys handed out, nine were returned completed. However, I did not continue the survey because my methods and questions are largely qualitative and tourists' written responses were very brief and thus less useful than the verbal ones offered by people interviewed in person.

I decided to limit data collection on tourists' perspectives to TRC visitors as the Macaw Project is more integrated into the tourist experience there than at RFE's other lodges. However, low season begins in February, so very few guests visit TRC in February and March, and there were not a sufficient number of tourists to support a statistically significant sample size. With thousands of guests each year at RFE's three lodges, these twenty individuals certainly are not a representative of all RFE tourists. However, their views do provide some insight into the ecotourism experience RFE and TMP offer visitors at the Tambopata Research Center.

### *RFE Guides*

All Rainforest Expeditions guides work on a contract basis and are paid a daily rate depending on their level of experience and this salary is supplemented by tips from tourists. Their schedules are set according to how many tourist groups are booked for them and their desired time off. Rotating between the three lodges and Puerto Maldonado with assigned guests, RFE guides generally spend from 1-4 consecutive nights at any given lodge. In high season, some choose to work continuously for periods of several weeks or months with just a few days off. While working, they live out of their backpacks, walking many kilometers each day in all kinds of weather conditions. When all clean shirts are caked with mud and sweat, taking a day off to do laundry in town becomes imperative.

RFE guides were interviewed in March and April. Interviews with guides focused on their motivations to work as a guide/for RFE, the differences between RFE and other ecotourism operators, and their perceptions of the Tambopata Macaw Project. Of the eighteen RFE guides interviewed:

- 3 are members of the Native Community of Infierno, 7 are “locals” from Puerto Maldonado or other surrounding communities, and 8 were from other parts of Peru (most from Lima).
- In terms of familiarity with RFE, 6 were new guides or guide assistants (*practicantes*) with one year or less at RFE, 4 had worked between 1 and 3 years, and 8 had 5 years or more at RFE.
- 3 guides had worked directly with the Tambopata Macaw Project as *guacamayeros*, and 2 of these used this experience to improve their chances of being selected as an RFE guide.
- 4 guides had previous experience with RFE as staff and/or as NCI members in the Posada Amazonas project.
- 3 were no longer guiding at RFE, or doing so infrequently, and 2 of these are now instructors for RFE’s annual guide course to train and select new guides.

With about 45 guides in total, and 20 employed on a more or less permanent, full-time basis, these eighteen individuals represent a significant portion of RFE guides.

### *RFE Staff Members*

Staff members work full-time, with one day off per week. Most save up these “*francos*” (or free days), working 25-30 days in a row, going downriver to see friends and family for 4-5 days, and then returning to the lodge. The rhythm of life is set by tourist and staff meal times, boat arrivals and departures, and the many conversations, naps, television shows, and games of soccer, volleyball, and cards squeezed in between.

Interviews with RFE staff were conducted in March and April, and focused on their motivations to work in ecotourism, and their perspectives on the relationship between the Macaw Project and RFE ecotourism, and the good things and difficulties of working in tourism. Of the thirteen staff members interviewed:

- All are Peruvian and locals from the area, 2 are also NCI members.
- In terms of familiarity with RFE, 4 had one year or less experience, 2 had worked between 1 and 3 years, and 7 had worked 5 years or more.
- 1 had participated in the guide course but not been hired as a guide, 1 expressed interest in moving from his staff job into guiding with RFE.
- 6 were full-time staff at TRC, 3 were full-time staff at Posada Amazonas, and 4 were in positions that require movement between all three lodges (e.g. boat drivers and maintenance workers).

These individuals represent a small portion of all RFE staff, but a large portion of total TRC staff (as only 5-8 individuals’ are working at this lodge at any given time)

### *Guacamayeros*

*Guacamayeros* include a mix of Peruvians and foreigners. TMP volunteers apply to work on the Macaw Project and are selected by its lead researchers based on their expressed interests, experience, and the projects’ labor needs. Most are young professionals, recent graduates, and students in fields related to TMP’s work (biology, environmental science, veterinary medicine, etc.). Field Team Leaders (FTLs) are previous volunteers (generally Peruvians) selected to work as paid research staff. FTLs train, supervise, and work alongside TMP volunteers, under the direction of TMP’s lead researchers.

Many *guacamayeros* are undergraduate students or recent graduates seeking research fieldwork experience and/or fulfilling an internship or practicum requirement for their studies. Volunteer positions are unpaid and the minimum time commitment is six weeks. However, stays of 2-3 months are preferred as it takes at least two weeks to complete basic training in the primary monitoring activities. TMP volunteers and staff sleep in shared dorm rooms, and eat with RFE staff. Since a major objective of the TMP is to support the capacity-building of Peruvian scientists, Peruvian volunteers receive free room and board. Foreign volunteers pay \$10 per day which covers all expenses for the duration of their volunteer period. All volunteers are responsible to cover travel to and from Puerto Maldonado (free transportation is provided from there to the lodges by bus and boat) and any costs incurred in town on days off.

I began interviewing *guacamayeros* early in January and continued throughout the duration of my fieldwork period. All but two of these participants were actively working with TMP or had just finished their volunteer period at the time of the interview. Of the twenty *guacamayeros* interviewed for this research:

- 12 were TMP volunteers for periods of 2-5 months. Of these volunteers, 2 were repeat *guacamayeras* over multiple field seasons, 3 are Peruvian nationals (but not locals from Tambopata), and 9 are non-Peruvian.
- 8 were TMP research staff (lead scientists and Field Team Leaders (FTL)) in paid positions and/or gaining data collection for their own research. Of these, the 2 lead researchers are foreigners, and the 6 FTLs are all Peruvian (3 are also locals from Puerto Maldonado). Of the FTLs, 4 are using TMP volunteer labor and data to support research studies for their own Bachelors' and/or Masters' degrees, and 1 became an employee of RFE after working for TMP.

These twenty individuals represent about two-thirds of all *guacamayeros* who worked on the TMP from January-April 2009.

### *Other Local People*

In this thesis, I refer to a few interviews and casual conversations with local people who are linked to Rainforest Expeditions but do not belong to any of the above social categories. Of the three interviewees:

- 1 is an NCI member involved in tourism through his position in the community.
- 1 is the sister of a RFE staff member from Puerto Maldonado.
- 1 is a student at a Puerto Maldonado university who is employed part-time as assistant for an independent research project being conducted at TRC.

I also mention comments from informal conversations with two other locals: 1 who worked three months as an assistant manager at an RFE lodge to fulfill practicum requirements for his program, and 1 who worked as an RFE guide for 5+ years and now guides for GAP Adventures.

### *Coding*

In most cases, I promised interview participants anonymity, and have tried to present material in such a way that even people intimately familiar with the setting should be unable to recognize the identity of individuals. In the text of this thesis, real names have been replaced with an anonymous yet individualized label assigned to each interview: RFE guides are G1-G18; *guacamayeros* from the Macaw Project are divided into project staff PS1-P8 and project volunteers PV1-12; RFE staff members are S1-S13; tourists interviewed are T1-T13, tourist surveyed are TSV1-9; and other locals are OL1-OL3.

It was not feasible to conceal the identity of certain key people such as TMP Director Donald Brightsmith because he is such a prominent figure in the triumvirate. Many people mentioned Don in many different contexts during interviews, and his identity in these contexts is relevant to the themes of this thesis.

Interviews were digitally recorded or meticulous notes on the responses to each question were taken by hand during the interview and typed up soon after each session ended. Recorded interviews (24 in total) were transcribed verbatim for analysis, and passages quoted in this thesis were later shortened into a form more conducive to the style of written language and translated if necessary. Over 180 pages of notes and typed transcripts of recorded interviews form the backbone of this thesis. This material was coded using rigorous grounded theory methods (see description below) to reveal the emergent themes.

## **Analysis**

Analysis was integral to all phases of the research process. Having noted the anthropocentric orientation of development studies, I selected a case study I hoped would enable me to analyze a non-human centered approach to development. Although I left for my fieldwork with general research questions, specific research and interview questions were formulated and modified on site in response to the factors encountered and perspectives offered by actors there. I reviewed all interview notes and began transcription of recordings while still in Peru. As described by Kvale and Brinkmann (2009), to some extent, researchers who transcribe their own interviews, “have the social and emotional aspects of the interview situation present or reawakened during transcription, and will already have started the analysis of the meaning of what was said” (180). This was certainly true for me – while transcribing I would pause to write memos about patterns noted in the data, new observations, and insights gleaned, especially when one person’s comment related to a previous conversation with another. As described in the previous section, such incorporation of analysis into the fieldwork stage is integral to the methods of grounded theory.

## ***Sociological & Anthropological Perspectives***

Social constructionism and an interpretative approach are important aspects of my perspective. As described by Charmaz (2002), constructionists do not believe their research reveals an external objective reality, but rather that both data and analysis are “created from the shared experiences of researchers and participants” (677). Objectivists may protest that interpretive constructionist approaches are subjective and insufficiently scientific.

However, there is an important difference between “biased subjectivity” in which researchers notice “only evidence that supports their own opinions” and “perspectival subjectivity” that appears “when researchers who adopt different perspectives and pose different questions to the same text come up with different interpretations of the meaning.” In fact, when acknowledged it can enrich the analysis (Kvale & Brinkmann,

2009: 213). To avoid such biased subjectivity while using an interpretive approach, Geertz wrote “thick descriptions” and attempted “to keep the analysis of symbolic forms as closely tied as I could to concrete social events and occasions, the public world of common life, and to organize it in such a way that the connections between theoretical formulations and descriptive interpretation were unobscured” (1973: 74).

In my own research and write-up, I use a mixture of ethnographic “thick description” and grounded theory techniques in an attempt to construct an analysis that is as objective as possible. While Chapter 2 provides a detailed “thick description” of a typical day as a *guacamayera*, Chapter 5 and Chapter 6 use ethnographic material, quotations from interviews, and background information to unpack the activities and interactions that occurred that day and link these to my “theoretical formulations.”

## **Limitations of the Research**

### *Short Time Frame*

A primary restraint on this research was the short time frame, a difficulty perhaps inherent to MSc studies, which exacerbated many other limitations. Time was a particularly serious limitation for me because of the nature of the ethnographic methods used. As Geertz describes it:

...ethnography is thick description. What the ethnographer is faced with ... is a multiplicity of complex conceptual structures, many of them superimposed upon or knotted into one another, which are at once strange, irregular, and inexplicit, and which he must contrive somehow first to grasp and then to render. (1973: 60)

Four months is an extraordinarily short amount of time in which to attempt to formulate even an initial understanding of the few threads this thesis focuses upon, and untangle them from the milieu of social life. Although my interview questions did evolve as time progressed, by my last few weeks of fieldwork I had identified new questions and wished I could have posed those questions to all interviewees.

### *Interviewee Composition*

My interviewee selection was also limited by the time span of the fieldwork and logistical challenges. I identified several people as excellent potential informants whom I was unable to interview because their daily schedules and movements between the lodges never aligned with my own. For example, I had hoped to interview more guides who also worked as *guacamayeros*, including one from NCI. It was difficult to arrange time with particular individuals because guides rotate between the lodges depending on the itineraries of their assigned tour groups on a schedule that is never certain until tourists arrive at the Puerto Maldonado airport. In addition, guides and staff work from approximately 4:30 a.m. to 8:00 p.m. (later depending on the position and if night tours are offered) with a few short breaks throughout the day. The intensity of their schedules made it difficult to find times when people were available and had the energy to answer questions, making my interviews catch-as-catch-can. Four interviews were cut short because the participants had to leave for another work-related activity.

Time restraints also required limiting the scope of the research to people directly connected with the Macaw Project and RFE. I formally interviewed six members of NCI, and spoke at length with several others about themes related to my thesis. However, all of these NCI members had direct links to RFE as guides, Posada Amazonas staff, members of the Control Committee for Ecotourism that represents NCI's half of Posada ownership/management, etc. Additional interviews with NCI members and Puerto Maldonado residents not directly involved with RFE would have provided a broader picture of local views on the Macaw Project and RFE.

### *One-Shot Interviews & Fieldwork*

Another limitation of my research is its one-shot nature, both in terms of conducting single interviews rather than multiple interviews with each respondent, and in terms of conducting all fieldwork during a single trip. (My fieldwork resembles a pilot study for future research and several longer-term research projects could be identified based on this study.) I did not conduct multiple interviews with the same person on different days, testing answers for consistency. Nor was there time to analyze my

interview results and return to ask previous interviewees whether they agreed with particular statements, or generate new sets of questions.

In her Ph.D. dissertation on the collaboration between RFE and NCI that resulted in the creation of Posada Amazonas, Amanda Stronza emphasizes the importance of visiting the area and building rapport with NCI members during multiple visits spanning four years (2000). She also describes how:

Stepping away from the field in the midst of the research allowed me to gain perspective and to discern patterns among events and ideas that often seemed unconnected, irrelevant, or merely confusing up-close. Also, dividing the field work over four visits gave me the opportunity to reassess and modify my original objectives and methods as I learned more, and as my thinking changed. (54-56)

Many times during my own fieldwork I felt frustrated that I was too close to the situation to sufficiently analyze it, see the patterns, assess how my own research and interview questions had evolved, and revise my research trajectory.

### *Reliance on Qualitative Methods*

Finally, a serious limitation of this research is its almost complete reliance on qualitative methods. As described in the sections above, my research orientation is qualitative and interpretive. Interviews were non-systematic, and most sample sizes are insufficient to infer statistically significant relationships. Although I recognize quantitative methods can provide a valuable supplement to qualitative data, my results include only a few questions that can be quantitatively compared. Through analysis of these questions and coding of qualitative materials, I have included quantitative analysis where possible.

### **Researcher Positionality & Interviewee Composition**

Acknowledgement of and reflexivity about one's own positionality is essential to undertaking and analyzing the results of socio-cultural studies, and can be both an asset and a limitation. Because of the time limitations outlined above, and my choice to

conduct fieldwork in a site where I had few contacts and had never visited previously, I needed to quickly familiarize myself with the scene on the ground and build rapport with informants. This task was facilitated by my affiliation and participation with the Tambopata Macaw Project.

As a TMP researcher, I enjoyed easy access to TRC tourists who cheerfully consented to interviews. Being a *guacamayera* enabled round-the-clock presence at the lodges, provided an automatic role for me (familiar to all RFE guides and staff), and enabled me to partake in all facets of *guacamayero* life. However, the prominence of this identity undoubtedly created pre-conceived notions and influenced what people were willing to share with me, especially any criticisms non-*guacamayeros* might have of the TMP. While I had good rapport with all of the *guacamayeros*, guides, and staff interviewed, in most cases I knew staff members less well than I did individuals from other social groups. Staff interviews were often shorter because staff tended to be less candid with me, offering briefer responses to questions and fewer direct criticisms of the Macaw Project.

Since the gender and social characteristics of both researchers and the people involved in the study influence the kinds of opinions and life experiences revealed, which constitute qualitative data, it is important to mention a few relevant things about myself and the composition of interviewees. I am a North American woman who lived in Costa Rica for nearly three years before beginning the MSc program for which this thesis was written, and I was twenty-nine at the time research was conducted. My formal education is in social, not biological, sciences. Most of the *guacamayeros* interviewed are trained in biological sciences, and these are the kinds of scientific researchers most familiar to RFE guides and staff. Most RFE lodge staff (especially at TRC) and guides are male; only three of those I interviewed were female. The gender balance amongst *guacamayeros* and tourists is more equal; nine *guacamayeros* and five of the tourists I interviewed are female.

Finally, it is important to be frank about my own orientations to the themes of ecotourism, conservation and development addressed in this thesis because inevitably they have shaped my research from topic selection and the questions asked, to my interpretations of events in the field and final analysis of the material.

Many people with whom I spoke in Peru assumed that because my background is sociology and anthropology, I would be most interested in subjects like indigenous culture and community participation. Ironically, it was in fact my frustration with the anthropocentrism of development approaches and their social science critiques that shaped my research interests and led me to select a conservation biology project as the focus of my thesis. I believe that humankind is currently committing genocide against many other species on this planet. My ultimate aim is to promote changes in human behavior and thinking that help preserve biodiversity and ecosystem functioning, which I believe are of paramount importance for all forms of life on Earth.<sup>18</sup> Education and research are tools that can facilitate this process, and it is my hope that this thesis makes some small contribution.

\* \* \*

In Chapters 5 and 6 the results of my MSc research are analyzed, discussed, and related to the findings of other studies and the broader theoretical concepts outlined in Chapter 4. While interview material was collected systematically, it is important to keep in mind that my methods were largely ethnographic, and “For ethnographers, the research findings cannot be separated from the specific location and the surroundings in which they were collected” (Marvasti, 2004: 36). The ethnographic material presented in this thesis presents a snapshot of Rainforest Expeditions and the Tambopata Macaw Project at a certain point in time, framed by the views of the particular individuals present. While some generalizations can be made and broader theoretical contributions drawn from the material, it is by no means an exhaustive study. The work and its conclusions are site specific and pertain to the particular set of relations and circumstances encountered in this case study.

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<sup>18</sup> My orientation and its scientific and philosophical bases are thoroughly explained in Chapter 4.

## CHAPTER 4

### A Theoretical Framework to Approach the “Mutually Beneficial Triumvirate” & Bio-centric Development

#### Environment & Development

The global environmental problems that define this age are inextricably linked to processes of development and modernization during the past millennium. As described by Arce and Long (1998), “development” is often conflated with modernization theory, which assumes the scientific worldview, technologies, and capitalist economic relations of Western societies are superior to those of the “so-called ‘backward’ or ‘underdeveloped’ countries” (5). Increasingly efficient forms of resource extraction, industrial production, higher levels of consumption, and increasing Gross Domestic Product are the hallmarks of such development.

In addition to being culturally insensitive and ethnocentric, this conceptualization of development is ecologically unsustainable. The ultimate limits of our planet’s carrying capacity unmask the illusion of infinite economic “growth” because the resource base simply cannot be expanded like purchasing power through increased monetary flows. Given the reality of such ecological limitations, Hornborg (2006) points out that, “‘development’ generally continues to imply increasingly sophisticated patterns of environmental load displacement” (171). Growth-based development to support our increasing human population is only made possible the consumption and conversion of vast portions of the resources and species on this planet.

Several alternative approaches to human-environment relationships and to the study and practice of development have been proposed to rectify this problem. Unfortunately, despite their purported differences, predominant “alternatives” like “sustainable development” and “ecological modernization” (see following section) are founded on the same fatally flawed growth-based approach to development as the older modernization and development orientations outlined above.

Obsession with economic growth and material consumption is but one aspect of a fundamental problem shared by all existing theories and approaches to environment and

development – they are grounded in an anthropocentric orientation. While newer approaches acknowledge the environment, like older ones they place human needs, wants, and desires above the basic survival requirements of all other species and natural entities. In “Moving Beyond Anthropocentrism: Environmental Ethics, Development, and the Amazon” (1990), Katz and Oechsli argue against the narrow but “pervasive interpretation” of anthropocentrism that has guided debates and policy choices over environment and development. The co-authors define *anthropocentric* as:

... those values, goods, and interests that promote human welfare to the near exclusion of competing nonhuman values, goods, and interests. This version of anthropocentrism is closely aligned with the term *instrumentalism*, according to which the world is viewed as a resource valuable only as it promotes human good.” (150, italics in original)

The result of policies and actions based on anthropocentric instrumentalism is that while we attend to important debates about responsibility, burden sharing, and equity among humans, the mass extinction of nonhuman species is not given moral regard or considered in these ethical debates (151-157).

Humanity is literally consuming Earth’s biodiversity as the biosphere cannot sufficiently absorb our pollution and vast numbers of other species cannot reproduce or evolve fast enough to adjust to changes affecting all ecosystems on the planet. There is a consensus among scientists studying biodiversity loss that “the current massive degradation of habitat and extinction of many of the Earth’s biota is unprecedented and is taking place on a catastrophically short timescale.” Extinction rates are estimated at “thousands of times” the normal background rate, which could lead to the extermination of 30% “of all species by the mid 21st century” (Novacek & Cleland, 2001: 5466). The precise impacts from this genocide of species are uncertain. However, all concern for other species aside, scientists believe such biodiversity loss threatens the basis of human life as we know it on this planet.

If we have any hope of averting environmental catastrophe and fulfilling our moral duty to nonhuman nature, humanity must realign its priorities and actions and shift its philosophical underpinnings from an anthropocentric instrumentalist approach to a more ecocentric one. The development trajectory we choose will be crucial in this

process. Throughout this thesis, I articulate and illustrate an alternative theoretical and practical approach, bio-centric development, which hopefully may be used to help address the serious environment and development challenges we face.

As far as I know, the only approach to the environment and development challenges we face which barely resembles bio-centric development are the Integrated Conservation and Development Projects (ICDP) put forward in the early 1980s. However, there are distinct differences between ICDPs and the form of bio-centric development I propose. Although no single definition for ICDPs is predominant, they basically “seek to address biodiversity conservation objectives through the use of socio-economic investment tools” (Hughes & Flintan, 2001: 4). They were proposed by conservation organizations and the United Nations Environment Program in response to calls to “shift away from the strict separation of conservation and human development” (Dove, 2006: 198). While I too believe conservation and development need to converge around crucial issues, with bio-centric development I am proposing development of and for endangered species and natural entities themselves. This is quite different from the approach of ICDPs, which make human development a means to conservation ends.

This chapter situates my research within the fields of environment, development, and tourism studies and describes the theoretical frameworks that will be applied throughout the thesis. First, it argues that existing popular development “alternatives” like sustainable development and ecological modernization are untenable because of their common anthropocentric basis. Second, anthropocentric and ecocentric philosophies are outlined, and bio-centric development is described as a fundamentally different approach. My approach to studying the mutually beneficial triumvirate is described, and my study is related to existing ecotourism and volunteer tourism studies. Finally, a new social philosophy that provides a relevant framework for analyzing the relationships of the “mutually beneficial triumvirate” is described.

### **Sustainable Development & Ecological Modernization**

Despite important differences that distinguish ecological modernization from sustainable development, both are “primarily anthropocentric approaches” at heart (Langhelle, 2000: 303). While the environment is recognized as a vital instrument to be

maintained and protected, development is implicitly defined as human development. Both approaches also emphasize continued material, economic growth under a modernization development paradigm.

Ecological modernization is founded on belief in technological innovations and further “industrial development as offering the best option for escaping from the ecological crises of the developed world” (Fisher & Freudenburg, 2001: 702). Proponents of ecological modernization acknowledge “some fundamental transformations within the modernization project” are needed to correct for “structural design faults that had caused severe environmental destruction” (Mol & Spaargaren, 1997: 19). These “transformations” focus on ‘ecologizing’ the capitalist economy by introducing clean production processes (Hannigan, 2007: 26). However, while others scholars believe resolving the environmental crises we face will require radically restructuring the economic order and institutions governing global trade, ecological modernizationists’ stress that the “institutions ... involved in the modern organization of production and consumption” should not be rejected (Mol & Spaargaren, 1997: 19). Thus, this approach envisions “environmental improvement ... in tandem with economic growth” (Fisher & Freudenburg, 2001: 704).

Unfortunately, as described in the citation from Hornborg (2006) in the above section, the finite resource base cannot be expanded like economic capital. Given this reality, approaches like ecological modernization only serve to exacerbate the problem of “environmental load displacement.” Biofuels are an excellent example of this, as they seemingly represent a technology-based development “solution” to carbon pollution and non-renewable resource depletion that enables continued growth and consumption. However, because they are simply a form of displacement, they create a host of other environmental problems including deforestation so biofuel crops can be planted, increased food prices from competing land use, nutrient depletion when biomass leftovers are used from food crops rather than composted back into the soil, and increased pollution from chemical fertilizers and pesticides. This illustrates the fundamental flaw in the ecological modernization approach to development.

The defining document on sustainable development, *Our Common Future* (also known as the Brundtland Report), states that: “Humanity has the ability to make

development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987: Art. 3, ¶ 27). The unstated assumption is that sustainable development is concerned with meeting the needs of present and future human generations. The environment should be sustained, but only because it is instrumental in meeting the needs of human generations.

*Our Common Future* claims to offer “New Approaches to Environment & Development (Part I.1.II). However, this document:

...not only emphasized that economic growth was still an objective of human society, but also advocated a five- or even tenfold increase in world manufacturing output. It accepted the Western development paradigm and the profligate Western lifestyle as a model for the industrializing world. Ecological sustainability was not seen as primary in the policy-making process, but rather as only one of a number of factors. (Richardson, 1997: 52).

The report does refer to the need for a reduction in the consumption of resources by developed countries to make an increase in consumption by developing countries possible and still achieve sustainability. It is telling that while I know this passage exists, I was unable to locate it in the electronic text using the Find function and the search words reduction, consumption, and growth. Ironically, when I attempted to find the reference with the Google search tool on the U.N. Documents website using the terms WCED reduction AND consumption, the reply query was “No matches found. Do you mean WCED production AND consumption?” Nonetheless, the part of the “sustainable development” message recognizing reduction has been ignored in practice.

Sustainable development has been widely promoted and embraced because the same old popular anthropocentric, growth-based approach is cleverly phrased to make it appear like a new environmentally friendly alternative. This slight of tongue was used to unite parties with conflicting interests and subdue environmentalists and development critics. Richardson (1997) describes how the “key to understanding the Brundtland approach to the natural world is that it frames anthropocentric programmes and the industrial worldview in the language of biocentricity” (46-47). However, whereas sustainable development does not “seek to question the concept of quantitative growth

measured in traditional terms,” supporters of a truly biocentric approach “question the very concept of quantitative growth.”

Sustainable development and ecological modernization are among the approaches advocated to resolve the environment-development conundrum. However, it can be seen that both are based on traditional modernization and growth-based approaches to development and neither gives adequate consideration to nonhuman species or natural entities. To achieve a true shift and develop a truly alternative approach, we must alter the philosophical underpinnings of our thoughts and actions.

### **Anthropocentrism, Eco-centrism & Bio-centric Development**

Anthropocentrism is a human-centered worldview that draws a psychic barrier between nature and humankind, presupposing human control of nature. It is the dominant philosophical orientation underpinning mainstream global political-economic relationships, as it shapes the collective actions and individual attitudes of billions of human beings. Richardson (1997) describes how the “anthropocentric approach to the natural world is that humankind is above nature and has the right – divine or otherwise – to subjugate it.” This orientation has both religious and secular aspects. Major world religions like Christianity call “on humankind to impose its will on the natural world.” Such religious traditions, “through industrialism,” have become intertwined with the secular “scientific-rationalist concept, grounded in the ideas of Bacon, Newton, and Descartes, that planet Earth exists for the benefit of, and exploitation by, the human race” (44). Anthropocentrism stresses “the value of biodiversity to human beings as an economic resource or as less overtly instrumental, educational, cultural, recreational and aesthetic values” (Yamin, 1995: 533). The anthropocentric orientation is defined in contrast to eco-centric or bio-centric approaches.

Eco-centrism, or bio-centrism, is a worldview that sees human beings as part of nature, and presupposes humankind’s interrelationship and interconnection with everything else that exists on planet Earth. This view is advocated by philosopher Arne Naess, whose descriptions of “Deep Ecology” (1973) are often used to explain eco-

centrism.<sup>19</sup> In addition to concern for human physical and material needs, an ecocentric approach also “encapsulates the fulfillment by human beings of non-material or spiritual needs, together with respect for the needs of non-human life on the planet and, indeed, the Earth itself, because of their intrinsic value independent of human life” (Richardson, 1997: 50).

For millennia, people of many cultures lived by practices grounded in eco-centric beliefs. Today, many of these eco-centric belief systems and cultural practices have been considerably weakened or destroyed. This cultural extinction is linked to the biodiversity loss and habitat destruction that are currently occurring at unprecedented rates around the world. These losses can be partially attributed to the social and environmental impacts occurring under existing development paradigms.

Unfortunately, both conservation and development commonly have been pursued on anthropocentric bases. While newer development concepts like “sustainable development” and “ecological modernization” recognize human reliance on nature, as discussed above, they are still overtly anthropocentric. Although conservation has been explicitly concerned with the planet’s non-human species, like development, it too is often based on anthropocentric reasoning.

Yamin (1995) asserts that: “Conservation has a long history of being justified on anthropogenic grounds” (533). These roots reach back to Christian religious doctrine based on the “implicit underlying philosophy that ‘the earth was a larder created for the use of mankind’” (Thomas in Yamin, 1995: 533), and Aristotelian teachings that “plants existed for the sake of animals and animals for the sake of man.” From this viewpoint, “conservation is merely an exercise of self-restraint designed to maximize human welfare over the long-term” (Yamin, 1995: 534). Stated this way, “conservation” and “sustainable development” are two sides of the same coin.

However, there is also a fundamentally different approach that can be taken to conservation and development based on eco-centric principles. Eco-centric conservation stresses the “moral imperatives to respect the intrinsic value, integrity, and interdependence of all forms of life,” which “tempers the concept of absolute dominion

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<sup>19</sup> Deep Ecology’s seven principles and their relationship to conservation and development approaches are discussed in detail later in this section.

by emphasizing humankind's guardianship role" (Yamin, 1995: 533-534). After two years immersed in development studies, I have yet to find an existing development approach which reflects an eco-centric worldview. However, I believe development can be pursued on eco-centric grounds. Through this thesis, I seek: 1) to demonstrate that such development is possible, and, in fact, already exists, using the Tambopata Macaw Project as a case study; 2) to propose the concept of "bio-centric development" to describe this approach.

### ***Bio-centric Development Interventions***

Bio-centric development is distinct from existing development concepts in at least two ways: 1) as an eco-centric, rather than anthropocentric approach it focuses on the *biosphere* – living organisms and their environments (Merriam Webster website) – thus, human beings are not its primary concern, though they are among its beneficiaries; 2) it encompasses initiatives concerned with the health and well-being of non-human species and larger environmental entities like ecosystems – areas outside the traditional scope of development. Bio-centric development can be described as interventions designed to meet the needs of nonhuman species, improve the health of environmental entities, and address environmental problems exacerbated and/or caused by humankind.

Eco-centrism and anthropocentrism are opposite value systems – each is a kind of moral bedrock, at times subconscious, from which more specific thoughts and actions arise. Naess (1973) emphasizes that the eco-centric tenants of Deep Ecology are "clearly and forcefully normative," expressing "a value priority system" (7). In this regard, I do not purport to subscribe to the values of scientific neutrality and objectivity. I believe humanity has an ethical obligation to tackle the environmental problems we have created using all the tools at our disposal, including development, to do so.

To address the current biodiversity crisis, Novacek and Cleland (2001) call for "enlightened human intervention beyond simple measures of wilderness preservation, a strategy that embraces ecosystem management and mitigation of the current alteration of global biogeochemical cycles" (5466). I believe a bio-centric approach to development can contribute to this process.

### ***Eco-centrism & a Bio-centric Development Paradigm***

Whereas existing development approaches are grounded in anthropocentrism, a bio-centric approach to development is possible. I demonstrate this through a case study approach by examining the Tambopata Macaw Project (TMP) in this thesis. Critics may say the unique conditions under which TMP and Rainforest Expeditions co-evolved are not replicable, and therefore bio-centric development is nothing more than an idealistic concept, unattainable in reality.

However, basing development on the tenants of eco-centrism does not seem so far-fetched when its basic principles are compared to the recommendations and conclusions reached time and time again by critical evaluations and reviews of both conservation and development initiatives. While certainly not the only eco-centric philosophy, Deep Ecology is a prominent example that I will use to illustrate how eco-centric principles can be incorporated into conservation and development projects, and indeed how this is already being done.

One of Deep Ecology's primary advocates, Arne Naess, differentiates the movement from the "Shallow Ecology movement." According to Naess, while shallow ecology "fights against pollution and resource depletion," its central objective is "the health and affluence of people in the developed countries" (1973: 3). In contrast, Naess details how Deep Ecology is concerned with all life forms and improving the living conditions of all human beings, including non-material qualities like the maintenance of one's culture and way of life.

The seven principles of the Deep Ecology movement as described by Naess (1973) are:

- 1) *A relational, total-field image* that does not favor humans but rather views all organisms "as knots in the biospherical net or field of intrinsic relations."
- 2) The principle of *biospherical egalitarianism* as embodied by the "ecological field-worker" who "acquires a deep-seated respect, or even veneration, for ways and forms of life. He reaches ... a kind of understanding that others reserve for fellow humans," based on *the equal right to live and blossom*.

- 3) *Principles of diversity and of symbiosis* based on recognizing that diversity “enhances the potentialities of survival, the chances of new modes of life, the richness of forms.” Its supporters fight against economic, cultural, and military domination and invasion, “and they are opposed to the annihilation of seals and whales as much as to that of human tribes or cultures.”
- 4) *Anti-class posture*. The diversity of “human ways of life is in part due to (intended or unintended) exploitation and suppression on the part of certain groups.” Therefore, it is important to follow the first three principles in conflicts between groups, “including those today between developing and developed nations.”
- 5) Fighting against *pollution and resource depletion*.
- 6) An outlook that emphasizes *complexity, not complication*. This recognizes “the profound human ignorance of biospherical relationships and therefore of the effect of disturbances.” Among humans, it “favors division of labor, *not fragmentation of labor*, to support “integrated actions in which the whole person is active” and “complex economies” that integrate a “variety of means of living.”
- 7) *Local autonomy and decentralization* because vulnerability “is roughly proportional to the weight of influences from ... outside the local region in which that [life] form has obtained all ecological equilibrium,” and “increased local autonomy ... reduces energy consumption” (e.g. self-sufficient vs. import-dependent communities).

(3-6, all italics in original)

Many of these principles resonate with conclusions reached by critics of development and conservation written decades after Naess’ articulation of Deep Ecology. Ecotourism and protected areas critiques provide an example that illustrates this point and relates it to back to the case study examined in this thesis.

In a review over 220 anthropological critiques of conservation, West, Igoe, and Brockington (2006) investigate the “social, material, and symbolic effects of protected areas” and how they “impact people’s lives and their surroundings” (252). These authors

found that many projects actually damage the cultures and environments of the people and places they purport to help. Too often, such projects remove resources from the hands of local people and fail to give them a fair share of the benefits, while their cultural practices and ways of life are overrun by introduced capitalist economic relationships and values (West et al., 2006). The eco-centric principle of *complexity, not complication* supports people's rights to pursue multiple economic forms. Adhering to *diversity and symbiosis* requires respect for a variety of "modes of life" and recognizes how this diversity contributes to human and environmental health.

A book by Furze, De Lacy, and Birkhead (1993), reviews several case studies of conservation and development projects that employ a variety of techniques to effectively "link development to conservation through protected areas (and ecotourism)" (174). These authors conclude by suggesting seven key practices: empowerment of local people; participation in the project cycle; creating stakeholders; linking benefits to conservation; distributing benefits; identifying community institutions and leaders; be site specific (Furze et al., 1993: 174-176). The participation of local people in project design and implementation, and their right to a share of its benefits are inherent to Deep Ecology's principles of *diversity and symbiosis*, *anti-class posture*, and *local autonomy and decentralization*. If the people and organizations sponsoring such conservation and development projects begin from the eco-centric principles described by Naess, practices such as those recommended by Furze et al. (1993) should become the norm.

### **Tourism & Development Studies**

Many academic studies have critiqued both mass tourism and its alternatives, such as ecotourism, for causing environmental degradation and negative social impacts on people living in tourism destinations. Environmental anthropologists and sociologists, and tourism scholars, have especially focused upon the problems created by tourism when human communities lose access to natural resources reserved for tourist use and/or lose touch with their cultural traditions as a result of tourism development (for example, the review by West et al. (2006) of over 200 anthropology articles on the social impacts of protected areas and eco/tourism). Various forms of tourism have also been critiqued as a form of ritual consumption or commodification of a particular location's nature and

culture (see for example, Stronza (2001) on the major themes covered by anthropological studies of tourism based on a review of over 100 articles). While I am well-aware of these debates and believe many interesting and legitimate critiques have been made, my focus is different.

The majority of anthropological and sociological tourism studies I have read emphasize the negative social and environmental impacts of tourism over any benefits that may result from tourism development. While I do not contest these negative impacts, all development involves social and cultural changes, affecting “traditional” forms of resource use, consumption, and social relations – this is the purpose of development. These changes usually include various forms of negative impacts on human communities, nonhuman species and their shared environments. While we each may envision “development” differently, most people want a higher quality of life and personal advancement, and are eager to embrace activities which could make this possible. Therefore, scholars should not evaluate tourism in isolation, but in relationship to negative impacts and benefits of other development alternatives, as do people living in “developing” locations.

When I asked people from Tambopata who participate in tourism about their motivations to be a guide or to work as staff for Rainforest Expeditions (RFE), or the difference between RFE and other tourism operators, many of them drew comparisons between eco/tourism and its alternatives. Besides tourism, the primary economic activities of Tambopata are extractive industries like mining and logging, or subsistence ones like farming and hunting. These activities have had devastating impacts on the health of the regions’ forests and rivers, and many people expressed their preference for tourism as a form of development that conserves their environment and offers more security than these other options. For example, a Puerto Maldonado university student said, contrasted ecotourism with mining saying “[ecotourism] is something positive. ... You can offer your land without losing your land, you don’t have to sell it or contaminate it” (OL1). This subject is addressed in Part II of Chapter 5 in the section ‘‘Conservation/Environment’ (vis-à-vis Extractive Economic Options).’

## **Tourism & the “Mutually Beneficial Triumvirate”**

My research explores the interactions between a conservation biology research project, and two forms of alternative tourism (ecotourism and volunteer tourism) to see how this three-way relationship might contribute to something that could be called bio-centric development. The central difference between bio-centric development and previously articulated approaches is its eco-centric orientation. An eco-centric perspective defines human beings as just one element in the equation, and gives equal value and consideration to non-human factors (like other species and the environment). It also emphasizes non-material improvements in human quality of life over quantitative capitalist economic growth. My assessment of the Tambopata Macaw Project, Rainforest Expeditions, ecotourism, and volunteer tourism are framed by these eco-centric concerns.

I based my case study choice on the hypothesis that the Tambopata Macaw Project and Rainforest Expeditions *are* achieving bio-centric development, and began fieldwork with an opinion informed by much desk research that each venture exemplifies many of the best practices in scientific research and ecotourism. While I still believe this, throughout the research process I discovered many areas in which the Tambopata Macaw Project and Rainforest Expeditions could improve their practices. The critiques and positive appraisals offered in Chapters 5, Chapter 6, and Chapter 7 are based on examples from this specific case, but may have wider application in other tourism and development studies.

## ***The Actor-Oriented Approach & Expanding the Concept of “Social Actor”***

The approach followed throughout my research is to investigate the perspectives of actors from all groups who are participating in the “mutually beneficial triumvirate.” This is in keeping with the actor-oriented approach (AOA) to development studies advocated by Wageningen University scholars. AOA bases the study of social and cultural phenomena on the assumption that actors have agency to make and act on decisions; as opposed to structural analysis which assume that “development and social change” are primarily a product of external forces controlled by “powerful economic and political groups, institutions and enterprises” (Long, 1992: 19-20). However, social actors draw upon “a repertoire of different life styles, cultural forms and rationalities” common

to a particular society, which “they themselves play ... a part in affirming or restructuring.”

Thus, the “social actor is a social construction rather than simply a synonym for the individual.” Actor-oriented studies therefore contain two kinds of social constructions, “first, that which is culturally endogenous ... based on the ... representations characteristic of the culture in which the particular social actor is embedded; and second, that which arise from the researchers’ or analysts’ own categories and theoretical orientation” (Long, 1992: 25).

In my work, I try to represent actors’ social constructions as objectively as possible by providing detailed ethnographic descriptions and quoting extensively from interview statements throughout this thesis. As described in previous chapters, I use the “culturally endogenous” terms and social constructions found at the field sites when possible, and try to clearly delineate my own social constructions and interpretations as a researcher. I especially focus on interactions between groups of social actors (guacamayeros, RFE staff, guides, and tourists), perspectives offered by actors about another group that complement or contradict those of actors in that other group, and the variety of perspectives within each group.

The *Chicos* are one example of a “culturally endogenous” socially constructed group followed in this research. As wild birds raised by human hands, some of them still engage in extensive social interactions with humans and they play an important role in research and tourism at Tambopata Research Center. As described in Chapter 5, they have the agency to make decisions and act on them, and they distinguish between and interact with different human social groups in distinct ways. Thus, I argue throughout this thesis that the concept of “actor” should be expanded to include non-human social actors. This is necessary if the actor-oriented approach is to be applied to non-anthropocentric conservation and development projects.

### ***Ecotourism & Volunteer Tourism Influences***

The work of tourism and environment scholars Amanda Stronza and Lisa Campbell also greatly influenced my approach, and I followed many of the methods and lines of inquiry suggested in their work. In Stronza’s review of the major themes

addressed by anthropological studies of tourism (2001), she identifies a knowledge gap. She suggests that current studies “may be divided conceptually into two halves,” one focusing on the impacts of tourism on host communities, and the other on the origins of tourism and tourists’ motivations (262). What we lack is an understanding of hosts’ motivations to participate in tourism, and the impacts tourism experiences have on tourists (see also Stronza, 2005). Similarly, Campbell and her co-authors describe how most volunteer tourism studies examine only the volunteer/tourists’ experience, without examining the parallel perceptions of volunteers’ hosts or how both volunteers and hosts construct the meanings of volunteerism (Gray & Campbell, 2007). I also use several of the techniques employed in Campbell and Smith’s study (2006) of volunteer tourists’ motives to participate in a conservation biology project. For example, I present the results of my investigation into the motives of RFE guides and tourists, and TMP research staff and volunteers in a similar format.

### ***Ecotourism in Theory & Practice***

When the theoretical principles of ecotourism are put into practice, I believe the negative social and environmental impacts of tourism development can be minimized and its benefits maximized. Martha Honey is one of the seminal authors on ecotourism and development. Part I of her book *Ecotourism and Sustainable Development: Who Owns Paradise?* (1999) is dedicated to describing the origins of ecotourism and the problem of green-washing in the tourism industry (when environmentalism is used as little more than a marketing slogan), and to articulating a rigorous definition of ecotourism. Real ecotourism is much more than just travel to “natural” destinations or wildlife observation. Honey offers the following definition to distinguish ecotourism from other types of tourism: 1) involves travel to natural destinations; 2) minimizes social and environmental impacts; 3) builds environmental awareness for both tourists and residents of nearby communities; 4) provides direct financial benefits for conservation; 5) provides financial benefits and empowers local people; 6) respects local culture; 7) supports human rights and democratic movements (22-25).

While these are ideal principles that may never be perfectly represented in the real world, they do provide a set of tangible criteria against which tourism operators can be

assessed. Many certification schemes based on similar criteria have been proposed to help tourists' evaluate whether the tenants of ecotourism are truly being upheld in tourism companies' practices. For example, certification based on measurable social and environmental criteria is available through the Sustainable Tourism Certification Network of the Americas, sponsored by Rainforest Alliance, the World Tourism Organization, the International Ecotourism Society, and United Nations Environment Program (Rainforest Alliance website). Rainforest Expeditions is in the process of being certified by this program.

Rainforest Expeditions' owners clearly link ecotourism to conservation by providing benefits to local people:

The importance of macaws to ecotourism is clear, but the importance of ecotourism to conservation lies in its indirect use of wildlife and ecosystems as tourist attractions to generate significant revenue and local employment. ...it is important that the income remain in the region and that local people benefit from it. Only then will they view ecotourism as a development alternative and fully understand the value of nature conservation. (Nycander et al., 1995: 441)

Currently, twenty to twenty-five NCI families receive direct income from Posada Amazonas, and employment opportunities rotate "every 2-3 years throughout the community of 150 households" (Stronza & Gordillo, 2008: 457). The communal profit sharing structure offer additional economic benefits to all NCI members, even those who do not participate directly in the project. Rainforest Expeditions upholds the tenants of ecotourism by directly a significant portion of profits back to local peoples and the conservation of Tambopata's forests and nonhuman species.

My interest in genuine ecotourism versus green-washing and my belief that Rainforest Expeditions (RFE) does represent an example of genuine ecotourism led me to explore the perspectives offered on these subjects by people involved in the triumvirate. I asked RFE tourists, staff, and guides, and Tambopata Macaw Project (TMP) *guacamayos* about the difference between RFE and other eco/tourism operators in Tambopata, and how RFE and TMP are contributing to conservation and development in the region. Their answers provide insight into how ecotourism, conservation, and

development are conceptualized by the triumvirate's participants, which can be compared and contrasted with how it is theorized by scholars.

### ***Volunteer Tourism***

Organizations sponsoring a form of vacation tourism dedicated to volunteer work have been around since the 1970s. One of the most well known is the non-profit Earthwatch Institute, founded in 1971. Earthwatch specifically focuses on supporting research and education by sending volunteers to assist scientists in conducting fieldwork (EWI, 2007). The research projects gain both valuable data collection labor and funding from volunteers who pay to participate. Increasing interest in this form of travel has led to a proliferation of volunteer tourism opportunities and organizations catering to interested volunteer/tourists. The website of the organization VolunTourism provides educational information about volunteer tourism and promotes the industry by helping people learn about existing options. It defines "VolunTourism" as: "The *conscious*, seamlessly integrated combinations of voluntary service to a destination along with the best, traditional elements of travel – arts, culture, geography, and history *and recreation* – in that destination" (VTa, italics in original).

Despite an established presence in the tourism market, volunteer tourism is relatively new as a field of academic inquiry. In 1991, Lindberg identified a subset of the ecotourism market "directed specifically towards research" and described it as "comprising 'hard core nature tourists' such as scientific researchers" (as cited in Clifton & Benson, 2006: 241). Clifton and Benson (2006), identify this branch of "research tourism" studies as the root of more recent academic investigations of the more broadly defined volunteer tourism. The often cited volunteer tourism scholar Stephen Wearing describes it as presenting an alternative to the colonialism of free market mass tourism, which has "led to the exploitation of host communities, their culture and environment" (2001, ix). In contrast, Wearing defines volunteer tourism as organizing volunteers to undertake "holidays that might involve aiding or alleviating the material poverty of some groups in society, the restoration of certain environments or research into aspects of society or environment" (1).

Since 2000, the body of academic research on volunteer tourism has grown steadily, as each year a few more studies are published. Several authors have pointed out that the “scant” existing research about volunteer tourism has primarily focused on the tourists themselves, with little attention to the people and communities that host such tourism (Gray & Campbell, 2007; McGehee & Andereck 2009). These authors assert the importance of understanding the parallel perceptions of volunteers’ counterparts. Gray and Campbell (2007) note that the “identities, behaviors, values, motives and personal development of the volunteers” were the subject of at least eight studies published since 2001. However, few articles since then have focused on volunteer tourism hosts’ experiences. Thus, their work “expands the analysis to all actors involved in volunteer tourism, whether or not they are involved *as volunteers*,” supporting a research agenda that addresses “the broader social meaning of volunteer tourism.” (464, italics in original).

### ***Volunteer Tourism in the “Mutually Beneficial Triumvirate”***

#### *Earthwatch Expedition Participants*

Earthwatch volunteers are considered the basis for the volunteer tourism leg of the ecotourism, conservation biology, and volunteer tourism “mutually beneficial triumvirate,” outlined by Brightsmith et al. (2008a). Earthwatch expeditions have been described as a form of volunteer tourism by many scholars (for example, see Gray & Campbell, 2007) and analyzed in a variety of studies. I decided not to focus on Earthwatch Institute in my investigation of volunteer tourism. However, this decision requires some explanation and qualifications. While I did not ask participants any direct questions about Earthwatch, several people mentioned Earthwatch during interviews and casual conversations. These unprompted comments about Earthwatch and responses to consistently asked questions about whether or not *guacamayeros* are tourists offer additional insights into host perspectives on volunteer tourism.

### *Are Guacamayeros (Volunteer) Tourists?*

My main research interest in this area was whether working as a *guacamayero* is also considered a form of tourism by actors involved in TMP/RFE. Through my thesis research I deliberately explored perceptions of volunteer tourism in relation to TMP *guacamayeros* and gleaned unprompted opinions about Earthwatch from several interview participants. My participation with the Tambopata Macaw Project (TMP), first as a short-term volunteer on a two-week Earthwatch expedition and then as a *guacamayera* working over a period of several months, provided me with insights into the experiences and treatment each kind of volunteering yields. I asked *guacamayeros* and RFE staff and guides, “Are *guacamayeros* tourists? Why or why not?” Qualitative material collected on these questions provides insight into how the meaning of volunteerism and tourism are constructed by all parties involved (see Part II, Chapter 5).

The stark contrast between Earthwatch groups and *guacamayeros* probably affects peoples’ perceptions of “volunteers” vis-à-vis “tourists” at RFE lodges, making them more likely to state that *guacamayeros* are not tourists. I believe most people from RFE and TMP would unequivocally label Earthwatch expedition members as tourists if asked. Future studies of other cases where a direct comparison can be made between host perceptions of Earthwatch teams or other short-term volunteers with their perceptions of a project’s longer-term volunteers could yield interesting results about the social construction of meanings for both “volunteer” and “tourist.”

### *Categorizing TMP Volunteers as Volunteer Tourists*

Generally, in situations categorized as volunteer tourism the “volunteer tourists” pays higher prices, stays for a shorter period of time, and engages in less specialized work than do TMP volunteers. For example, Earthwatch expedition ‘Macaws of the Peruvian Amazon’ team members stay 12 nights, pay over \$2,500 (a much higher rate than regular RFE tourists), and participate in only a few basic monitoring activities for which they can be trained quickly. They engage in actual fieldwork eight days of the trip, work one shift per day, and enjoy guided activities and meals from the buffet in the dining room during free time. It is an experience considerably more tourist and less volunteer than that of TMP volunteers.

Despite these significant differences, TMP volunteers do meet many of the standards commonly used to describe volunteer tourism. Describing the history of the industry, VolunTourism website asserts that volunteer tourism “in its current iteration received a very big boost from the founding of Volunteer Service Overseas in 1958” and U.S. Peace Corp in 1961 (VTb). Placements under these programs last from six months to two or more years, much longer than the few months stay of TMP volunteers. In the website’s section on frequently asked questions it is also noted that in “the broadest sense, VolunTourism represents voluntary service experiences that include travel to a destination in order to realize one’s service intentions” (VTc). Many of the TMP volunteers interviewed mentioned service-oriented motivations, such as “making a contribution to conservation.”

Scientific researchers with characteristics similar to those of TMP volunteers have also been the subject of previous academic studies about volunteer tourism. Locating their work in the broader sphere of volunteer tourism studies, Clifton and Benson (2006) investigate the socio-cultural impacts of “research ecotourism” in Indonesia. Their “research ecotourists” are mostly “UK-based higher education students undertaking fieldwork ... designed to meet longer-term conservation objectives” that also support their “undergraduate and Masters level dissertation projects” (243). Likewise, some TMP volunteers, me included, use their fieldwork period both to support conservation and to collect material for a thesis. Scholars have also noted that the people they choose to study as volunteer tourists often do not self-identify as tourists (Clifton & Benson, 2006; Gray & Campbell, 2007).

Despite the rejection of this label by some volunteer/tourists, there is good reason to analyze their experiences using the lens of tourism studies. Campbell and Smith (2006) describe a Costa Rican turtle conservation and research project quite similar to TMP in its reliance on a mix of short and long-term volunteer labor from both Costa Rican nationals and foreigners. The turtle project’s short-term volunteers pay thousands of dollars to participate for 1-3 weeks (like EWI expedition ‘Macaws of the Peruvian Amazon’ team members), while long-term volunteers stay 2-4 months (like TMP volunteers) and receive free room and board. While short-term volunteers pay directly, Campbell and Smith note that long-term research assistant pay opportunity costs in foregone income and “both

groups contribute time and money to volunteer in difficult conditions.” The authors argue that even the turtle project’s Costa Rican research assistants “can be considered volunteer tourists” because those interviewed “were from other parts of the country and rarely, if ever, returned home during their stay” (87). The same reasoning applies to all the TMP volunteers I interviewed<sup>20</sup> and supports my selection of TMP volunteers as representatives of the volunteer tourism side of the ecotourism, conservation biology, and volunteer tourism triumvirate.

In their analysis of the situation, TMP Director Donald Brightsmith and RFE co-owner Kurt Holle explicitly cast Earthwatch expedition team members in the role of volunteer tourists, whereas long-term TMP volunteers were included under the “conservation biology” side of the triumvirate, and RFE and its guests represented the ecotourism side (Brightsmith et al., 2008a). Earthwatch volunteers do unquestionably qualify as volunteer tourists, and the work of all *guacamayeros* does contribute to conservation biology. Many TMP volunteers are dedicated to science as a career and some have field experience and skills comparable to those of TMP’s paid research staff. TMP’s long-term volunteer positions will never be sold to the general public on a website like VolunTourism. Thus, while I selected TMP volunteers to represent volunteer tourism in this study, their experiences and opinions also exemplify the conservation biology side of the triumvirate, supplementing material from TMP research staff interviews.

### **Addressing the “Mutually Beneficial Triumvirate”**

Following the approach and methods advocated by Gray and Campbell (2009), this research explores the perceptions and experience of actors from *all* groups involved in a situation that includes not only volunteer tourism, but also ecotourism and scientific research. Brightsmith et al. (2008a) define and analyze each side of the triumvirate in terms of three discrete organizational entities; I take a different approach, examining the perceptions and experiences of the individual actors involved.

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<sup>20</sup> At times students and guides from Tambopata do work as Macaw Project volunteers. However, of my interviewees, the only local people who have been TMP volunteers are now in paid Field Team Leader positions or work as RFE guides. Thus, none of them are included in the group defined as volunteer tourists.

From this angle and at this level, there is considerable overlap between the three sides of the triumvirate as exemplified in the identity of individuals who were, for instance, first TMP volunteers, later paid research project staff, and finally Rainforest Expeditions' (RFE) guides. A variety of ethnographic research and interview methods were used to explore the motivations and experiences of not only TMP volunteers and research staff, but also RFE staff and guides. This perspective enables analysis of: 1) the patterns in responses both within and between actor groups, 2) the broader interactions between volunteer tourism, ecotourism, and scientific research, and 3) how the boundary between these activities is socially constructed and deconstructed by the people involved.

### **The Call for New Social Theories**

Over twenty-five years ago, sociologists Riley Dunlap and William Catton called for new social theories to overcome the hegemonic “human exemptionalism paradigm” and anthropocentrism common to all the available, and supposedly varied, “competing social theories” (Goldman & Schurman, 2000: 563). Following this call, myriad new theories and approaches to studying human-environment relations have been proposed. Goldman and Schurman (2000) review the results of well over 100 studies undertaken in this vein. They conclude that “recent theorizing on social-natural relations has been highly dynamic” and scholars have grappled with “the entrenched idea that nature and society are phenomenologically and scientifically distinct” from a “multitude of perspectives” (578). While I agree that much exciting new work has been generated, the nature-society divide is but one aspect of anthropocentrism. I seek a social science approach to studying the environment that actually puts human beings in their proper place as but one aspect of nature. Unfortunately, the very definition of social sciences as disciplines focused on humanity elevates human interests and benefits over the needs of nonhuman nature – and this is the manifestation of anthropocentrism I find most troubling.

### ***Bio-centric Development***

My research uses grounded theory methods to articulate and illustrate bio-centric development, which I believe is truly a non-anthropocentric approach to the theory and

practice of development. Gray and Campbell (2007) note that grounded theory “is useful when there is little existing theory in a subject area” because its methods identify and focus in upon the “emergent themes” that arise through the interview process (469). As described in Chapter 3, the techniques used in my fieldwork process closely resemble those of grounded theory and I purposefully applied grounded theory methods to the analysis of my ethnographic and interview material.

The following chapters describe the results of my thesis research. Chapter 5 addresses my original research questions, while Chapter 6 focuses more on the emergent themes identified using grounded theory methods. These emergent themes include: the tensions, trade-offs, and benefits created by combining tourism activities centered on macaws with their scientific study; the great importance of learning to the staff and guides of Rainforest Expedition; the role of traditional ecological knowledge in scientific study and the issue of valuing scientific expertise over that of local people; the activities of *guacamayeros* as a form of labor, which is distinctly different from wage work<sup>21</sup>; and the importance of direct participation and experience as a way to cultivate deep caring in humans about other species and their conservation.

### ***“Assemblage Theory” & Its Potential:***

#### ***A Non-Anthropocentric Social Theory to Articulate Bio-centric Development***

A new social theory that is very well-suited to analyzing the relationships between the various components of the triumvirate was brought to my attention just weeks before the final deadline for this thesis.<sup>22</sup> While there was insufficient time to read the entire text and incorporate it into my thesis, I use some of the concepts explained in *A New Philosophy of Society: Assemblage Theory and Social Complexity* by Manuel DeLanda (2009) to describe the “mutually beneficial triumvirate.” DeLanda uses scattered references to a “theory of assemblages” in the work of philosopher Gilles Deleuze to construct a full-fledged theory (3). As described in abstract by DeLanda and illustrated using general examples from both human social interactions and biology, it appears to me

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<sup>21</sup> I thank my advisor and theoretical guru Dr. Alberto Arce for identifying this theme in the midst of all the material I threw at him upon returning to Wageningen.

<sup>22</sup> Again, I thank Dr. Alberto Arce for bringing this work to my attention.

that this philosophy makes possible the incorporation of non-human species as equals in the construction of social theories. This is the leap that must be made if we are to finally overcome the “human exemptionalism paradigm.”

This framework fits well with the other approaches used in my research and can be used to construct a fitting description of the relationships between the components of “mutually beneficial triumvirate.” DeLanda stresses that the properties of assemblages “emerge from the interactions between parts” (5). In my research, the actor-oriented approach was used to follow the interactions between social actors during fieldwork, and grounded theory methods were used to identify the properties that emerge from these interactions during analysis. Thus, I am able to present a quick sketch below of how apply assemblage theory applies to the “mutually beneficial triumvirate” and bio-centric development.

### ***Assemblage Theory as Illustrated by the “mutually beneficial triumvirate”***

Assemblage theory applies to “wholes constructed from heterogeneous parts.” These include a wide variety of entities that range from “atoms and molecules to biological organisms, species and ecosystems” to human social collectives. As such, “entities are the products of historical processes” that include “cosmological and evolutionary history, not only human history” (3). Assemblage theory can therefore be used to analyze these entities, or wholes, which are created through the assembly of these heterogeneous parts.

In the terms of assemblage theory, the “mutually beneficial triumvirate” is an assemblage constructed from the heterogeneous parts of ecotourism, conservation biology, and volunteer tourism. These components are themselves assemblages, embodied in the Tambopata Macaw Project and Rainforest Expeditions, entities which have resulted from the particular historical processes described in Chapter 1 of this thesis. This history includes macaws’ evolution as species with low reproductive rates which depend on natural elements like clay licks to provide dietary supplement and deep cavities in trees for nesting sites. The Tambopata Macaw Project and Rainforest Expeditions evolved in response to how human history and use of the same natural

elements on which macaws' rely has led to the extinction and endangerment of these species.

### *The Characteristics of Assemblages*

Unlike social theories that envision entities as fused wholes, assemblages are “wholes characterized by *relations of exteriority*.” The component parts of assemblages are autonomous and “may be detached and plugged into different assemblages, in which its interactions are different” (DeLanda, 2009: 10). Therefore, the properties of these component parts can never fully explain the whole. This is because the properties of an assemblage “are the result not of an aggregation of the components' own properties but of the actual exercise of their capacities” (11).

These characteristics also describe the component parts of the “mutually beneficial triumvirate.” Rainforest Expeditions (RFE), the Tambopata Macaw Project (TMP), and the volunteer/tourists who provide labor for its activities are each autonomous components. As described in the following chapters, it is the various interactions between these components and the capacities each brings to the relationship that creates a triumvirate which is a synthesis greater than the sum of its parts. In addition, its components are plugged into other assemblages, such as RFE's venture with the Native Community of Infierno (NCI). While RFE brings the capacities to raise money through tourism to each assemblage, these capacities are exercised differently in each situation. While RFE provides TMP with funding, logistical support, and tourists' eager to learn about macaws, its relationship with NCI is based on helping community members develop their own capacities for tourism administration.

Assemblage theory contains several other main features which I am unable to adequately describe and illustrate here. DeLanda summarizes these additional features as:

Assemblages are characterized along two dimensions: along the first dimension are specified the variable roles which component parts may play, from a purely material role to a purely expressive one, as well as mixtures of the two. A second dimension characterizes processes in which these components are involved: processes which stabilize or destabilize the identity or the assemblage ([through] territorialization and

deterritorialization). In the version of assemblage theory to be used in this book, a third dimension will be added: an extra axis defining processes in which specialized expressive media intervene, processes which consolidate and rigidify the identity of the assemblage or ... allow the assemblage a certain latitude for more flexible operation while benefiting from genetic or linguistic resources (processes of coding and decoding). (2009: 18-19)

Through these elements, assemblage theory provides an analytic framework that allows for the “decomposition of an assemblage into its different parts, and the assignment of a material or expressive role to each component” (14). Components can also be assigned a roles along the other axes according to whether they increase the stability of the identity of an assembly (what DeLanda refers to as “territorialization” and “coding”) or destabilize it (“deterritorialization” and “decoding”).

Because of their characteristics, “assemblages may be taken apart while at the same time allowing that the interactions between parts may result in a true synthesis” (11). In the case of the “mutually beneficial triumvirate,” the interactions between the component parts of ecotourism, conservation biology, and volunteer tourism create a truly synthetic assemblage. As described in Chapter 7, bio-centric development is the product of this synthesis.

## CHAPTER 5

### **Breaking the Boundaries of the “Mutually Beneficial Triumvirate”: Ecotourism, Research, & Volunteer Tourism as Mutually Constituted Components**

This chapter contains an analysis and discussion of results that address my research questions and original fields of enquiry, as outlined Chapter 3, Methodology. (Additional themes that arose through the fieldwork and data analysis process are addressed in Chapter 6, Emergent Properties.) The ethnographic techniques, actor-oriented approach, and grounded theory methods used generate results which highlight that ecotourism, conservation biology, and volunteer tourism are more than a “mutually beneficial triumvirate” with three discrete sides. There is considerable overlap and interdependence between Rainforest Expeditions, the Tambopata Macaw Project and the volunteer/tourists who provide its labor. Responses to interview questions reveal how these three components are mutually constituted through their interactions. Actors define “scientific research” and “researchers,” “tourism” and “tourists,” and “volunteers” in relation to their conceptions of each other category. Comparisons of response patterns reveal both similarities and differences in how each social group conceptualizes the same components and the variability in the views of actors within the same group.

Ultimately, these results demonstrate how the components of triumvirate create a synthetic assemblage, able to achieve more than the sum of the parts from which it is constructed, which makes bio-centric development possible. For organizational purposes, the chapter is divided into three parts, one for each component of the triumvirate. The views of actors from each social group are presented and analyzed to flesh out the properties of each component and their relationship to the other components of the triumvirate.

#### **PART I: CONSERVATION BIOLOGY**

As discussed in Chapter 4, development has largely been conceptualized in terms of meeting human needs and improving human quality of life. Conservation, on the other

hand, has focused on how to maintain non-human species and larger environmental factors like ecosystem management. In anthropocentric approaches to development, care of the environment is instrumental to human wellbeing. The approach taken by the Tambopata Macaw Project (TMP) turns this equation on its head, making human beings instrumental in improving the health and well-being of a non-human species.

Much of TMP's research has focused on experimental techniques that improve the health and wellbeing of macaw populations, essentially developing the macaw population itself. By making macaws the object of development the TMP has also contributed to human development by supporting ecotourism and the capacity building of young biologists and guides who participate in the scientific research process. TMP's nest work efforts have greatly increased the sites' value as a tourism resource as large macaw sightings can be virtually guaranteed during nesting season. The following section demonstrates how major TMP initiatives provide an example of bio-centric development, made possible through relationships with volunteer/tourists who assist with the research and the support of Rainforest Expeditions' ecotourism funding.

### **Macaw Development**

As described by current Tambopata Macaw Project Director, Donald Brightsmith, the early work conducted from 1989 – 1993 at Tambopata Research Center was intended:

...to develop techniques to increase the reproductive rates of wild macaws (Nycander et al 1995). During this 4 year study researchers 1) developed techniques to use live palm trees to create nest sites for Blue-and-gold Macaws, 2) constructed artificial nest boxes for use by Scarlet Macaws, and 3) rescued, hand-raised and released Blue-and-gold, Scarlet and Green-winged Macaw chicks. All of these resulted in great increases in the reproductive output of these three species in the area surround Tambopata Research Center. (Brightsmith, 2000b)

The current work of TMP continues this study, documenting the state of TRC's current nesting macaw populations, the hand-raised *Chicos*, and focuses on additional techniques to boost the reproductive success of macaws. This work is an active intervention into

processes of population decline that result from natural breeding characteristics and anthropogenic changes to the environment.

Similar interventions have been made on behalf of humans to increase our populations. Modern medical advances, increased agricultural output, and improved infrastructure (for example, provision of clean drinking water and waste water treatment for urban populations) have decreased mortality rates and increased life expectancy. We call this “development.” In fact, human development has been so successful that our own natural breeding characteristics and ability to alter Earth’s environments now require interventions to *reduce* our own populations through birth control and family planning.

Humanity should now direct some of its development efforts towards *increasing* populations of other species which have become endangered as a result of human population growth and conversion of Earth’s bounty into resources for our consumption. Such actions would represent a form of bio-centric development. This is exactly the objective of the TMP initiatives described below.

### ***Artificial Nest Experiments = Addressing the “macaw housing crisis”***

A lack of suitable natural nesting sites was identified in early studies as a major obstacle to the reproductive success of wild macaw populations. As described by one of the first researchers to study macaws in Manu and Tambopata, “the most severe bottleneck preventing pairs from attempting to breed may be a scarcity of adequate nesting cavities” (Munn, 1992: 55). Unlike many bird species, macaws do not build nests; they nest in existing cavities in just a few species of trees. These cavities are formed when natural processes of rotting and decomposition eventually create holes suitable for use by nesting macaws. Because it takes so long for such cavities to form in the hard wood of the *Dipteryx* species preferred by Red-and-green and Scarlet macaws, these trees are often hundreds of years old (and are also choice trees preferred by loggers).

The small number of nesting sites limits macaw reproduction even in virgin forests (Munn et al., 1991). The forests of the Tambopata National Reserve that surround TRC, have been selectively logged in the past but are “currently free of anthropogenic disturbance” (Renton & Brightsmith, 2009: 2). Even in such relatively pristine conditions, the number of trees that can be utilized by macaws for nesting is limited and

often a single suitable tree will contain multiple natural cavities. Several pairs of large macaws spent the 2009 nesting-season fighting over sites in a tree adjacent to the lodge that contains four natural cavities. Subsequently none of these potential nesting sites resulted in any fledged large macaw chicks.

### *Artificial Nest Experiments*

To address the problems macaws face in trying to find suitable nesting sites, in 1990 TMP began experimenting with artificial nest designs under the direction of Eduardo Nycander. Trained as an architect, Nycander “never imagined he would turn his talents to designing homes for macaws--and climb 150 feet up trees to install and monitor them” but working as assistant to WCS biologist Charles Munn in 1987 “he says, ‘brought me to a crossroads in my life’” (Munn, 1994: 137). In the first several years, Nycander and his team experimented with the use of palm trees to increase the number of nesting sites.

In 1990, TMP researchers built and hung twenty-four artificial nests constructed from “the central barrel-shaped section of *Ireartea* palms.” Nesting cavities were made in three to five meter lengths of palm trunk, capped top and bottom with wooden disks, and entrance holes were cut in the upper third of the trunks. Each nest, weighing about 350 kilograms, was hoisted about thirty meters up and hung in a tree in the forest surrounding TRC. Unfortunately, most of the nests were hung too late in the 1990-91 nesting season to attract nesting pairs, and by the following season all but three of the twenty four nests had rotted to such an extent that they were not useable. However, despite the problems with the nest design, one pair of Scarlet Macaws “successfully fledged a single chick,” which provided the “first successful documented nesting of macaws in an artificial nest substrate” (Brightsmith, 2000).

### *Palm Topping*

In their quest to develop new experimental nest techniques, in 1991 and 1992 TMP researchers “accelerated the formation of natural dead palm cavities by cutting the crowns off, or ‘decapitating,’ 23 live *Mauritea flexuosa* palms” (Nycander et al., 1995: 426). Topping palms exposes “the soft center of the palm to water, fungus, and beetles

that all combine to rot the center away and leave only the hard outer layers of the palm,” producing tubes deep enough for use by nesting macaws. The experimental nesting techniques were successful in their aims as the nests were “extensively used by both Blue-and-gold Macaws and Red-bellied macaws (*Orthopsittaca [Ara] manilata*).” The average topped palm lasted four years before it rotted and fell over, but was only available to nesting macaws for about three nesting seasons. In terms of fledging success, “4 chicks fledged from the 6 nests that were initiated (0.67 chicks per nest). This is similar to the data reported from natural nests where 10 chicks fledged from a total of 14 nests” (Brightsmith, 2001b).

The palm swamp nesting research was very labor intensive, creating significant benefits for humans in the form of employment opportunities for local people and field experience for TMP assistants who helped with the nest monitoring. During nesting seasons (Nov-April) from 1990-1992, “over 17,000 person-hours were spent searching for and observing nests from the ground and climbing nest trees over 1000 times to measure nestling growth” (Nycander et al., 1995: 423). Like the current mix of foreign and national *guacamayos* present from January-April 2009, the dozens of Peruvians who assisted with this early monitoring gained valuable experience in conservation biology methods like research protocol design and data collection, tools needed to undertake independent field research.

An additional 1,500 person-hours were spent on the manual labor required for palm nest box construction and topping the trees (Nycander et al., 1995: 426). An NCI member recounted some experiences working with TMP to cut the palm tops during the first session of the environmental education workshop I coordinated for the students of Infierno. He recalled it being very hard work, but was proud to describe his participation in the project.

#### *Wooden & PVC Artificial Nests*

Unfortunately, although the palm nest work yielded significant scientific results and benefits for both macaws and people, the palm nest boxes and the topped palms decomposed quite rapidly. This spurred a search for improved nest box designs. In 1992, new boxes constructed from tropical cedar wood were hung and seven of the eight boxes

were occupied by nesting Scarlet Macaws. Although more durable than the palm trunk nests, these boxes were also vulnerable to rot, lasting a maximum of six nesting seasons before they became unusable. Artificial nests made from PVC tubes of twelve and fourteen inches in diameter were introduced in 1992, and several variations on the original design have been used since (Brightsmith, 2000b). Wooden and PVC artificial nests (Figure 5.1 below) are still abundant in the forest surrounding TRC and their monitoring continues today, as described in the ‘Nest Check 1’ section of Chapter 2.

**Figure 5.1: Photo of a wild Scarlet Macaw pair perched atop a PVC artificial nest.**



In a January 2009 talk for the Earthwatch expedition, TMP Project Manager Alan Lee described how the project’s artificial nest box work was directed to help fix “the macaw housing crisis.” The concerted efforts described above represent a form of active intervention similar in intensity and purpose to development projects designed to aggressively tackle the challenges faced by human populations.

### ***Supplemental Feeding Techniques = Combating Chick Mortality & Malnutrition***

Another factor that contributes to macaws' low reproductive rates is the large number of chicks that die in the nest. Even when macaw pairs lay three or four eggs, and multiple chicks hatch, usually only one chick successfully fledges. Reasons for macaw chick death include parasites, predators, and malnutrition (Brightsmith, 2001b). Like development projects aimed at combating childhood malnutrition, TMP researchers have focused their efforts on understanding and alleviating chick malnutrition. Chick growth has been part of TMP's nest monitoring studies for years, and as shown in Figure 5.2, it continues today.

**Figure 5.2: Photo of a TMP lead researcher measuring a young macaw chick while an RFE guide records the data collected.**



The first chick to hatch is most likely to fledge, and subsequent chicks are much more likely to die of starvation. When chicks begin to lose critical weight, researchers can predict their death. To reduce chick mortality, TMP researchers experimented with supplemental feeding techniques in the late 1990s and early 2000s. Chicks that appeared to be on the verge of starvation were given supplemental doses of food at critical points and left in the nests, after which the parents began to feed them again (Brightsmith, 2001b). In this way, several chicks from nest monitored by TMP were saved from starvation and subsequently fledged. The supplemental feeding techniques developed by TMP are now being used to manage the wild population of highly endangered Blue-

throated Macaws (Brightsmith, pers. comm., January 15, 2009). Thus far, TMP efforts in this vein have focused on alleviating the symptoms of chick starvation.

However, the behavioral reasons for chick starvation are still unclear. A major objective of current research is video monitoring using infra-red cameras mounted inside the nests to test three theories about why younger chicks die: 1) preferential feeding of older chicks by parents, 2) sibling competition prevents younger chicks from receiving food as older chicks intervene in their feeding, 3) younger chicks beg less vigorously and so do not receive food (EWI, 2009). As TMP's supplemental feeding techniques addressed the physical reasons for chick mortality, perhaps this newer work will enable researchers to understand and affect change in the social reasons for chick starvation.

### ***The Chicos: Hand-raising and Release to Increase Local Populations***

From 1992-1994 TMP researchers took macaws that would have died of starvation from nests, hand-raised them, and released them at Tambopata Research Center. Of thirty-four birds total, six were Blue-and-gold Macaws, five were Red-and-Green Macaws, and twenty-three were Scarlet Macaws (see Brightsmith, 2001b; Nycander et al., 1995). In the social world of TMP and RFE, these birds are known as the *Chicos*.

As described in Chapter 2 and in other sections of this chapter, some of the *Chicos* still return to the lodge and/or use the artificial nest boxes hung in the forest around TRC. Thus researchers have been able to follow their success in integrating with wild populations. From August 1999 - March 2000, a concerted effort was made to determine the survival rates of the *Chicos*. Eleven of the original thirty-four birds released were re-sighted during this period (two Red-and-greens and nine Scarlet Macaws). None of the Blue-and-gold macaws released have been re-sighted and identified. However:

Anecdotal accounts and personal communications from guides and researchers suggest that all these birds began to fly with wild birds at an early age and broke their dependence on the food from people at a young age. As a result it is thought that the disappearance of these birds is due to

a difference in their behavior not a difference in their survival rates.

(Brightsmith, 2000b).

The documented survival rates of the Red-and-greens and Scarlet Macaws is 40%, and it is certain that not all the hand-raised birds still return to TRC. Of those re-sighted, seven had mated with wild birds. Although several still return to TRC and interact with humans, none of the birds still receive “a significant portion of their daily nutrition from the lodge.” This work is the first documented case of “the successful integration of hand-raised macaws into a wild population” (Brightsmith, 2000b).

### **Human Development**

The above section describes the intensive efforts of the Tambopata Macaw Project to develop populations of macaw species. Given the tens of thousands of hours of labor required, and the huge costs to pay assistants for this time, TMP could not have maintained such longevity nor achieved such significant results without the aid of its volunteers who provide year round labor coverage. Dozens of TMP researchers and long-term volunteer/tourists, and hundreds of Earthwatch volunteer tourists<sup>23</sup> have given their time, sweat, blood, and tears, to the cause of macaw development.

Since EWI sponsorship of TMP began in 2001, its expedition team members have supplied over 13,000 hours of labor to the project (“about 12% of total project labor”). The bulk of TMP labor is performed by the long-term volunteers. From 1999-2007, foreign volunteers contributed 56% of total project labor and Peruvian biologists, veterinarians, and foresters contributed another 22%. Only 10% of project labor is performed by paid field assistants (Brightsmith et al., 2008a: 2836). As a result of such wide-spread participation by volunteers in its research activities and through its involvement with ecotourism, TMP is making significant contributions to human development.

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<sup>23</sup> I use the term “volunteer tourists” to describe Earthwatch expedition team members, and “volunteer/tourists” when referring to TMP’s long-term volunteers or when grouping these volunteers with EWI volunteer tourists. This is because whether different actors have very different opinions about the status of TMP *guacamayeros* as volunteers and/or tourists, which is the focus of my analysis of volunteer tourism, presented in Part X of this chapter.

### ***TMP Researcher & Volunteer Composition***

As the project has evolved, the composition of TMP volunteers has shifted from Peruvians with little scientific background, to a mix of biologists and veterinarians from Peru and abroad who bring significant scientific experience to the project. In the past decade, short-term Earthwatch Institute (EWI) volunteers (mostly foreigners) of whom no previous training is expected have also joined the efforts.

In its early years, TMP primarily relied on the assistance of Peruvian volunteers. As described by its founders, by the mid-1990s TMP had:

...attracted over 50 Peruvian volunteers, a dozen or more of whom show exceptional talent and are now associated with the project on an ongoing basis. Most of these volunteers had no previous conservation experience. The project thus has served as an effective mechanism to find and train talented young conservation professionals and activists in Peru. (Nycander et al., 1995: 442)

From 1989-1992 TMP's Peruvian founders, Eduardo Nycander and Kurt Holle, were highly involved in managing the intensive macaw research activities of its volunteers. After they founded Rainforest Expeditions and their focus switched to ecotourism, TMP was maintained from 1993-1999 by young Peruvians employed by RFE who worked "simultaneously as guides and researchers, but no major publications were produced" (Brightsmith et al., 2008a: 2834).

With the hiring of Dr. Donald Brightsmith as Director of TMP in 1999, the cultivation of general conservation ethics in volunteers and guides without specialized scientific backgrounds switched to a specific focus on the capacity building of promising young Peruvian biologists. RFE made this possible by paying Dr. Brightsmith's salary from November 1999-February 2007 at a total cost of \$76,560 (Brightsmith et al., 2008a: 2836). Dr. Brightsmith is now employed as a professor at Texas A&M University in the United States, enabling him to bring more traditional forms of funding and support through the academic arena to TMP and the young scientists whose development the project supports.

### *RFE Guides*

Guides are still offered training opportunities to participate in the project as volunteer Macaw Project Assistants. They must commit to a volunteer period of several weeks initial training, but afterwards they can join the project as time permits and be called back to work at any time by RFE. According to Brightsmith, about twelve guides have taken this opportunity since 1999. Such guide training is a service TMP offers to RFE which “improves the accuracy of information” given by their guides to tourists and it also helps the project because “every data point collected is good” (pers. comm. January 15, 2009).

### *TMP & Birding Specialization*

Three RFE guides who had worked with TMP were interviewed during my fieldwork. Experienced RFE guides have an area of specialization and these three all focus on birds. Participating in TMP avian research gives guides valuable experience and broadens their basis for interacting with groups of birdwatchers. Although one guide already knew the bird calls and had participated in other research projects before, he emphasized the value of learning from one of TMP’s lead researchers:

...Alan [Lee] knows a lot about birds. He is a birdwatcher. So he already knows this and he helped me. ...It helped me a ton to know more, more about the behavior and everything about these birds. These are interesting things that I wanted to know. (G8)

Another guide who has less experience birding before working with TMP described how Donald Brightsmith was central in shaping his birdwatching interest. He said:

Well I just needed to do a little thesis for my career [to finish his degree]. But then I met Don [Brightsmith], and as soon as I met Don it was like, you know like someone put a bacteria inside you, and it started running with that stuff. Like now, I want to escape sometimes ... but this is something in me. Wherever I go, always someone, a birdwatcher there (*laughing*), wherever I go someone would like to talk about nature. (G14)

These guides' statements about their time as *guacamayeros* indicate that TMP lead researchers can be important influences for guides. Participating in TMP's scientific research activities can inspire a new passion for birds or help to deepen previous interests.

According to one birdwatching specialist, as a highly specialized branch of tourism with considerable demand in Peru, birding provides greater economic advantages and opportunities than other kinds of tourism (G16). Discussing his specialization in birding, another man mentioned how helping TMP and attending RFE capacity courses in birding enabled him to guide tourists with special itineraries, like "parrot lovers" and groups of photographers. Being asked to guide these kinds of groups is "the maximum that you can arrive to at Rainforest" (G5). I also noted during my fieldwork that guides who had previously worked as *guacamayeros* were assigned clients of great importance to RFE like filmmakers and the Earthwatch expedition group. If it is indeed true that birdwatching specialists are offered the best groups, then the training TMP offers is even more important as such experience improves guides access to the best guiding opportunities.

#### *TMP as Access to RFE Guide Positions*

Several guides interviewed mentioned that RFE is the best ecotourism company in Tambopata, and thus guiding positions at RFE are coveted by guides from the region. Two of the guides who worked with TMP used this experience to improve their chances of gaining work as an RFE guide. One said he was motivated to work with TMP because:

...basically it was one more way to enter further into Rainforest. It was very difficult to begin guiding at Rainforest. ... But in some way I had to make myself known, to win over people and a good way for me was helping [TMP], and at the same time I knew much more for when I applied as a guide at Rainforest. I could talk a lot about the project with many details, and this opened doors for me. (G5)<sup>ii</sup>

The selection process that takes place during RFE's annual guide course is highly competitive, and, as this passage indicates, the knowledge gained by working with TMP

can provide previous *guacamayeros* with important advantages over other applicants during the course.

The comments of a TMP Field Team Leader also support this notion. Two men from Puerto Maldonado who worked as TMP volunteers later applied and were accepted for RFE's 2009 guide course. One of them was selected as a new guide and offered a position at RFE for the upcoming season:

I asked him, 'Did it serve you well to have been a guacamayero?' 'Yes' he said 'because before I didn't know about the jungle and with this experience I seemed very interesting because I know many things now.' It had given him an advantage in the guide course that many people didn't have. (PS8)

During an interview with one of the guide course instructors, I asked whether he agreed with this opinion. He confirmed that this man's experience working for TMP did help him get selected, and that previous *guacamayeros* generally perform well in the course, particularly during the modules taught at Tambopata Research Center which focus on the *colpa* and TMP's research activities.

### ***Capacity-Building with Peruvian Student/Scientists***

The opportunities TMP provides for Rainforest Expedition guides and other long-term volunteers to participate in scientific fieldwork is a form of capacity-building. This is especially important for Peruvian students in natural science fields, and TMP places special emphasis on their development. The most promising volunteers are offered opportunities to design their own research projects and use the labor of TMP *guacamayeros* to collect data for their Bachelor's or Master's theses. Four of the six Field Team Leaders interviewed are using TMP data to complete theses on a variety of topics. Ongoing capacity-building of Peruvian scientists was elevated to the level of a major ongoing research objective in Brightsmith's most recent proposal to Earthwatch for research funding. Passages from interviews with TMP's Peruvian Field Team Leaders and volunteers show how and why these opportunities are so important to them.

### *Fieldwork Experience*

TMP provides valuable opportunities for young biologists and veterinary students to gain the field experience and skills necessary to gain other research positions and paid employment. This is especially true for Peruvians because scientific research projects conducted in Peru offer few paid positions. The story of one Field Team Leader (FTL) illustrates the importance of TMP fieldwork experience for his career.

This FTL described how when he met Donald Brightsmith, his family was having serious financial difficulties, and “I had to work but [in order to get work] you have to have experience.” Brightsmith invited him to join TMP as a volunteer where he received free room and board. He described how working as a volunteer on the project enabled him to “form my character as a professional.” His education had been very theoretical and he attended a university with few resources.

At TMP he was able to supplement this theory with practice: “what they taught was how to work *on site*” as a field biologist. These skills later proved invaluable in conducting research for his thesis and gaining other positions. As a TMP volunteer he learned “how to work – and it was a shock ... the rhythm of work.” He recalled getting up at 4:30 in the morning and working until 5 p.m., being grilled by senior project members on bird calls heard even while eating lunch.

After two months, he “left skinny,” yet was thrilled to have learned so much and described his experience with great enthusiasm. He explained how volunteering with the project “opened doors for me,” which led to other fieldwork opportunities through researchers familiar with TMP. He proudly recalled that when he applied as a volunteer assistant on another project and was asked by that project’s lead researcher ““how do I know you are good?”” he replied ““because Don recommended me.”” After finishing with this second project he returned home and was immediately hired for a position in a Peruvian ministry.

Other Peruvians working for TMP emphasized how fieldwork experience allowed them to get a better idea of their options as they prepare to enter scientific careers and to seize the opportunities available. One volunteer mentioned that her choice to participate in TMP was motivated more by an interest in getting scholarships and research funding than in finding paid positions. She is interested in conducting her own research projects,

and the people administering these grants all want “to see experience; that’s what they all ask for, fieldwork experience” (PV9). A volunteer who has almost completed her degree and is trying to decide between going into laboratory work or fieldwork described how “it helps you a lot to see that you can do this kind of work before you choose” which path to follow (PV8).

Gaining fieldwork experience is an important motivation for most of the Peruvian and foreign *guacamayeros* who work for TMP and is the basis for TMP’s contributions for human development. However, the *guacamayeros* interviewed for this research also mentioned a variety of other motivations for participating in the project. These responses are analyzed in the following section.

### ***Guacamayero* Motivations: TMP & Scientific Research Careers**

All Field Team Leaders (FTLs) and volunteers were asked about their motivations for working with the Tambopata Macaw Project. Table 5.1 (below) shows the results from this question. Fieldwork experience was the motivation most frequently cited by both volunteers and FTLs, and is important for the reasons discussed in the section above. Fieldwork experience can yield indirect economic benefits, such as learning new skills that increase opportunities for future employment. However, only one person mentioned payment, a direct economic motivation.

For many *guacamayeros*, the TMP is also related to their field of study or work (although not all mentioned this as a motivation). Four of the volunteers interviewed are avian specialists with considerable previous experience working with birds. One Peruvian volunteer came to TMP specifically to gain experience because he works with a less extensive macaw research project currently taking place in Manu National Park. TMP lead researchers are helping him develop a proposal to expand that program from basic clay lick monitoring into nest work and other activities.

Six other volunteers interviewed have biology or veterinary backgrounds working with a variety of other animals. Several of these volunteers mentioned that TMP rounded out their research/fieldwork experience. For example, one volunteer who has worked on six or seven other projects with reptiles, mammals, and fish wanted additional work experience with birds. In his eyes, the Tambopata Macaw Project “functions as a training

ground for biologists” and this is more important than the results of the scientific research or what TMP contributes to conservation since it takes place in an area that already has protected status (PV10). This view is considerably different from those expressed by many other *guacamayeros* interviewed.

**Table 5.1: Volunteer & Project Staff Motivations to Work for TMP.**

<b>TMP Volunteer</b>	<b>Learning</b>	<b>Fieldwork Experience</b>	<b>Relates to Work/Study</b>	<b>Contribute Conserv.</b>	<b>NCI Project</b>	<b>TMP Reputation</b>	<b>Travel/See Jungle</b>	<b>Pay</b>
PV1			X				X	
PV2					X			
PV3		X					X	
PV4		X		X			X	
PV5				X			X	
PV6		X		X		X		
PV7		X	X					
PV8		X	X	X		X		
PV9		X	X	X		X		
PV10		X					X	
PV11	X	X	X					
PV12				X				
<b>TOTAL</b>	<b>1</b>	<b>8</b>	<b>5</b>	<b>6</b>	<b>1</b>	<b>3</b>	<b>5</b>	<b>n/a</b>
<b>Project Staff</b>	<b>Learning</b>	<b>Fieldwork Experience</b>	<b>Relates to Work/Study</b>	<b>Contribute Conserv.</b>	<b>NCI Project</b>	<b>TMP Reputation</b>	<b>Travel/See Jungle</b>	<b>Pay</b>
PS2			X	X				
PS3	X	X		X				
PS4			X					
PS6	X	X		X				
PS7		X	X				X	
PS8		X	X					X
<b>TOTAL</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>

*Contributing to Conservation*

Half of the Field Team Leaders and half of the volunteers interviewed mentioned contributing to conservation among their motivations for working with TMP. Two volunteers highlighted the difference between research for its own sake, and TMP’s approach where research results are directly applied to conservation. One related this to her own feelings about participating in TMP saying, “It’s important to know you are making a difference” (PV6). The other, who had previous experience doing biological surveys, said she liked the single species approach and being able to see the gains being made: “This fieldwork is producing benefits you can see. Just getting off the boat at TRC

you can see it is working, there are so many macaws. You can see how it's going to help them" by preventing logging, protecting the lick, and in the artificial nest work. Before she never really knew how to go about planning a research study for a Master's degree, and said she would "take a lot of ideas [from TMP] for her own future projects," including the application of research results (PV12). These *guacamayeros* expressed deep concern and caring for macaw populations' declining state and general conservation problems like deforestation.

### *Seeing the Jungle*

Five volunteers and one FTL mentioned seeing the jungle, the Amazon, or Tambopata's forests in particular, as a motivation for working with TMP. One Macaw Project FTL asserted that: "the majority of *guacamayeros* come because they want to experience the jungle" (PS2). This is different from contributing to conservation because it is based on the appeal of TMP for its location. The Tambopata Macaw Project is situated at a desirable (tourism) destination and seen through the lens of volunteer tourism this motivation is about more about a personal (tourism) experience than the desire to save macaws or the rainforest.

As described in Part II of this chapter, many tourists interviewed and surveyed made similar statements about their desire to "see the jungle" in explaining their choice of Rainforest Expeditions as a tourism operator. The question of whether or not *guacamayeros* are (volunteer) tourists is the focus of Part III of this thesis. RFE guides, staff, and *guacamayeros* themselves were all asked this question, and their answers reflect various assessments about scientific expertise, nationality, and payment, as they relate to a person's status as tourist or not tourist. Thus, I will note here that the six *guacamayeros* who listed this "touristy" motivation among their reasons for working with TMP include both foreigners and Peruvians, volunteers who pay to work and FTLs who are paid to work. Five of the six have scientific backgrounds and/or considerable fieldwork experience with research projects. These details are relevant to how people conceptualize ecotourism and volunteer tourism, as described in the following two parts of this chapter.

## **PART II: ECOTOURISM**

This section analyzes the results from interview questions designed to explore the ecotourism side of the ecotourism, conservation biology, and volunteer tourism triumvirate. The research questions guiding this aspect of my study were: What distinguishes Rainforest Expeditions (RFE) from other eco/tourism operators? How does the conservation biology work of the Tambopata Macaw Project (TMP) contribute to ecotourism at RFE? What motivates the actors involved to participate in ecotourism?

Responses to interview questions about whether or not Rainforest Expeditions (RFE) is ecotourism, and what distinguishes RFE from other eco/tourism companies reveal how RFE staff, guides, and tourists, and TMP *guacamayeros* conceptualize ecotourism. Answers to other questions provide further insight into the reality of ecotourism, its benefits and drawbacks. These include guide and staff perceptions of the good things and difficulties of working in ecotourism, and tourists' statements about how new knowledge gained on their trip might impact their future behavior.

### **Conceptualizing Eco/tourism**

As described in the 'Ecotourism in Theory & Practice' section of Chapter 4, genuine ecotourism encompasses a variety of factors, including environmentally friendly practices, local participation and benefit, and education of tourists and communities. Actors from all of the social groups (RFE staff, guides, tourists, and *guacamayeros*) mentioned a number of these topics during interviews. However, actors from different groups tended to emphasize particular aspects of ecotourism.

#### ***Tourists***

Interviews (n =13) and surveys (n = 9) with guests at the Tambopata Research Center (TRC) reveal a variety of views about ecotourism and Rainforest Expeditions' performance as an ecotourism operator. For example, asked whether RFE is ecotourism, one tourist replied, "Yes, in the sense that it does involve the local community. It burns a lot of gas to get upriver, but the location and activities are compatible with ecotourism." He also mentioned that while RFE does "alert tourists through small things like the use of

biodegradable soap,” they should talk more with tourists about environmental degradation, how it is “a unique privilege to be here” that imparts visitors with a responsibility to help protect the rainforest (T6). Several essential aspects of ecotourism are highlighted by his response: local participation, environmentally friendly practices, and tourist education.

Responses to questions about what distinguishes Rainforest Expeditions from other eco/tourism operators also provide insight about how tourists’ conceptualize ecotourism. Of nineteen tourists who responded to this question (n = 11 interviewees, 7 surveyed), eight mentioned green practices like using biodegradable soap to have the lowest possible environmental impact. Four people mentioned how RFE incorporates participation by people in local communities. A retired anthropology professor said while he did not have much personal experience with ecotourism, he had read academic literature that gave him the impression that:

...a lot of ecotourism operators don’t really get the point of including local people ... weaving them into the structure. A lot pay lip service to local participation ... Rainforest is really trying to make it work. ...they take local participation and local profit more seriously than most (T4).

Five tourists also emphasized research and environmental education as an important aspect of ecotourism, and two specifically mentioned that education and research should include local people, not just tourists.

Two survey respondents mentioned the high quality of RFE guides, and a third specifically described how RFE’s approach “made the ecotourism experience enjoyable rather than restrictive. Appropriate explanations were given as to the reasoning behind specific regulations, operations or guidelines” (TSV8). RFE guide practices and tourism regulations are based on respect for the animals and habitats in which they operate (for example, not smoking in the forest). The comment of this survey respondent illustrates how regulations to minimize environmental impacts (which should be integral to ecotourism) place social restrictions on tourists and it is important that ecotourism operators provide guests with adequate explanations.

Although a few tourists’ emphasized local participation, their responses generally placed more focus on environmental factors than social ones in evaluating Rainforest

Expeditions as an ecotourism operator. In addition, small symbolic acts like using biodegradable soap received greater recognition than RFE's considerable dedication to conservation by sponsoring TMP (although they all attended a presentation about TMP) or local participation through the NCI collaboration (although at least four of the tourists interviewed and two of the survey respondents spent one or more nights at Posada Amazonas lodge enroute to TRC.<sup>24</sup>)

### ***Guacamayeros***

During interviews, *guacamayeros* tended to emphasize the importance of ecotourism as means to conservation ends. One volunteer said that her experience with TMP and RFE: "really turned me around for ecotourism. Before I thought, tourism – bad. But now I think tourism is the only way forward because people are selfish and will only do it [conservation] if they see something in it for themselves" (PV6). While most *guacamayeros* noted how ecotourism provides TMP with funding for their conservation activities, a few also stressed that tourists provide an audience for the messages about macaw conservation that TMP hopes to spread.

### ***RFE Staff & Guides***

Whereas tourists' conceptualizations of tourism are based on personal travel experiences (and in the case of *guacamayeros*, several months living at RFE lodge), the majority of staff and guides I interviewed have professionally dedicated themselves and their lives to tourism – they sleep, eat, work, sweat, learn, and play at RFE lodges year round. The perceptions of tourists and tourism described by RFE staff and guides are based on both empirical and academic study. Their days are filled by talking with and teaching tourists, their nights spent socializing with other people who work in tourism and *guacamayeros*. RFE staff and guides also participate in a variety of other capacity-building courses, ranging from specialized areas of interest (e.g. birding, cooking) to general topics like ecotourism, conservation, and English. Although not every guide interviewed was asked what they studied, ten of the eighteen studied tourism or

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<sup>24</sup> Tourists' level of awareness about RFE's major conservation and participation initiatives are discussed in Chapter 6, 'Consumer Demand Driving Ecotourism?' section.

ecotourism at Peruvian universities and technical institutes. In addition, all guides are required to complete RFE's signature guide course twice (see 'Rainforest Expeditions' Ecotourism Approach' section, Chapter 1), and staff members are also sometimes selected for this course.

The way RFE staff and guides conceptualize ecotourism is evident in their responses to questions about what makes Rainforest Expeditions different from other tourism operators. There are similarities in the answers given to this question by actors from these two social groups, as I was able to use several of the same categories in coding their responses. Thus, results for the two groups are presented together based on shared themes, and differences between social groups are noted.

### *Education & Learning*

Both guides and staff focused on the learning opportunities provided by Rainforest Expeditions versus other tourism companies. Three of seventeen guides and six of twelve staff members asked mentioned learning as what sets RFE apart from other companies. One man who worked at three other lodges before joining the Rainforest staff said, "The best thing about Rainforest is that they enable the people. The others just teach you to do one thing and nothing else" (S8). RFE capacity-building courses for staff focus not only on the skills required for particular jobs, but also on conservation and ecology. The same staff member quoted above said later in the interview that when he started at RFE he attended talks about conservation and he learned about "how the trees clean the air – and I didn't know that. I want to conserve nature more" now.

Learning was also a prominent theme in guides and staff responses to questions about their motivations to work for Rainforest Expeditions and the benefits of ecotourism in general.<sup>25</sup> Raising environmental awareness and local benefit and empowerment are two of the seven ecotourism principles listed in Chapter 4. By focusing on learning and capacity-building opportunities for staff and guides, Rainforest Expeditions is putting these principles into practice.

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<sup>25</sup> This is discussed in detail in the 'RFE Guides & Staff Motivations to Participate in Ecotourism' section later in this chapter. As one of the predominant emergent themes from this research, learning is also addressed in Chapter 6 and Chapter 7.

### *Social & Ecological Responsibility*

While providing education is a form of social responsibility, five of seventeen guides and four of twelve guides specifically mentioned RFE's commitment to working with local people and good treatment of personnel as what distinguishes them from other Tambopata tour operators. A guide from NCI said the difference is that "Rainforest is ecotourism. The economic profits go directly to the people of the community" (G17). Like this man, some guides and staff stressed social responsibility and local participation as the defining factor of ecotourism. Other guides placed equal or greater emphasis on the conservation and environmental aspects of ecotourism. A guide from Puerto Maldonado who has worked at other lodges said there are very few businesses that practice real ecotourism in Tambopata, and contrasted this majority with RFE which, "works on conservation projects with biologists and naturalists" (G2).

A total of eight guides and three staff mentioned greater ecological responsibility in responding to the question about RFE's difference. They noted things like greener practices and conservation education for staff. An instructor for the annual guide course described how much RFE invests in the formation of their guides. This includes using the course to train guides in environmental education so they give quality information to tourists: "we plant a bug in tourists about themes of conservation" by talking about issues like deforestation, using the information guides give to raise tourist consciousness. RFE also teaches guides to follow practices that show respect for the forest and its wildlife (G12). Four guides mentioned these green guiding practices, especially respect for the highly endangered giant river otters living in *Tres Chimbadas* Lake. During tours, RFE guides do not enter the area of the lake where their dens are, and when the otters give signals of distress, they move their boats away. As one guide said:

...we know when the otters do this (*mimicing the movement of their head and noise they make*) it is a way of saying, 'Hey, you are in my place. Get out!' So we go then. But in other places, the people begin to follow them just so the tourists can take a better photo. (G11)<sup>iii</sup>

Another guide with several years of experience at RFE and other lodges mentioned that these norms of guiding behavior are socially reinforced amongst RFE guides. If a guide

lets his or her boat get too close to the otters during a tour, other guides will talk to them about it and ask them to show respect for the animals (G4).

### ***Conceptualizing Ecotourism: Social Group Comparisons***

These results show differences in the way groups conceptualize ecotourism. While tourists focused more on small-scale environmental practices visible at the lodges, *guacamayeros* concern was how ecotourism contributes to conservation. As a group, staff and guides emphasized both aspects of social and environmental responsibility. However, the trend in staff responses was to focus more on education and learning opportunities, and certain individual guides only emphasized either local ownership or conservation but not both.

### **Ecotourism Motivations & Impacts**

Ecotourism is supposed to raise environmental awareness and provide educational opportunities for both tourists and local people residing in destination locations. However, while many studies have focused on the social and environmental impacts of tourism on host communities, little is known about the impacts of ecotourism experiences on tourists themselves or what motivates members of host communities to participate in tourism (Stronza, 2001). To explore this knowledge gap, I asked tourists how they perceived the impacts of their experience, and staff and guides why they chose to work for Rainforest Expeditions.

### ***The Impacts of Ecotourism Experiences on Tourists***

Tambopata Research Center guests (n = 9 interviewees; 6 of 9 survey respondents answered) were asked what new knowledge or lessons were acquired during their visit and how these might impact their future behavior. Six only mentioned information learned about macaws. Three respondents (T3, T5, and TSV6) described gaining new ecological or conservation knowledge or new awareness about the importance of rainforest conservation. The mother of a family with two children said: “this whole trip has been very educational ... going on the jungle walks with the guide. We all put in our journals what we have learned” (T3).

Many emphasized how they already cared about the environment, were ecologically aware, or practiced a “green” lifestyle before their trip (T3, T6, T7, T9, T13, TSV1). Three interviewees stated they had previously donated time or money to social or environmental causes, and following this experience they might start again (T4, T7, T13). One interviewee said, “It renews my personal goal of having a small footprint, respect for nature,” (T9). After first mentioning new information learned about macaws, a survey respondent wrote: “however, this trip was more of a reminder than anything. It reminds me of what is really important and that we are all a part of something bigger than ourselves and we have an obligation to help protect it for future generations” (TSV1). For these tourists, the ecotourism experience re-invigorated previous interests or convictions, and served as a reminder of environmental lessons already learned elsewhere.

#### *Tourists’ Critiques of Rainforest Expeditions & the Tambopata Macaw Project*

Some also evaluated aspects of their ecotourism experience more critically. Whereas the TMP presentation for tourists explains the history of the project and its research objectives, one couple wanted to know more about the conservation applications of TMP work. They suggested TMP should provide more written materials about the research to all TRC tourists (such as the forty page Earthwatch Expedition Briefing they read after a EWI participant left it on a coffee table). They asserted that people who “bother to go all the way up to TRC probably have enough interest,” and that sharing more information could benefit TMP because “anyone who goes up there is a potential supporter for the project” (T12).

Two interviewees (T6 and T13) asserted that TMP and RFE could do more to raise the environmental awareness of both tourists and local people, and that doing so is an essential part of ecotourism. Asked about the appeal of research and tourism as a combination, one tourist said he approved that “Local people are involved, at least in the tourism aspect,” and suggested that TMP should hire local people as research assistants since they cannot afford to volunteer (T6).<sup>26</sup> The other tourist emphasized that RFE

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<sup>26</sup> In fact, half of the Field Team Leaders working in paid positions from January-April 2009 are from Puerto Maldonado, and all but one was Peruvian. However, all of these local people work at the lodges on the lower river where TMP has a much lower profile, thus their participation (and even the existence of the project at those lodges) escapes the notice of most tourists). In our

should support environmental education campaigns to engage local communities because this has a much greater conservation impact than legislation, using the example of raising awareness of Tambopata River turtles' threatened status rather than just forbidding people to hunt (T13). These tourists strongly believe that ecotourism is more than just showing tourists cool wildlife, it is also about education.

*Ecotourism's Cross-Purposes: Pleasure vs. Environmental Awareness & Education*

Comments made by certain tourists point to the tensions inherent in ecotourism's cross-purposes as an activity that is supposed to provide both pleasure/leisure and serious environmental education about the problems of habitat destruction and the plight of endangered species. In terms of raising the environmental awareness of tourists, one woman said:

...other than the information I was given by [TMP], there isn't really that much talk about the destruction of the rainforest, the destruction of species. ... I think there could be a lot more political work done by the guides. Like whenever you see something pretty, something people get excited about, you should be told about the political implements but also I would like to know about what I can do. ... And if there's anyplace where people are ready to learn about it, then it is here where people are willing to listen. Of course, you don't want to ruin their experience by making them all sad and stuff, but actually I think you should. (T13)

She pointed out that creatures like jaguars are more than just a "pretty" tourist attraction: "their territory is also declining all the time. And I just saw the prints, but I can imagine this beautiful animal and you could use that more – if you want to be ecotourism. If not, then of course you won't care."

During interviews, several other tourists commented on similar tensions between the enjoying their experiences and feeling guilt for the environmental degradation caused by travel. Two people (T6 and T10) mentioned the tradeoffs

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interview, Project Manager Alan Lee emphasized that he makes a point of hiring local students from Puerto Maldonado because he wants "to give local people the chance to work on the conservation of their resources," and people from Puerto "stick with us," whereas folks from Lima come, work, take their experience and leave.

between caring about the environment and wanting to see the jungle on the one hand, and the pollution created by long distance travel on the other. Three people (T6, T7, and T13) described how their jungle experience made them feel about the state of the environment. One woman was surprised “to see so much the damages we’ve caused, but it’s really noticeable” in the small number of animals seen and the work of the Macaw Project. She said, “I really have a hard time accepting the way humans live and now it’s harder. ... This experience has just added reflection to my reflection.” (T7). Another man noted that this trip was his “first time in my life in the jungle,” and described the excitement of seeing birds and monkeys in the wild. However, he said: “the exhilaration of the day was matched by an immense sadness in knowing what is happening to the world. ... I just hope that someday my sons can see this too” (T6).

It seems that to fulfill its own mission, ecotourism should invoke such a mixture of intense pleasure and sadness. Indeed, the logic behind using ecotourism as a tool for conservation is that this combination of emotions makes people care enough about the state of the environment and the plight of nonhuman species to take action and affect a change in tourists’ perceptions and behaviors.

### *Affects on Tourists*

It is extremely difficult to assess what impacts, if any, ecotourism truly has on its participants. In addition to those who said they may donate time or money again to causes like rainforest conservation (n = 3), two interviewees pointed out how their ecotourism dollars were supporting the macaw research. One said it made her “proud” to have supported the Macaw Project “by coming here” (T5). Two survey respondents for whom this was their first ecotourism trip stated they would like to do more in the future. One also mentioned s/he will “recommend friends and family to this spot to help contribute” (TSV2).

A couple from Germany described how their new understanding of the rainforest and the people who live there, of the symbiosis between animals and plants, affected their perspective. Before they watched programs about the rainforest on European television stations, but “it’s like watching a war somewhere else. Now we’re involved” (T5).

Hopefully, the feelings of attachment to the rainforest and renewed interest in the environment described by the RFE tourists surveyed and interviewed will translate into future actions. In either case, their comments point to the importance of tourists' personal experiences and direct involvement as a way to engage them and foster/renew caring about environmental problems which can seem quite distant while they are at home.

Ecotourism is envisioned as an educational experience that “builds environmental awareness” for both tourists and residents of nearby communities (Honey, 1999: 22). In the language of tourism studies, both tourists and their “hosts” should learn from ecotourism experiences. The responses analyzed here describe what tourists learned and how this might affect them in the future. In the section below, guide and staff motivations for working for Rainforest Expeditions are presented and analyzed. Patterns in their responses highlight the importance of learning as a motivation for participating in ecotourism.

### ***RFE Guides & Staff Motivations to Participate in Ecotourism***

Guide and staff interviews began with questions about their work history at Rainforest Expeditions and their motivations to work for RFE and/or as a guide. Most people mentioned several motivations. Different forms of learning emerged as a predominant theme in their responses, whether boat driver, cook, waiter, or guide. Through a rigorous process of coding interview material (see Chapter 3), categories were developed that encompass the responses of all actors in each social group. The motivational response categories developed and quotations that exemplify each one are presented in Table 5.2, ‘Motivational Response Categories for RFE Guides & Staff.’ Of the nine categories developed, seven apply to the responses of both guides and staff. Only guides mentioned the energy of the forest as a motivation, probably because the majority of staff time is spent in the lodge whereas guides spend significant portions of their days walking in the forest. Both staff members and guides mentioned general motivations such as “I like the work,” but guides always qualified such statements with more specific descriptions. (This may be due to the tendency of staff to be less candid than guides in interviews, as discussed in Chapter 3.) As a result, only staff responses are

categorized generally as ‘Likes Work.’ The distributions of responses within each category are presented by individual actor in Table 5.3 and Table 5.4.

**Table 5.2: Motivational Response Categories for RFE Guides & Staff.**

Motives	Examples
Learning	<p>"I want to advance, to learn basically. I believe that with Rainforest I can, that I have the possibility for personal advancement." (S1)</p> <p>"I could make more of myself and learn more things. It is starting practically from zero here, not knowing much about the jungle, and every day learning more." (G12).</p> <p>"You relate with people from different places. You are learning about many other cultures. For example, I didn't know how to say anything, even 'yes' in English, but now I know." (S12)</p>
Cultural Exchange	<p>"I like to interact with people who come from all the different countries. All who come teach you something that you don't have in your country, a lot of knowledge." (S11)</p>
Social Environment	<p>"One of the things that I will <u>never</u> forget is that every day, <u>every day</u> without exception, I have laughed, every day. This means a lot to me." (G12)</p>
Conservation/Environment	<p>Rainforest is a business "dedicated to conservation. To maintain this. I like that because I am from the jungle, and I like what they do." (S13)</p>
NCI Project	<p>"I am interested in the work they do with the Community of Infierno. Before I came to know Puerto Maldonado, I had heard about the they do" and the agreement with NCI (G11).</p>
Pay	<p>"There is a good work environment here. It's not boring. I have the ability to learn a variety of things. Aside from that is the money, something secondary." (G2)</p>
Likes Work	<p>"I like the work. I like the jungle. I like to see animals. ... There is not much noise. ... We are all a family." (S5)</p>
Reputation	<p>"Rainforest is prestigious. With a work certificate from Rainforest, whichever lodge will accept you." (S9)</p>
Forest Energy	<p>"I like the jungle very much, and it is a special experience for me. ... You are always recharging your energy because the forest always has good energy for you." (G13)</p>

### *Forest Energy*

Motivations categorized as ‘Forest Energy’ are based on guides’ descriptions of a special feeling they get from the energy of the forest, an emotional motivation to work. Like the example given in the Table 5.2, the four guides who listed this as a motivation

described an energetic exchange that takes place between themselves and the forest. His eyes glowing, one guide described how the rainforest is “romantic” and “mysterious,” it makes him “want to understand life,” and it makes him feel “so alive” (G14). These feelings dwell in the mystical, spiritual realm of human emotions. Another guide who specializes in shamanism said, “When you enter into the forest, you are entering into all the spirits of the plants and trees, and they are always in a process of interchanging energy” (G18). Along the continuum from anthropocentric to eco-centric, these motivations express a distinctly eco-centric orientation. These responses are distinguished from those who mentioned more general things such as “liking the clean environment” (S4) or “liking the jungle” (S5), which are categorized as ‘Conservation/Environment’ motivations.

**Table 5.3: RFE Guide Motivations to Work for Rainforest Expeditions.**

<b>Guides</b>	<b>Learning</b>	<b>Cultural Exchange</b>	<b>Social Environ.</b>	<b>Conserv./ Environ.</b>	<b>NCI Project</b>	<b>RFE Reputation</b>	<b>Pay</b>	<b>Forest Energy</b>
G1				X	X	X		
G2	X		X	X				X
G3	X	X	X	X	X	X	X	
G4				X				
G5	X	X		X				
G6	X		X	X		X		
G7	X	X	X	X	X	X		
G8	X	X		X			X	
G9		X		X		X		
G10						X		
G11		X		X	X			
G12	X		X					
G13	X	X		X				X
G14	X	X	X				X	X
G15	X	X			X			
G16		X		X	X			
G17	X	X			X			
G18							X	X
<b>TOTAL</b>	<b>11</b>	<b>11</b>	<b>6</b>	<b>12</b>	<b>7</b>	<b>6</b>	<b>4</b>	<b>4</b>

### *Learning & Its Manifestations*

As shown in Table 5.3 and Table 5.4, a majority of both staff and guides described learning as an important motivation to work in tourism. This was often the first motivations given and some people explicitly said learning is more important than other

motivations like pay. Ecotourism presents opportunities for hosts to learn in multiple ways, from new information and skills gained, to meeting people from different cultures and growing through such social interactions, to new conservation and environmental understanding. All these forms of learning were mentioned as motivations during guide and staff interviews.

In Spanish, different ways of learning and knowledge are distinguished from each other through use of words with more specific meanings: *aprender* is to learn; *conocer* to meet or know people or places; *saber* to know information. The category ‘Learning’ includes responses articulated using forms of *aprender* and *saber*, learning as a general motivation to work for RFE. Many respondents were more specific, and qualified the type of learning that motivated them.

**Table 5.4: RFE Staff Motivations to Work for Rainforest Expeditions.**

Staff	Learning	Cultural Exchange	Social Environ.	Conserv./ Environ.	NCI Project	RFE Reputation	Pay	Likes Work
S1	X	X	X					
S2			X					
S3	X			X				
S4	X			X	X			
S5				X				X
S6	X	X	X					
S7		X	X				X	
S8	X	X				X		X
S9								X
S10	X	X	X					
S11	X	X	X				X	X
S12	X	X			X		X	
S13			X	X				
<b>TOTAL</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>4</b>

Both staff and guides are highly motivated by opportunities to learn from cross-cultural interactions (‘Cultural Exchange’). Like the man quoted in the motivational response categories table, staff tended to phrase this in terms of knowing and relating to tourists. While guides also mentioned learning from tourists, some specifically added that RFE has given them the opportunity to work with other Peruvians from different cultures within their own country (such as NCI members), and scientific researchers.

My findings about the predominance of learning as a motivation of RFE guides and staff are consistent with results from another study about NCI's involvement in tourism. Participatory research conducted with three communities, including NCI, showed that "learning opportunities" were the "second most-frequently cited benefit, identified by 33% of the respondents" (Stronza & Gordillo 2008: 457).

*'Conservation/Environment' (vis-à-vis Extractive Economic Options)*

Conservation and environmental motivations for working in ecotourism was the most common response for RFE guides, and mentioned by four staff members as well. For some people, it is learning about conservation and the environment which motivates them, whereas others focused more on conservation in practice. Several guides described their motivation to teach tourists about the conservation of flora and fauna, "not to keep wild animals as pets but to have them here in the wild instead" (G2). Other staff and guides specifically mentioned how they like working for Rainforest Expeditions' because it contributes to conservation. This is similar to the *guacamayeros*' quoted in Part I of this chapter who are motivated to work for TMP because they feel good knowing their efforts are ultimately contributing to conservation.

Several staff and guides whose responses are categorized this way contrasted working in ecotourism with other jobs available in the region such as mining and logging, which have a far greater environmental impact. The man quoted as exemplifying 'Conservation/Environment' in the 'Motivational Response Categorizes' table described how he had previously worked doing installations at mining camps:

At the mines ... I have seen the jungle totally destroyed, full of rocks they have dragged up from the work, and the trees are fallen, and already it will not return and grow back the same. ... Much is lost from what there was before. So, on the one hand, it pained me, and on the other, it paid me. It pained me more, because I have seen enough destruction. What they do here [at Rainforest Expeditions] is first teach you what it is you have, the trees, the plants.... (S13)

Like this man, many local people with whom I spoke evaluated ecotourism vis-à-vis the other economic activities of the region, and available job options. They prefer working in

an industry that promotes conservation, rather than exploitation, of the jungle. Such choices make tourism viable in Tambopata and ensure the survival of species like macaws.

### **“Seeing the Jungle”: Tourist Experiences at Tambopata Research Center**

A variety of factors influenced tourists’ decisions to visit Tambopata Research Center (TRC). Most TRC tourists were motivated to “see the jungle.” Four of thirteen interviewees specifically mentioned the appeal of TRC’s remoteness. As one person said, he wanted “untrammled forest all around” (T4). Some tourists mentioned wanting to see as many animals as possible, and macaws just added to this experience (T3, T10, T13), while for others seeing macaws in particular was extremely important. The Tambopata Macaw Project (TMP) plays a significant role in enabling RFE to capitalize on all these tourist’s desires.

#### ***TMP Nest Work***

TMP’s nest work initiatives have significantly boosted the reproductive success of local macaw populations (as described in Part I of this chapter). This enables TRC tourists to see more macaws, especially during nesting season (November-March). Of the tourists asked, all nineteen who visited during nesting season (n = 12 interviewed, 7 surveyed) had seen macaws at their nests in the forest during guided walks. Fifteen of these nineteen tourists also were able to watch TMP researchers climbing trees with nests and see macaw chicks while TMP researchers had them on the ground, as described in Chapter 2.

Of the fifteen tourists who saw the chicks, I asked fourteen questions about their favorite or most memorable experiences from the trip. Four of fourteen respondents (n = 2 interviewed, 2 surveyed) listed seeing the chicks among their favorite memories. Two parents visiting with their children talked about how rewarding it was to see, “the baby macaws being brought down from the nest and watching our kids witness that.” That evening they received the TMP presentation, and the next morning on his tourist exit evaluation their son gave it a 6 out of 1-5 rating (T3). Whereas most people responded to questions about favorite memories by listing several events, seeing the chick was the only

experience recounted by one interviewee who said how “impressive” it was for him and how he had never thought he would be able “to see a small bird like that” (T10).

The experimental hand-raising and artificial nest techniques pioneered by the Tambopata Macaw Project have since been applied in a variety of other macaw conservation projects. In the larger sphere of rainforest conservation, macaws are a charismatic “flagship species,” which can be used to rouse human attention and motivate people to protect their habitat. Macaws also function as an “umbrella species” because conserving the vast tracts of old-growth forest they require to reproduce benefits all species living there (Simberloff, 1998). In the case of TRC, tourists have direct interactions with macaws because of TMP’s work.

Wondering what makes macaws such a powerful flagship species, I asked fifteen tourists (n = 9 survey respondents, 6 interviewees) “What makes macaws so appealing to people?” Most people listed a variety of reasons. Macaws’ brilliant colors was the most frequently cited trait (n = 10), followed by their beauty (n = 6), intelligence (n = 5), behaviors such as their sociability (n = 5), and size (n = 3). After listing off several of the previous traits, half of the interviewees concluded by commenting on the positive emotions seeing macaws stirred in them. The abundance of wild macaws and the intimate interactions between *Chicos* and humans at TRC makes visitors feel good – setting an emotional tone that benefits ecotourism at Rainforest Expeditions’ in an intangible, yet profound way.

### ***The Chicos***

A major way in which TMP contributes to tourism at TRC is through the hand-raising of the *Chicos* in the early 1990s (as described in Part I of this chapter). While at TRC from January-March 2009, I saw at least five of these birds at the lodge on multiple occasions, with two individuals, *Inocencio* and *Chuchuy* (two Scarlet Macaws raised by TMP who are now a mating pair), visiting on an almost daily basis. Recently, TMP researchers compiled a guide to the *Chicos* to help TRC tourists, *guacamayeros*, guides, and staff to identify the individual birds who still frequently visit the lodge. The laminated booklet features full-color photos of each of the birds, provides the number of the ring with which they are banded, and explains identifying characteristics used by the

researchers to visually distinguish between the birds. A copy of the *Chico* guide is kept in a prominent location on the coffee table in the tourist dining room.

#### *Value-Added Tourism Resource & Social Actors*

As discussed below, the *Chicos* add to tourists' experience at Tambopata Research Center (TRC) in a variety of ways. Rainforest Expeditions certainly benefits from the *Chicos* as a value-added resource. However, the *Chicos* are much more than an economic resource for ecotourism or a tool of conservation. At TRC, the *Chicos* interact with humans from all the social categories described in this research and participate as social actors in those different arenas.

The tourism value of the *Chicos* was not lost on TMP and RFE founders Eduardo Nycander and Kurt Holle, who wrote that:

...as of early 1994, the TRC boasted a unique, unprecedented wildlife spectacle - a flock of handraised, free-flying wild macaws. By March 1994, 14 one-year-old macaws hand-raised in 1993 still visited the TRC daily and played with visitors and posed for photos.

(Nycander et al., 1995: 441)

The presence of the *Chicos* ensures that, during nesting season at least, while not every tourist is lucky enough to see macaws at the clay lick, almost every one sees macaws up close at the lodge, and perhaps even interacts with them. All of the tourists interviewed (n = 13), and surveyed (n = 9) saw at least one of the *Chicos* during their stay at TRC. Like the macaw chicks, the *Chicos* were often mentioned among tourists' favorite memories. Of the eighteen individuals asked about their most memorable experiences (n = 9 interviewees, 9 surveyed), five mentioned the *Chicos*.

Under the section asking "What are the most memorable experiences from your trip?" one survey respondent (TSV6) simply wrote, "The chicos flying on my windowsill and interacting with them (well trying to shoo them away)." When asked whether or not they had seen the *Chicos*, some interviewees commented on how interactions with the birds contributed to their stay at TRC. One man wryly replied, "Yes. They were acting nasty the way they do, trying to steal our jam." He explained that before he had never cared for macaws. However, "this experience has changed my view of macaws. I have a

sense of wild macaw behavior. ... I am kind of a macaw person now.... So having tourists come here is effective if I'm an example" (T4). Another person said, "They woke us up this morning at our bed. We woke up with them eating a cracker [on the windowsill]. It was a good way to wake up" (T3). These comments show how the *Chicos* directly add value to tourists' experience at TRC through their social interactions.

The *Chicos* are like ambassadors of the wild flock in the human world of TRC, their daily presence makes macaw behavior accessible to guests who translate it into human social terms.<sup>27</sup> Like humans, the *Chicos* are social actors who possess the agency to make decisions and act on some of them, coming and going from the lodge as they please and to interacting with different human groups and individuals on different bases.

#### *My Changing Social Roles & Relationship with the Chicos*

Like most visitors, the *Chicos* were integral to my experience as a tourist and researcher at TRC. Arriving at TRC for the first time with my fellow Earthwatch expedition team members, a macaw swooped in, greeting us with "Ra-rahh," as it landed on the wooden TRC trail map that hangs beside the lodge's wide front steps.

**Figure 5.3: Photo of a *Chico* perched on the trail map in the entrance of the Tambopata Research Center.**



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<sup>27</sup> This theme is addressed further in 'The Human Obsession: Anthropocentrism, Anthropomorphism & Conservation of Chapter 7.

It turned its head to one side and fixed us with an alert avian gaze. For most of us, it was the first time seeing a wild macaw so close, near enough to reach out and touch it, though we did not do so. In good tourist form, we began to take snapshots of the bird, “Oohing” and “Awwing” at it.

During my time with the Earthwatch group, I noticed how much my fellow team members and I delighted in the *Chicos* presence. We discussed them at meals, laughing when the *Chicos* flew in to steal food from the breakfast buffet, all the more when the staff scampered over to shoo them away with their hands or a squirt bottle filled with water. When I transitioned into the role of a *guacamayera*, my relationship with the *Chicos* changed as I assumed a professional interest and concern for them.

As a TMP volunteer, I was assigned the duty of recording which birds visited the lodge each day on the *Chicos* monitoring sheet. On days when I had not seen any *Chicos*, I asked others at the lodge if they had. Staff and *guacamayeros* could often tell me which particular *Chicos* had visited; tourists showed me photos they had taken, enabling me to identify the birds. When I saw tourists tempting the *Chicos* with food to sit on their shoulders, their casual treatment of the *Chicos* concerned me.

It is not uncommon even for domesticated parrots to suddenly bite their owners without provocation or warning. Macaw beaks are many times larger and the strength of their jaws' double-tendons is enough to crack a brazil nut. Knowing this and having seen the aggression of certain *Chicos* with climbers at their nests, I worried a *Chico* might bite an unsuspecting tourists. On more than one occasion I reminded tourists that while the *Chicos* may seem tame, they are wild animals. When I discussed this problem with a guide who had worked as a *guacamayero* himself, he said with frustration that whoever was guiding those tourists should have properly explained this to their group and not allowed them to interact with the *Chicos* in that way.

Living in the researchers' quarters rather than the tourist rooms also changed my view of the *Chicos* and interactions with them. In the dining room and tourists' rooms the *Chicos* go searching to beg or steal food around meal times. However, they also know researchers can often be relied upon at other times of the day. One afternoon, a male Scarlet Macaw named *Tabasco* flew into the equipment room and went straight to the

large Tupperware in which *guacamayero* snacks are stored. One of the lead researchers laughed and explained that he knows the bin well and can even open it if there is no weight on the lid. Another day as I sat upstairs doing data entry, I heard the whoosh of wings just under the eaves as a macaw alighted on the landing where the stairs turn, followed by the clicking of nails on wood as it walked up the steps. Within moments its mate arrived as well. I laughed and explained what I had just witnessed to the three other *guacamayeros* who emerged from other areas to see what had caused the noise. We gave *Inocencio* and *Chuchuy* some crackers and took pictures of them hanging out with us in the *guacamayeros'* quarters.

**Figure 5.4: Photo of *Inocencio*, *Chuchuy* and some *guacamayeros* in the researcher's quarters of Tambopata Research Center.**



As an ethnographic researcher interested in the relationships between TMP and ecotourism at RFE, I noted the daily interactions between tourists, *Chicos*, staff, and guides, which began to take on the hue of a farcical performance. I saw the breakfast scenario that had delighted me as an Earthwatch tourist repeated over and over again. In the field notes for my thesis research I wrote:

February 6: Breakfast with Chicos

*Inocencio* and *Chuchuy* come each morning to the porch where staff and *guacamayeros* eat; they beg food or steal it while unguarded.

Staff does not feed the birds. [One staff member] even teases them, poking his finger or fork towards them as he passes by the *Chicos* sitting on the rail. They return the sentiment by leaning forward, beak open to bite him. Many researchers do feed them, rolls dipped in yogurt to soften them because they are otherwise too dry to swallow. Some try to hide it from the staff (who know full well what is happening).

In the tourists' dining room staff and guides run the show and chase off birds who get too close to full plates with the spray bottle. Tourists delight in the *Chicos*. One tourist [from Earthwatch] specifically thanked the [TMP] research director for raising them. He chuckled and said they were raised by Kurt and Eduardo before his time. Tourists seem to especially enjoy the spectacle of [the same staff member who teases them in the staff lounge] chasing *Chicos* with the spray bottle. The short "Rah" call in response is met with predictable peals of laughter and smiles from the tourists. At times this seems an almost rehearsed routine in which both staff and bird know well their role, inter/acting this ritual for the tourist audience.

Seeing macaws is certainly not the only activity that interests TRC tourists. However, it is important to most, and the *Chicos* provide a unique opportunity for tourists and researchers to study wild macaw behavior, be it modified by their comfort with humans.

#### *Wild Animals or Pets?*

Interested in the *Chicos* as a tourism resource, and their dialectical existence as wild creatures raised by humans, untamed birds who are actors in the human arena, I asked a few tourists additional questions about their perceptions of the *Chicos*. A study from 2000 that surveyed 161 tourists at four Tambopata lodges (none of them owned by RFE) found that 87% responded "No" to the question "Should the lodges keep captive birds on site as pets for tourism, photography etc.?" (Kirkby et al., 2000: 125-126). I explained this study to two tourists during interviews, and asked whether or not they considered the *Chicos* to be pets.

Both of the tourists I asked, like the majority of the survey respondents mentioned above, said they believe lodges should not keep pets. Nonetheless, neither of them had a problem with the *Chicos*. One commented that he knows why the *Chicos* behave as they do and “it’s okay because of the nature of the project. And it’s nice to see the birds up close” (T9). The other remarked that although she does consider the *Chicos* to be pets:

...it is okay in this case because they were part of a research program ...  
and they are birds that would have died otherwise. You know, it’s not like they got them from the wild and turned them into pets. ... [Also], they are coming when they want to come. They are not forced to stay here. (T13)

For these tourists who opposed lodges keeping birds as pets under normal circumstances, TMP’s scientific research legitimizes the presence of the *Chicos* at TRC. The specific conditions made seeing macaws so close something they could appreciate, rather than feel bad about as they would to see a bird caged, tethered, or with clipped wings.

Several guides and *guacamayeros* also mentioned during interviews that RFE does not keep pets, but rather promotes wildlife conservation and educates tourists about the illegal pet trade. For example, TMP Project Manager Alan Lee contrasted RFE with other supposedly “eco” lodges that buy animals so tourists have something to see, rather than conserving habitat for wild animals. Asked about the differences between RFE and other ecotourism companies one guide said “what I have heard is that the majority of other lodges keep animals as pets, to exhibit them,” whereas RFE trains its guides to spot animals in the wild and talk with tourists about how “we don’t force them to be here or close them in” (G9).

Later in the interview, discussing the importance of the Macaw Project to RFE ecotourism, she said:

The majority of tourists have seen some parrot or parakeet in a cage, because they bring them [through the pet trade] and it is illegal and all that. How much better for them to see parrots in their natural habitat and explain to them [about the birds]? Because we do not just say ‘Ah, there they are on the *colpa*.’ No, we have the information from the Macaw Project, and with this we can say which hours they [the birds] can go, why they go to the *colpa*, about how many eggs they have and how many of

them survive. It is very important that the tourists are going to like to know this, because the majority of tourists have seen them in a cage in their countries. Many say, ‘Oh, I have one just like this in my house!’ I too had one like that in my house because I didn’t know about this project and how important it is. So one becomes conscious and realizes that the poor animals suffer a lot when they are enclosed. So then it is important also because it opens your eyes. (G9)<sup>iv</sup>

Visiting the clay lick and learning about macaws through the TMP’s work enables tourists to see and appreciate macaws in their natural habitat as compared to the caged birds they have had contact with before.

As hand-raised birds who are partially tame, not pets but rather free animals who choose to interact with humans, the *Chicos* enable tourists and researchers to get much closer to wild macaws is possible at the lick or under normal conditions. There are tourism benefits and likely conservation benefits from such interactions which foster caring on an interpersonal level (see ‘The Bio-centric Approach to Development: A Labor of Love,’ Chapter 6). However, some see the *Chicos*’ behavior as a problematic because it goes against their nature.

A guide who worked as a *guacamayero* mentioned during our interview that the all research projects have their problematic elements, and in his opinion the *Chicos* are problematic for TMP:

The problematic thing about the Macaw Project is that there will always be these young chicks that were hand-raised before. They are flying and trying to steal the tourist’s food, which is something very interesting for the passengers who come, for the visitors. Because they have a close experience with a bird that is almost wild – almost because it is not 100% wild – it is in contact with people, it is not afraid of people. So then the problematic thing is that ...they are accustomed [to people] and for this reason they are going to come down every breakfast to choose a pancake or roll or something, to steal the butter also. So then this is not good, it is problematic. Supposedly the research should help those [birds] which are in a normal situation. (G8)<sup>v</sup>

He pointed out that although the *Chicos* are no longer really fed at the lodge, having been officially weaned shortly after their release into the wild, a *Chico* with a wild mate still comes to the lodge to forage for food and its wild chick is learning this behavior:

At breakfast time – and they know exactly when it is – the *Chico* comes down, and its chick also is going to follow the parent.... Yes, I have seen cases in which a wild chick, 100% wild, comes down accompanying its parents and it begins to learn things that are not within its natural behavior. To be in contact with humans – which you would never see in a wild state, 100% wild and natural – this is the problematic [of TMP]. (G8)<sup>vi</sup>

As this passage demonstrates, although a very small number of birds behave this way, the *Chicos* who still return to the lodge are very much social actors who engage in the human world of TRC. They arrive on a schedule according to meal times, they interact with tourists, guides, staff, and researchers, and a few have even taught their wild yearling chicks to engage with human beings.

From the perspective of conservation biology, the behavior of these *Chicos* is problematic because it goes against macaws' wild nature, but from an ecotourism perspective it is positive because they allow intimate contact with mostly wild animals. From the perspective of the actor-oriented approach to studying social relationships and interactions, the *Chicos* demonstrate why the concept of “social actor” should be expanded to include more than just human beings.

Finally, as described by the guide in the passage above, the *Chicos* behavior is “problematic” in terms of wild macaw characteristics. With regard to developing hand-raising techniques for use in other locations, which may not be in large protected areas like TRC, the *Chicos* sociability with humans is a failure because such behavior could lead macaws raised this way to seek out human settlements where they might be killed or captured as pets. In fact, the techniques used at TRC were modified when applied in Costa Rica with Scarlet Macaws (*Ara Macao*) and hand-raised chicks “were isolated from almost all human contact” (Brightsmith et al., 2003) to avoid creating birds like the *Chicos* who were not shielded from human contact during their raising. For the successful survival of re-introduced species in locations nearby human settlements, such as Curu and Golfito, Costa Rica, such steps are necessary.

However, the *Chicos* represent a different kind of success for macaw conservation. By enabling interpersonal interactions and experiences with individual wild birds, the *Chicos* cultivate caring in humans for the wellbeing of macaws in general, as described by the tourists quoted in this section. Such caring concern and emotional attachment is needed to help raise human interest in the wellbeing of non-human species and motivate people to act on their behalf. This level of care is what drives the bio-centric development of Tambopata Macaw Project researchers and volunteers, as described in the section ‘The Bio-centric Approach to Development: A Labor of Love’ in Chapter 6.

### ***The Importance of Macaws and TMP to RFE Ecotourism***

In addition to the direct contributions TMP’s makes RFE ecotourism as described in the section above, TMP’s presence also indirectly aids RFE tourism. Data from RFE’s own evaluation surveys administered to over 1,000 tourists annually shows that overall satisfaction ratings rose from 92% in 1999, “but averaged 97.4% +/- .05% per year from 2000 to 2007.” Although cause and effect relationships cannot be established, co-owner Kurt Holle and TMP Director Donald Brightsmith believe “the presence of the active, high-profile research at the site was a major contributing factor to this increase” (Brightsmith et al., 2008a: 2837). In my research, I asked tourists to rate on a scale of 1-5 how much value the Macaw Project added to their experience. The mean average for tourists interviewed (n = 10) was 4.45, and for survey respondents (n =9) it was 4.11. Among both groups, the value TMP added was equal to or greater than the value of seeing macaws.

### ***Tourist Desires to See Macaws***

Tourists interviewed (n = 9) and surveyed (n = 9) were asked to rate the importance of seeing macaws on their visit using a scale from 1 (not valued/not important) to 5 (highly valued/highly important). Ratings given ranged from a low of 3 to a high of 5. The mean average rating for this question by tourists interviewed was 4.16, and 4.11 for survey respondents. One man replied, “On a scale of 1-5? I would say 6. They are a signature species. It’s sort of like going to Australia and not seeing a kangaroo” (T9). After giving a rating of “5” to the importance of seeing macaws, a

couple added, “Otherwise we wouldn’t have liked it here – that’s the value of the station” (T5).

The opinion voiced by these tourists’ points to a larger truth about the relationship between the Tambopata Macaw Project and ecotourism at Rainforest Expeditions. The presence of so many animals, and particularly macaws, is directly related to TRC’s isolated location in a protected area. RFE enjoys a privileged status as the only tourism company with a concession to operate a lodge on the Upper Tambopata River within the Tambopata National Reserve.

#### *TMP & Tambopata National Reserve Access*

According to two guides interviewed, RFE’s concession is directly attributable to its intimate affiliation with TMP’s scientific research. As described in Chapter 1, the Tambopata Research Center (TRC) was built in 1989, a year before the area was declared as a protected reserve. The Tambopata Macaw Project was granted permission to continue operating its macaw conservation and nest research at TRC. One guide confirmed that the tourism concession now held by RFE was originally permitted because of TMP because “there were a ton of costs and no income, economically. So they began to bring up tourists to see, filmmakers, birdwatchers. And this is how it initiated” (G8). He also noted that with the money and reputation earned from TRC is what enabled RFE to open its two other lodges.

Asked about the importance of TMP to Rainforest Expeditions’ tourism, another guide replied:

If I am sincere, from what I’ve heard if the Macaw Project disappears at TRC, Rainforest would not have the right to have a building so large like they have now. (G5)

From this perspective, it is the ongoing macaw research that enables Rainforest Expeditions’ to maintain its concession and the rights to operate Tambopata Research Center. Without TMP, RFE would only be allowed temporary camping rights like those granted to independent guides and other operators who take tourists up to Colpa Colorado.

TRC's location and the work of the Macaw Project are significant factors attracting some visitors. Two people interviewed were at TRC specifically to gather material for media that will feature the lodge and the Macaw Project (a book on parrots and a documentary film for European television). Such work provides free press coverage for Rainforest Expeditions, as do all the numerous scientific and popular articles and presentations based on TMP data. From 1999-2008, the research results have contributed to eleven peer-reviewed journal articles, over a dozen reports to government agencies, funders, and general audiences, and nineteen articles for popular magazines in seven different countries. Also, the TMP has been featured in two books and three television documentaries. While most of the written work is the direct product of TMP researchers, "the documentaries were initiated via contacts with Rainforest Expeditions but featured the research" (Brightsmith et al., 2008a: 2837).

Although it is difficult to quantify the marketing value this kind of international coverage has for RFE, co-owner Kurt Holle estimates it is probably over \$100,000 (Brightsmith et al., 2008a: 2837). Five of thirteen tourists interviewed mentioned they had selected TRC specifically for its location and surroundings. Compared with lodges in less pristine settings closer to human settlements, TRC's guests have better chances of seeing wildlife because the animals are more abundant. For example, as shown in a study conducted by TMP researchers and used to create a map for RFE's website, more animals are spotted at TRC than at RFE's other lodges closer to Puerto Maldonado (PS8).

While I was at TRC in February of 2009, crews from Japan and Germany were filming for two additional television documentaries, and an author from Australia was conducting research for a new book on parrots. *Guacamayeros* were featured in several filmed scenes and provided significant assistance and information to these individuals. A member of one film crew noted during our interview that in selecting sites for nature filming, it is "important that there are biologists around who know where the animals are" (T1) and that they had returned to TRC for a second time specifically to film researchers climbing macaw nests and checking chicks.

### *The Tourism Appeal of Scientific Research & Biologists*

Asked about the importance of TMP to her work, one guide said “it gives more value to the place that they [tourists] are visiting. It’s not just a lodge, but a research center and the passengers are always happy about this” (G4). Three tourists interviewed were attracted to RFE specifically because of TMP’s research. One was interested in TMP’s artificial nest work said the project “was by far the deciding factor and what made me do the 7 day, 6 night thing” rather than booking a shorter trip (T9). Comparing RFE to other companies, one guide said “other tourism businesses sell relaxation tourism. ... what Rainforest sells is nature, research projects” (G1). Later in the interview he emphasized how what RFE is selling at TRC is the chance “to go talk with researchers, the presentation about the project, going to see the nests, the chicks during nesting season. ... It wouldn’t make sense to go see the largest colpa in the world and not see the work of the researchers and what they are doing.”

After reviewing the options for Tambopata tourism operators in her guidebook, another tourist picked TRC because she “liked the idea of being somewhere they also do scientific research” (T13). Subsequently asked if she knew about the Tambopata Macaw Project before arriving she said she had read something but, “I’m not sure if I actually knew that the research they do here means the macaw project. No I don’t think I made that connection. So research for me was just like whatever research.” This comment points to the value of scientific research as a marketing mechanism that can attract tourists, even when they are unclear about the research topic.

Several people interviewed made comments that reveal how their associations of biologists with environmentalism positively affected their perception of RFE as a company. Three interviewees explicitly mentioned that RFE must be a green company because “most biologists care about the environment” (T1). For example, asked whether research and tourism is an appealing combination, one woman replied: “Oh, absolutely. I come from a biology background so it’s very appealing. I assume a place like this will be making the least possible impact” (T8). The person quoted in the paragraph above who picked RFE specifically because she associates scientific research with high quality: “Basically, compared to the other expedition companies that I looked at because they do scientific research here, I thought that it would probably be better, or like a higher quality

of the tour and guides, and just not as touristy” (T13). Although based on assumptions rather than opinions reached through informed research, these tourists’ beliefs are not inaccurate.

RFE is a company that exemplifies the environmental (and social) ideals of ecotourism. However, it is not simply that there are scientists conducting research in the woods surrounding RFE’s lodges – RFE was founded and is still owned by biologists. When I interviewed TMP Director Donald Brightsmith, he noted that real ecotourism “requires a company that is green to the core,” not just superficially. TMP Project Director Alan Lee echoed this sentiments saying what makes Rainforest Expeditions different is that, “Eduardo and Kurt are *guacamayeros* ... biologists steeped in conservation ethics.”

### **PART III: VOLUNTEER TOURISM**

In this case, the volunteer venture does not take place in a community or area of human settlement. Rather, Tambopata Macaw Project (TMP) research is conducted inside protected areas where all TMP staff and volunteers live and work at isolated lodges primarily used for ecotourism. Under these circumstances, the “volunteer tourists” are Macaw Project volunteers, while their “hosts” include Rainforest Expeditions’ staff and guides, and also TMP’s research staff (lead researchers and paid Field Team Leaders or FTLs) who follow the same regulations and work schedules as RFE staff. Thus, both volunteer and host groups include a mix of Tambopata locals, Peruvian nationals from other parts of the country, and foreigners. This situation produces a context in which to study not only how the meaning of volunteer tourism is constructed, but also the social construction of the categories of volunteer, tourist, and hosts.

#### **Conceptualizing Science vis-à-vis Tourism: Are *guacamayeros* tourists?**

Although *I* was interested in analyzing TMP volunteers from the perspective of volunteer tourism, I was not sure other actors involved consider them to be tourists in any way. Thus, during interviews I asked TMP Field Team Leaders (n = 4), TMP volunteers

(n = 10), RFE guides (n = 11) and staff (n = 11), “Are *guacamayeros* tourists? Why or why not?” Although intended as a straightforward yes or no question, not all responses could be categorized this way. As shown in Table 5.5, almost half of respondents answered either that “some are” (like) tourists while others are really more volunteers/researchers/scientists or that all *guacamayeros* are both tourists *and* volunteers/researchers/scientists (“yes/no”).

As a label applied to both volunteers and TMP staff, the term *guacamayero* encompasses individuals who are locals, Peruvian nationals, and foreigners, those who pay cash to volunteer, those who receive free room and board, those who are paid to work, and those who have built research careers on TMP data; some have not yet completed undergraduate programs at Puerto Maldonado universities and others are world renown scientists. Thus, the question elicited responses that reveal how interviewees conceptualize volunteers, tourists, and scientists, how these categories are socially constructed, and how blurry the boundaries between the three sides of the triumvirate can be.

**Table 5.5: Results from the Question “Are *Guacamayeros* Tourists?”**

<b>Response &amp; Examples</b>	<b>Volunteers</b> (n = 10)	<b>FTLs</b> (n = 4)	<b>Guides</b> (n = 11)	<b>Staff</b> (n = 11)	<b>Total</b> (n = 36)
<b>Yes</b> "Yes. They are tourists ... very good people ... and one treats them like the tourists they are" (S11).	0% (0)	0% (0)	0% (0)	36.3% (4)	(n = 4)
<b>Some Are</b> Some <i>guacamayeros</i> are (like) tourists; others are serious researchers interested in the birds.	30% (3)	25% (1)	0% (0)	27.3% (3)	(n = 7)
<b>Yes &amp; No</b> <i>Guacamayeros</i> are partly tourists; or they are (like) tourists when they arrive but become "part of the lodge."	40% (3)	50% (2)	0% (0)	18.2% (2)	(n = 8)
<b>No</b> "Researchers are never tourists" unless they are relaxing on vacation (G8).	30% (4)	25% (1)	100% (11)	18.2% (2)	(n = 17)

People from all groups and all response categories mentioned at least one of the following considerations in explaining their answers: nationality/origin (e.g. all foreigners or non-Tambopata residents are tourists); whether *guacamayeros* pay or not (e.g. paying makes *guacamayeros* (like) tourists); tourist vs. *guacamayero* living conditions (e.g. eating with staff, not in the dining room); and work vs. leisure focus (e.g. *guacamayeros* do not come to relax or for a guided tourist itinerary).

### **“Yes”**

Of the various social groups asked, staff members were the only people who replied “yes,” *guacamayeros* are definitively tourists. Three of the four reasoned that, like tourists, *guacamayeros* are from other places and come to learn about Tambopata as visitors. One man replied, “Yes, they are like tourists because they come from far away, from different parts, to see the animals” (S7). He then pointedly asked me whether I would ever return to Tambopata, searched my face, shook his head, and said he thought not. Surprised, I replied I had no plans to do so and probably would not, but that “I would like to bring my boyfriend here one day to see the birds,” belying my own tourist’s interest in Tambopata.

The majority of staff members and other respondents distinguished more between different kinds of *guacamayeros* (long-term researchers vs. volunteers etc.) or the various characteristics of tourists’ vis-à-vis those of *guacamayeros*.

### **“Some Are”**

One TMP Field Team Leader (FTL), about a quarter of staff members, and one-third of TMP volunteers responded that some *guacamayeros* are tourists, while this label really does not apply to others. A staff member with many years of experience at TRC said: “I see it depending on each researcher” (S3). Several *guacamayeros* distinguished between biologists or those with a genuine interest in the Macaw Project and volunteers with more touristy motives. The FTL explained that some *guacamayeros* are not so interested in the project itself; they are more motivated by wanting to learn Spanish, to know the people, or “to see more and pay less than the tourist price.” Others “really want to know more and more” and are “thinking all the time about macaws” (PS2).

Two volunteers specifically mentioned they thought guides and staff viewed them as tourists. One identified as being both a researcher and a tourist (PV1).<sup>28</sup> The other strongly rejected the tourist label. She explained that there are “no prerequisites for being a *guacamayero*,” and some “do not really care about the birds.” She contrasted this sort of tourist/volunteer from herself as a biologist. However, afterwards she sheepishly added:

Yes, I am a tourist here. But I am here for work, to gain experience as a biologist. If you were to ask any of these people [*waving her hand in the direction of staff and guides in the kitchen*] they’d say ‘Yes, she’s a tourist.’ I don’t want to think of myself as a tourist but I am seen as one. (PV6)<sup>29</sup>

Following this comment, she contrasted the depth and intensity of her experience with macaws and her preference to stay in a place for several months with that of a traveler “who just passes through.” She used the metaphor of birders who keep lists to describe this difference: “So they’ve seen it [a bird species], but what do they really know about it?” From this perspective, there are both qualitative differences (one’s depth of knowledge) and quantitative differences (length of stay) that distinguish tourists from volunteers or researchers.

Another volunteer with a “some are” response described why it was hard to give a “clear cut answer” to the question and compared working for TMP with a previous fieldwork experience in his home country:

To be honest ... I felt like a bit of a tourist at times even though I was legitimately working as a researcher. I think it was just being in the foreign culture, and I had so little time to fully assimilate (not knowing Spanish certainly didn’t help). When I worked in [the previous location], I really felt like [the National Park] belonged to me in weird sort of way. It

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<sup>28</sup> This volunteer’s comment inspired me to ask interviewees from all groups “Are *guacamayeros* tourists?” Because she was not directly asked the question, she is not included in the 36 respondents whose answers are analyzed. However, I would categorize her comments as “yes/no.”

<sup>29</sup> I categorize this response as “some are” because she first distinguished between other *guacamayeros* who are tourists and herself. Although she feels seen as a tourist by others, she does not self-identify with the label.

was my park, it felt like a part of me. I couldn't envision getting that same feeling for Tambopata, as much as I loved it. I would always, at least to a slight extent, feel like an outsider. On the other hand, some *guacamayeros* throughout the years have been from parts of Peru like Manu, Puerto Maldonado, or Infierno and I don't think anybody could ever confuse them with a tourist, nor should they. There are people like Donald [Brightsmith] and [a foreign FTL] who are outsiders that have spent so much time in the jungle that they can't be considered tourists. But for all of us working 2 month stints, I'd say yes, we are tourists. (PV7)

His response and that of PV6 quoted above, indicate a belief that sometimes even foreigners can rise above the status of tourist through cultural immersion, intimate experience, and bonding with a particular place and its inhabitants (similarly, this is the premise of anthropology). In the case of the Macaw Project, such transcendence is directly linked to scientific experience and expertise (a theme fully addressed in the “Yes & No” section below).

However, foreigners will always be tourists in the eyes of some people. One staff member replied: “Some [*guacamayeros*] are tourists, not all. ... Because foreigners come. ... Nationals are not tourists because they come to learn and to know” (S4). For him, Peruvian volunteers' motivations are linked to their nationality, exempting them from the category of tourist. Interestingly, many guides exempted all *guacamayeros* from the category of “tourist” specifically because they are coming to learn and to know rather than for a touristic leisure experience. On the other hand, a Peruvian *guacamayera* (PV8) quoted in the “Yes & No” section below saw the desire to learn and know as a defining characteristic of tourists.

### “No”

Like many whom responded “Some Are,” those who responded “No” focused on *guacamayeros*' motivations and how their experience is characterized by labor as opposed to leisure. All eleven guides, two staff members, three TMP volunteers, and one team leader firmly replied “no” *guacamayeros* are not tourists. With seventeen of thirty-six total respondents, this was the dominant response category.

TMP volunteers and staff, and RFE guides and staff who answered “no” focused on how *guacamayeros* work and learn, their greater interaction with staff and guides, and how their treatment differs from that of tourists. Staff and guides’ answers to the question of whether *guacamayeros* are tourists are based on comparisons between *guacamayeros* and the changing roster of tourists they interact with on a daily basis. Their responses highlighted their conceptions of tourism, and the quality of guides’ relationships with *guacamayeros* versus those with tourists.

### *Outside the Tourism Model*

One guide asserted that *guacamayeros* are not tourists because: “They don’t pay. Or maybe they pay \$10 per night, but they aren’t tourists. They don’t do the activities. They don’t eat in the dining room, they don’t have a guide. So they are not tourists” (G4). Her standard of tourism is shaped by the highly-structured, guided tourism characteristic of Tambopata. From this perspective, visitors without guides cannot be tourists, even if they are paying. After hearing her response, I explained the concept of “volunteer tourism.” Skeptically she replied: “No. I studied tourism and I have never heard of such a thing.” Although other guides did not so explicitly explain their concept of tourism to justify their responses, I believe many RFE guides have a similar conceptualization.

### *Alternative Motivations & Experiences*

All the TMP volunteers and five of the guides in this response category mentioned the intensity and/or quality of *guacamayeros*’ labor. One Peruvian volunteer insisted that *guacamayeros* are not tourists because they come to support the research with a work mentality, spend two weeks just getting trained, and then help train new volunteers (PV11). Another said that although the guides treated him like a tourists at the beginning, but then he was working so hard and “you haven’t time even for yourself, even to do laundry, so it doesn’t feel like tourism” (PV10). Given that all guides asked responded *guacamayeros* are not tourists, it is interesting that this volunteer and two others (quoted in the “Some Are” response category above) felt they were viewed or treated as tourists by guides.

Several guides and one staff member focused on *guacamayeros* mindset and intentions versus that of regular tourists. One guide explained, “For me, they are not tourists. They don’t come from a point of view of vacation or fun, they come to work. Everyday they get up at 4:30 in the morning, staying [at the clay lick] until 11, and this is work. ... They are all people who want to work, to know, to teach” (G2). Another guide who worked on a variety of research projects before becoming a guide and worked as a TMP volunteer himself vehemently said:

They are definitely not tourists. No. ... They are people who do research, to support conservation, staying and putting a lot of time from their life into what they believe. In this case, *guacamayeros* are putting their lives on the line climbing trees, or risking their fingers which could be cut off by a macaw’s bite. They are researchers. And researchers are never tourists, unless they are only traveling to find places for relaxation. (G8)<sup>vii</sup>

Working so hard and even risking their lives to contribute to macaw conservation differentiates TMP volunteers from tourists absolutely in the minds of these guides.

### *Different Social Relationships*

Three guides focused on the social interactions and quality of relationships between *guacamayeros* and guides versus those with tourists. From the perspective of a guide with many years experience at RFE, *guacamayeros* are not tourists because:

...we live almost in the same way, sharing the same area. ... We make friends more with the *guacamayeros* and the *guacamayeros* stay longer. In terms of personal treatment, the *guacamayero* is not a tourist. It is more than a tourist. It is more a friend than a tourist you know is going to leave right now in three days.

... A *guacamayero* is one friend more, one guide more, who has to sit at the table with your tourists, who is here [in the guide house] watching television, drinking beer when we go down to Puerto Maldonado together, who tells you about the Project, and you tell them about your work, who sleeps sometimes in the same area.

...They pass more or less through the same difficulties as a guide. If it rains here [*motioning to the holes in the roof of the guide house*], well the guacamayeros are also going to be affected. ... I think that for me a guacamayero is more a friend, more than a tourist, although probably they leave in two or three months. The relationship is different.... (G12)<sup>viii</sup>

As this passage highlights, especially at Posada Amazonas, *guacamayeros* and guides share many experiences. In some cases, this creates bonds of friendship (and sometimes romance) that extend beyond working life at RFE lodges to free time spent socializing in Puerto Maldonado.

A related theme among these respondents was *guacamayeros* integration into the lodge and local life. A guide who previously worked for TMP described how it is different to come as tourist than as a *guacamayero*:

...they get so local from the area. ... They feel like one element more, one stone more. Because they stay more than one month and they get used to the life, they mix with it. *Se acriollan*, we say in Spanish... If I go somewhere, I am like a guest at the front row, and I don't really understand the system. But as soon as time goes by, you understand more ... you understand as a local. (G14)

At the lodges, this integration and understanding comes from rules of conduct and meals that *guacamayeros* share not with tourists, but with staff. Immediately responding “no” to the question, one volunteer described *guacamayeros*' treatment as staff. After hearing an explanation of the volunteer tourism concept, she conceded that “Yes. It is a volunteer tourism position,” but reiterated that it “doesn't feel like it” because you are “immersed in being a cornerstone of the lodge and working. ... We are not allowed to act like tourists. Work comes first” (PV12). For these volunteers and guides, *guacamayeros* are not tourists because they have more in common with RFE staff and guides than with tourists. Unlike tourists, *guacamayeros* and guides are able to spend enough time together to develop close interpersonal relationships.

### *From Tourists to Something More*

Although none of the people whose responses are categorized as “No” considered *guacamayeros* to be tourists, a few described how it is *guacamayeros*’ experience that changes them from their initial tourist-like state into something else. One guide replied:

In reality, they are not because *guacamayeros* arrive to be part of the lodge. So they are not tourists [*giving a small smile*]. For sure, in the first days yes [they are tourists], because everything is going to be new for them. But afterwards they are going to be so long in the jungle that they are also going to be a help for you because they are going to say ‘Hey, I’ve seen this animal on this path.’ So this is more a help because they have information you will need, or you have information that they are going to need. So it is a mutual help really. (G13)<sup>ix</sup>

A TMP volunteer expressed a similar opinion, that while some *guacamayeros* begin more like tourists, asking lots of questions “they end more involved in what they believe in with the project, with the macaws and everything. No. I don’t relieve they are a type of tourist.”<sup>x</sup> (PV9). A TRC staff member described a similar opinion from his perspective: “They are like staff. They are tourists when they come, but they become part of the lodge, part of the staff, part of the Rainforest family” (S8). This conversion from tourists into something more than tourists was also described by some of those quoted in the “Yes & No” section below who believe that *guacamayeros* are partly tourists and partly something else.

### **“Yes & No”**

The staff and *guacamayeros* whose responses I categorized as “Yes & No” described various ways in which *guacamayeros* are both tourists and not tourists at the same time. The two staff members who responded this way focused on general traits of *guacamayeros*. Both mentioned that they are tourists “because they pay.” However, they are also not tourists because they are “from the project” (S2) and “they eat the same as the staff” (S5). Volunteers focused more on their conceptualizations of tourism and their own mixed motives for volunteering. Field Team Leaders highlighted how participating in TMP is a process that converts volunteers from tourists into researchers.

### *Conceptualizing Tourism*

While many TMP volunteers quoted above based their responses largely on their identity as scientists or workers, the question stimulated the volunteers cited here to examine their conceptualization of tourists/tourism. One TMP volunteer from Lima replied, “The concept of tourism is to come, to know [people and places], to interact. And how are we? The same, but also working” (PV8). She noted how “we take photos,” and said *guacamayeros* are tourists “except for the resting part” and “perhaps with another sentiment ... deeper,” finally concluding that *guacamayeros* are 70% tourist and 30% worker. Another TMP volunteer said he felt “like both a researcher and a tourist,” because “my motives to be here are sort of touristy” (PV3). These two volunteers self-identified as tourists despite the fact that both are committed to scientific careers and each mentioned during interviews how TMP fieldwork experience will aid their professional advancement. It is interesting to note that PV8 and PV3 have very similar scientific backgrounds and career aspirations to those of PV6 and PV9 who each completely rejected the label of tourist (as discussed in the sections above), and only one of each response pairing is foreign, while one is Peruvian.

### *Research as Ritual Conversion*

Half of the four Field Team Leaders asked responded that *guacamayeros* are both tourists and not tourists. As previous TMP volunteers and current research staff, they have worked alongside, trained, and supervised dozens of *guacamayeros*. This perspective has allowed them to witness volunteers’ progression from new arrival to old hand. An FTL from Puerto Maldonado described how “in part they are tourists” because they do not know very much when they arrive and you have to teach them about the area (PS3).

The other FTL, who is not from Tambopata, included himself in his appraisal of *guacamayeros*:

...To begin with, they are volunteer that come to work while learning. Then, it could be that we consider them as tourists in a certain way as well, because in some ways they are people who do not have this in their place, right. They don’t have this initial contact. So then, whatever person

that visits a place could be considered a tourist. However, the fact that they are doing research converts them into researchers. So I believe they are more researchers. Now, there are certain days that they have free and can also do tourism, go to walk freely and that could also make them a bit of like tourists. ... More researchers obviously, but we also have our little tourists, the ‘What is that?’ and ‘why is this here?’ And if someone says, ‘Shut up. I’m trying to work!’ you just keep on asking. (PS7)<sup>xi</sup>

Most *guacamayeros* are not from Tambopata and arrive as visitors to the region, similarly to tourists. Like tourists they have an outsiders’ interest in the unfamiliar, and continue to explore and ask questions throughout their time as a *guacamayero*. However, despite these similarities, partaking in scientific research makes *guacamayeros* “more than just tourists” in the eyes of most actors interviewed.

Through participation in the rituals of scientific research and daily life, volunteers who arrive as tourists are converted into researchers. Some actors cease to see *guacamayeros* as tourists at all, but rather as “a cornerstone of the lodge” (PV12), “part of the Rainforest family” (S8), “one friend more, one guide more” (G12).

### **The Social Construction of “Volunteer” & “Tourist”**

The range of answers given in response to the question “Are *guacamayeros* tourist?” show how both “volunteer” and “tourist” are socially constructed categories. As a social group, guides unanimously rejected the term “tourist” for *guacamayeros*. This seems related to: 1) a shared conception of tourism as a leisure activity and *guacamayeros* as workers; 2) for some guides, social relationships with *guacamayeros* are also considerably different than with tourists – tourists come and go as clients, while the experiences guides share with *guacamayeros* the longer duration of their stays allows relationships as friends and colleagues. However, the responses of RFE staff and *guacamayeros* do not seem to follow any discernable pattern based on social group membership or identity as foreigner, Peruvian national, or local.

A portion of foreign *guacamayeros*, Peruvian *guacamayeros*, and local staff identified *guacamayeros* as tourists, and another portion of each group said they are not tourists. In addition, TMP volunteers’ self-identification as tourists is not necessarily

related to their own level of personal scientific expertise or their nationality. Some *guacamayeros* with extensive scientific training and experience self-identified as tourists, while others with comparable backgrounds completely rejected the label. Given these ambivalent results, the way actors conceptualize “volunteers” and “tourists” and identify who fits these labels seems unrelated to external factors such as the various social groups to which they belong and more related to an individual’s own internalized identifications and associations.

While there is no clear pattern among staff responses about *guacamayeros*’ identity as volunteers or tourists, comments made during interviews with staff do indicate that their social relationships with *guacamayeros* are weaker than guides relationships with them. These remarks and criticisms of TMP voiced by staff, *guacamayeros*, and guides also show that TMP could do more to include local people in volunteer tourism and the environmental educational opportunities they provide to RFE tourists.

### **Volunteer Tourism & Local People**

A research focus on volunteer tourism begs the question, who is involved in volunteer tourism and in what capacity? In most cases, staff focused more on general characteristics of tourism and the TMP and less on individual motivations than did *guacamayeros* and guides in formulating their answers. This could be because staff members are generally less involved with *guacamayeros* than are guides. Despite sharing meals together, staff and *guacamayeros* spend less time together and are less likely to know each other personally. For example, all nine staff members asked how the TMP affects their work or life at the lodge replied, “It doesn’t.” Several made comments like the following: “It doesn't affect me at all because we are apart. We only eat together; we don't share anything” (S8).

Four of thirteen staff members interviewed expressed significant interest in knowing more about TMP’s work, directly asking that more information be shared with the staff through talks such as those TMP researchers give to tourists. Some of the more experienced staff noted that talks have been given in the past. However, according to one man it has been two to three years since a talk was given for Posada Amazonas staff (S12). In three years at TRC, one staff member said he has never received a talk about

TMP and he is very interested because he hopes to become a guide in the future. He tries to follow the presentations given to the tourists, but his English is not good enough to understand much (S10).

In addition, two staff members and one guide from Puerto Maldonado criticized the Macaw Project for not sharing more information with people from local communities. They asserted that few people from Puerto Maldonado know TMP exists. A staff member who had never heard of TMP before he began working at Rainforest Expeditions said, “I am from Puerto Maldonado, and you don’t hear that there is [TMP], you don’t know what it is” (S13). Another staff member said:

...it would be better if they involved more people from Puerto Maldonado with the project and that they divulge [more information]. I really don’t understand why they don’t divulge more in Puerto Maldonado about the project. I don’t understand why. And about all the conservation projects, because it seems to me that the most interested people are the ones from the place, and it would be better, a favorable impact for the project. (S1)<sup>xii</sup>

As this passage indicates, TMP is missing out on an important opportunity to increase local conservation awareness which can have the greatest *en situ* impacts. Five volunteer *guacamayeros* also echoed these sentiments, saying they would like to see more local education work done by TMP.

Many local students have been involved in TMP research as *guacamayeros*. As one guide said: “I know many students, people I studied with in Puerto Maldonado in tourism school who have come as volunteers and had the opportunity to learn more about something which for us, local people, only years ago was so far” (G1). However, TMP could do more to provide short-term educational opportunities and lectures for the general public. TMP lead researchers are aware of this and eager to expand such efforts.

The workshop I coordinated for students from the Native Community of Infierno (NCI) was one such effort to increase local participation and education. Eight students came to Posada Amazonas for an overnight fieldtrip. We walked in the forest, observed birds and looked down at the tree canopy from atop a thirty meter tall tower, practiced the methods of scientific data collection used in TMP monitoring and acted as *guacamayeros* performing morning clay lick duty (see photo, Figure 5.5). This workshop gave them a

shortened version of the volunteer tourism opportunities experienced by Earthwatch expeditions' participants. The following week, they shared what they had learned with younger students and community members back in NCI.

**Figure 5.5: Photo of an RFE tourist and two NCI students observing birds from the blind at *Colpa Hermosa* near Posada Amazonas lodge.**



As local participation is a vital component of ecotourism, so should it be integral to volunteer tourism. The whole premise of volunteer tourism is that the volunteer tourist experience changes people. Participating in scientific research can certainly do this. Describing the difference between working as a logger and working as an assistant on scientific research project in Tambopata (not TMP), one RFE staff member explained:

Before I hunted, I have eaten macaws, hunted almost all the animals, Howler and Spider monkeys. ... There was a change in me when I was a scientific assistant. The people who work in the forest as loggers are not happy because the work is very hard. But when I went to the forest as a research assistant ... I enjoyed the forest because I saw something to discover. Before I was like a monster, 'I am going to the forest to suffer.'

(S1)<sup>xiii</sup>

His statement indicates that working as a scientific research assistant brought about a profound shift in his relationship with the forest and its creatures. Before the forest was a place of suffering, and through a volunteer research experience it became a place of

learning and pleasure. He stressed that while both forms of work are hard “the satisfaction is different, I learned.”

As further discussed at the end of the following chapter, volunteer tourism provides opportunities for direct participation in scientific research and can be a powerful experience which increases human understanding and appreciation of non-human species. This level of caring and concern is necessary to shift human perceptions, making us less anthropocentric through intensive engagement with other species.

## **CHAPTER 6**

### **Emergent Properties**

In the course of my fieldwork and through the grounded theory methods used to analyze the ethnographic material collected, themes emerged which do not fit neatly into the three components of the “mutually beneficial triumvirate” or the framework of my research questions. This chapter describes some of the emergent properties arising from the relationships between ecotourism, conservation biology, and volunteer tourism activities and interactions between actors from the social groups constituting each component. These emergent themes include: the tensions, trade-offs, and benefits surrounding use of Tambopata *colpas* for research and tourism rather than hunting, and how this relates to local food traditions; the use of traditional ecological knowledge in scientific study and conflicts arising around issues of knowledge; the relationship between economical and ethical justifications for ecotourism, and questions about if tourist demand is really driving green services in this case; and bio-centric development as a labor of love.

#### **Changing Human Use of Macaws & Colpas: From Hunting to Research and Tourism**

Every single morning hundreds of macaws, parrots, and parakeets gather at the *Colpa Colorado*, and dozens of other clay licks along the Tambopata River, to socialize and feed on the salty clay soil of the lick. It is a daily ritual of nature that has been occurring for unknown ages and has been utilized by humans in very different ways over the past several decades. The predictability of the macaws’ presence at clay licks makes it a valuable resource that can be used to aid success in hunting and killing the birds, to conduct scientific monitoring of their behavior and abundance, and as a primary ecotourism attraction. These differing, and sometimes conflicting, uses influence interactions between various actors and their activities at the lick.

The TMP was initially envisioned as a platform both to conduct scientific research and to protect macaws from local hunters by being an active, on-the-ground

presence at the clay lick. Ecotourism was soon added as a component that could provide incentives for macaw conservation by creating economic opportunities for local people and generate income to support the research (see Munn et al., 1991; Nycander et al., 1995; Nycander & Holle, 1996). Rainforest Expeditions' co-owners Eduardo Nycander and Kurt Holle describe the Tambopata Research Center as being built in 1989 "with the dual purpose of protecting the adjacent macaw clay lick ... and of lodging nature tourists and researchers. The macaw was being illegally hunted at the time" (1996: 171).

Affecting change in local use of the clay lick as a hunting resource was clearly one of the original motives of TMP leaders.

The very conditions that make macaw clay licks such ideal hunting sites also create an incredibly valuable tourism resource, as "predictability cannot be overstated in its importance for ecotourism, because a tour company lives or dies based on its ability to deliver a consistently high-quality product" (Munn, 1992: 62). The same predictable daily arrival of birds also makes clay licks important monitoring sites for scientists attempting to estimate overall population figures or determine whether particular species are increasing or in decline. Although tensions are created by the combination of scientific research and tourism at clay licks (as described in this chapter) these are mainly complementary activities. Hunting, however, is obviously incompatible with research, tourism, and macaw conservation.

### ***Hunting & Local Food Traditions***

With the introduction of research and tourism to the region, human use of clay licks and macaws as a resource has changed drastically, as have the diets of local people involved in tourism. While I did not ask any interview questions specifically about macaw or bush meat consumption, many people (both native and non-native) raised these topics during interviews. Of the thirty-four individuals interviewed from the social groups "RFE guides", "RFE staff," and "Other Locals," twenty-six are from Tambopata. Half of these locals (n = 13) specifically mentioned hunting and eating wild animals during interviews. Frequent jokes about macaw chick soup between TRC kitchen staff and *guacamayeros* also provide evidence of the locally engrained categorization of macaws as a food source in Tambopata, even among people who would never eat them. The

changing use of the region's clay licks is linked to social changes that affect different local people in different ways, and influence their views of the good things and the difficulties of tourism.

### *Non-native Locals*

Several non-native local people mentioned the traditional use of *colpas* for hunting, and how social norms about the consumption of bush meat are changing among Puerto Maldonado's younger generations. Discussing how the Macaw Project shares its results more in academic arenas than local ones, a guide from Puerto Maldonado said:

This information from CDs, from the *Real Macaw* and documentaries that they make in TRC for example, these documentaries are carried abroad, but they don't stay here in Puerto Maldonado. So the people from here, that I believe should know a little about the project, don't know anything. If you ask them about *colpas* they say, 'Oh, yes. There are *colpas* seven, eight, ten, fifteen hours from here. They are very far.' But they don't know what you are doing there. Or they understand that *colpas* were places where many years ago they hunted a lot of animals, and nothing else.  
(G5)<sup>xiv</sup>

According to him, although their use as hunting sites has diminished many local people still associate *colpas* primarily with this purpose, and TMP should be doing more to change this perception.

Reflecting on the social changes resulting from ecotourism, two RFE staff members (S1 and S3) mentioned that the consumption of bush meat has declined among Puerto Maldonado residents. One of these men described how before eating bush meat was considered a tasty treat. Now, although he still likes bush meat, his children refuse to eat it, telling him not to buy it at the market in Puerto Maldonado and asking him not to kill animals encountered during walks on their farm (S3). Asked how he felt about this cultural change, he replied: "For me it is a little strange that they won't eat it. ... [But] this seems good to me because they are already thinking about raising animals instead of killing them." He described how his children are already "ahead," one wants to be an

engineer, the other a veterinarian, “suddenly my family is into other things so that now there is not much hunting.”

For these Puerto Maldonado locals, while social changes in the practices of hunting and bush meat consumption require adjustments, they do not represent a serious loss of dearly held cultural traditions. However, most of the six Native Community of Infierno members interviewed for this research expressed more mixed feelings about the social changes wrought by tourism development.

### *Native Community of Infierno Members*

While some RFE staff and guides I spoke with only mentioned the positive aspects of the lifestyle changes brought about by participation in tourism, all NCI members identified specific sacrifices or expressed sorrow over how tourism is leading to a “loss” of their culture, especially food traditions. The diets of NCI members were traditionally based on hunting, fishing, subsistence agriculture, and collection of forest resources (Piana, 2000). Asked how the significance of macaws has changed for the Ese ‘eja over the years, an elder NCI member replied that “almost no one” hunts them anymore, wistfully adding that it has been years since he’s eaten macaw (OL3). Responding to a question about why he never took the opportunity to volunteer for the Macaw Project as an RFE guide, an NCI member jokingly replied “because they didn’t give me a macaw to eat!” (G15). This joke belies a serious sorrow about changing cultural traditions, which he explicitly expressed later in the interview.

This change in the use of macaws and other wild animals from a food source to an ecotourism wildlife resource represents a sacrifice on the part of NCI members. A participatory study of “community views of ecotourism” conducted in 2003 found that 49% of respondents from three native communities (including NCI) identified “shifting away from what they had before tourism” as a cost of engaging in tourism. A man who works as Posada Amazonas staff commented, “Now I relate better to people from other places and other levels... but I miss hunting and fishing” (Stronza & Gordillo, 2008: 458). Most of the NCI members I interviewed expressed similar sentiments.

Asked how the collaboration with RFE has affected conservation practices in NCI, a man who has been active in the project since 1996 and is now a senior RFE guide, pointedly said:

...it's not only that Rainforest Expeditions is God, because we have made it equally, and paid our sacrifices as well – the fact not to hunt, the fact to accept not to hunt, which is part of our ancestral customs, the fact not to log – which after they have given explanations now we understand make a lot of sense. (G16)<sup>xv</sup>

As discussed in the 'Economic Interests over Conservation Ethics' section of this chapter, this guide believes NCI members make these sacrifices not because they believe in conservation, but for economic gains. Making changes to their diets are worth it, because reducing their bush meat consumption and giving up the delicious flavor of macaw chick soup supports an ecotourism venture from which they all profit.

Questions about the good things and the difficulties of working in tourism also yielded responses about food. The same guide quoted above asserted:

...for us guides from the community ... we do not get along well or become accustomed to certain things like the food. I suffer from this lasagna, things like meatballs, these green beans. I don't like them. (G16)

Dishes of this kind are served for dinner at the tourist buffets in the dining rooms of RFE lodges, and as an RFE guide he has to eat tourist food with his groups, "because outside they use it as marketing." Another guide from NCI replied that the bad thing about ecotourism is "losing my culture," saying "for example ... here [at Posada] we are eating things, national and international foods, and this can make you forget your customs" (G15). For these guides, eating tourist food has become an integral part of their daily lives, a requirement they resent and which represents a real drawback to the position.

On many occasions, after tourist mealtimes I saw both native and non-native local guides eating extra helpings of rice and meat in the kitchen with staff. As a foreign *guacamayera*, I longed for the salads and casseroles, the butter and jam, the fresh juices and fruits of the tourist buffet forbidden to me as I passed through the dining room on my way to the kitchen. There were not always sufficient quantities of food, especially vegetables, for those of us required to eat the staff diet and I found it difficult to fathom

that guides passed up dessert in favor of an extra portion of plain rice. Yet this is exactly the point, individual food practices and preferences are cultural and deeply engrained.

### *Local Changes in Food Practices*

The results described in this section highlight how entering into tourism is changing local diets and food traditions in a variety of ways. People may hunt less and grow less of their own food because they are aware of the animals' greater value as a tourism resource than as bush meat or because they are busily engaged in tourism activities. This process of socio-cultural change is also affecting the tastes of younger generations who are growing up eating more store bought foods and are less accustomed to the gamey flavors of bush meats than their parents. Those directly involved in tourism through guide positions must also alter their daily diets according to the international menus served in tourism lodges.

Most of these sacrifices are necessary to support a tourism industry based on wildlife viewing. Those interviewed for this research felt the economic benefits of tourism outweighed these dietary sacrifices. However, at RFE ecotourism is paired with scientific research, producing another set of benefits and tradeoffs.

### ***Scientific Protocol & Ecotourism: Mutual Benefits & Tensions***

As described in previous chapters, the *Colpa Colorado* is the site of more than twenty years of continuous scientific monitoring of avian clay lick use by the Tambopata Macaw Project (TMP), and it is the principal tourist attraction for Rainforest Expeditions' guests lodged at the Tambopata Research Center (TRC). Thus, the *colpa* (or clay lick) is central to the daily life of all people at TRC, from the boat driver who must transport researchers and tourists to the island observation point, to the guides who help tourists interpret the experience by spotting and identifying species, to the Macaw Project's lead scientists whose research careers depend upon data collected at the lick.

The inter/actions and commentary that surrounds its use provide clues to some of the mutual benefits, tensions, and tradeoffs that arise through the interplay between research and tourism in this case. The intimate relationship between science and tourism translates into specific sets of practices at the *colpa*. These practices are mutually

supportive of both activities, but at times can also be a source of tension between researchers and guides. Ultimately, although the aims of scientists can be quite different from those working in tourism, the overlapping interests of each group functions to keep the TMP and RFE working together and sharing managed use of the colpa.

As part of its research objectives, the TMP monitors the impacts of tourism on macaws. Studies include the affects of boat traffic and tourist volume on bird behavior at the lick, and how tourist volume and comporment influences the distance at which birds fly and perch near observation towers at Posada Amazonas and RFE's other lodge, Refugio Amazonas (PS8). Over the years, TMP has found that the impacts of tourism on macaws' feeding behavior can be minimized if proper distances and viewing techniques are established (for example, using blinds and maintaining silence for close viewing of birds, wearing dark colors when observing from afar in open locations, and restricting boat traffic in the river channel in front of the *Colpa Colorado* while feeding activity is taking place on the lick). The results of such studies have been used to formulate recommendations about best practices in tourism regarding macaws, which have been disseminated to the Peruvian agency in charge of park administrations (the Institute for Natural Resources or INRENA) and Tambopata lodges. Rainforest Expeditions relies on these recommendations, and "researchers have been charged with managing the location and behavior of the tourists around the clay lick" (EWI, 2009: 36-38).

### *Regulating Colpa Activities*

One of the major decisions about RFE's use of the Colpa Colorado concerns the timing of boat departure to and from the island. As described in Chapter 2, this a decision that affects motorist, guides, tourists, and researchers because all take the same boat. The TMP *jefe de campo* (Field Team Leader) sets the schedule for departure based on when the sun rises, the goal being to arrive at observation points on the island while it is still dawn, before the first bird arrives to the area. Depending on the time of year, departure from TRC's port is set for between 4:15 and 5:15 a.m. Most people get up thirty minutes before to prepare and make the short walk from the lodge to the river. Guides must get up even earlier because they personally wake their tourists, rather than them setting an

alarm, so they can sleep uninterrupted if it is raining and the visit to the *colpa* is cancelled.

TMP monitors the lick twenty mornings per month, but the timing of early morning boat departure to the lick remains the same even if no researchers are going. TMP studies have shown that boat traffic can affect birds' behavior at the lick, interrupting feeding and/or causing flushes (a flush is when a significant portion of the birds in the area fly from the lick or surrounding vegetation). RFE policy adheres to TMP recommendations to avoid disturbing the birds by only driving boats upriver into the narrow channel in front of the Colpa Colorado either before birds have arrived in the morning, or after morning feeding activity has ceased. When they are present, it is *guacamayeros*, not guides, who decide when to radio the boat for pick-up and return to TRC for breakfast. Often birds are visible on the lick from the researchers' observation point that cannot be seen by tourists and guides because of the different angle of their perspective and thick vegetation that covers much of the river bank.

The issue of boat transportation to and from the lick reveals aspects of the relationship between tourism and research in this case. In certain instances, timing is a source of tension between RFE guides and *guacamayeros*, as in the morning described in Chapter 2 when the late arrival of tourists to the port compromised the quality of TMP arrivals data for the day. On various days of sharing *colpa* duty at the lick, a few different *guacamayeros* commented that guides would occasionally come over to the observation point and pressure them to call for the return boat while birds were still on the lick. Alternatively, one grey morning with no feeding activity it began to pour rain, and after fifteen minutes those of us doing *colpa* monitoring called for the boat. The rain then abruptly ended and birds that had been perched in the trees began to move down lower in the vegetation, signaling that they may begin feeding soon. However, by that time the boat had already arrived. I felt badly about our decision to call the boat rather than wait it out, as for some of the tourists it was their only or last opportunity to visit the *colpa* before leaving TRC. Later that day, a guide who had previously worked with TMP approached me and gently suggested that in the future we should wait longer before calling the boat to see if the rain stopped.

### *Guides Challenging Scientific Protocol*

Three experienced RFE guides expressed discontent during interviews about the departure time of boats to and from the lick, even challenging the scientific justification for this TMP/RFE policy. One guide specifically said there was an “imbalance” between the desires of guides and those of researchers, with guide and tourist interests being outweighed. He noted that “The departure schedule is based on the fact that they [the researchers] have to be there early, before the first macaw arrives in the trees above the *colpa*, not necessarily on the *colpa*” (G16). However, feeding activity on the face of the lick itself does not begin until thirty to sixty minutes later.

It is this later feeding behavior that TMP regulations are supposed to be protecting by prohibiting boat traffic during feeding times. Since this later activity is also of primary interest for tourists, these guides reasoned that researchers should take their own boat ride and tourists should be allowed to arrive at the island at alternative times. One of these guides also expressed frustration at having to wait until the last bird has flown off the lick to call the boat, arguing that guides with tourists who wanted to be picked up earlier could walk to the point of the island or the other side where a pick-up boat would not enter the channel and disturb birds on the lick (G4).

### *Nature’s Ritual, Scientific Ceremony, Touristic Spectacle*

On the other hand, the very regulations and protocols of the TMP that require TRC guests to rise so early have established a ceremony around nature’s ritual that adds to the intensity of visitors’ experience at the lick. Asked about the importance of TMP for ecotourism at Rainforest, one new guide-in-training enthusiastically responded:

People love macaws. ... They see them and they go crazy. It is a show... leaving in the night. It seems like a ceremony.... You get up so early, before sunrise, you sit there. It’s like show, like a ceremony. How do they arrive? – the first pair, then another, then the parrots, the macaws. For me it’s a show, I am in a movie there. I am in a theater, sitting, watching. It is an incredible ceremony! ... For me it is a ceremony, a ritual. ... And they people are enchanted, they’re enchanted. (G11)<sup>xvi</sup>

His description highlights how the natural cycles of psittacine behavior are dramatized by TMP research protocols. It is the fusion of scientific methodology and the natural phenomena it follows that creates the “ceremony” he describes, making for an unparalleled touristic spectacle. This guide’s statement suggests that the magic of this experience would be greatly diminished were tourists to arrive at the lick later in the morning after the birds were already there. This is a subtle way in which TMP’s scientific research at TRC contributes to RFE tourism.

*Research & Tourism: Different Benefits & Trade-offs*

The regulations TMP recommends and RFE follows are based on measures designed to minimize tourism impacts on the macaws. However, as pointed out by one of the guides quoted above, some of TMP’s scientific research initiatives disturb the birds much more than do tourism activities. This guide described the double standard in a frustrated, sarcastic tone:

Out of respect for the birds, we are going to arrive early as well; we are not going to disturb them. More disturbances are obviously created by certain steps in the research, which is fine also because in this manner they are going to know more about the animals. But equally for us as guides, tourist activity in general, [TMP] is not going to remove or put anything that benefits the tourist. (G16)<sup>xvii</sup>

The “certain steps” this statement subtly refers to are intensive attempts made in recent years to trap macaws in the area of the lick in order to place satellite collars on them. This work is yielding new data about where macaws go during migrations away from the area after the nesting season, which has important applications for conservation of macaw habitat since birds collared in 2008 flew significant distances.

From the perspective of conservation biology, the stress and disturbance trapping and collaring causes macaws and the significant investment of researchers’ time and labor are well worth the valuable information the activity yields. However, macaws are very smart, so several days of consecutive trapping from blinds set up beneath the lick seriously disturbs macaw activity, as discussed among TMP researchers attempting to trap January-February 2009. This greatly reduces tourists’ ability to see birds, because

when aware of potential danger, macaws and other birds are much less likely to descend from the trees and land on the lick.

Another guide also mentioned trapping and specifically challenged the restrictions and regulations set by TMP. Critiquing TMP for its failure to capture more tourist interest in the project he said:

...for example, we have tourists who are very interested in parrots. And us being guides, sometimes locals, we try to explain to them the restrictions that exist in the project, and in some cases tried to talk or to explain to the people who are in charge of the project as *jefe de campo*. And in many cases, they did not understand, or they did not give much help to these kinds of tourists. They were so interested in the project, not so much to receive information, if not capture a bit more [of tourists' interest] in the project. For example, if there is a possibility for a tourist to be there with a researcher in the observation point. If the researcher is there, they would not give access [to the tourist]. ...when we are with tourists very focused on seeing activity ... the project tried to capture many parrots. But when they go to capture these parrots, these macaws, in order to put a type of collar it makes a lot of impact there, and they would not share much of this type of thing with some guides. (G5)<sup>xviii</sup>

Towards the end of the interview he again expressed frustration that after twenty years TMP is still pursuing the same research objectives of monitoring clay lick use and so: “they keep prohibiting the same things. I entered five years ago and they prohibited me from doing the same things they still prohibit now.”

This guide's narrative reveals frustration with the restrictions TMP sets, but also resentment that TMP researchers do not help guides by giving special attention to birdwatching tourists. The desire for this assistance is framed in relation to the negative impacts of TMP research activities on tourism. In this context, increased researcher interaction with tourists is a form of compensation for these impacts. As he suggests, “sharing” more about research activities with guides is one way TMP could give back to RFE and disseminate its results to more local people. This theme of sharing more TMP knowledge in local arenas was also raised by many people from all social groups.

## **Scientific Study & Traditional Ecological Knowledge**

Throughout the history of natural science, foreign scientists have relied on the traditional ecological knowledge of local people to find and identify study species, often without crediting them or sharing the benefits derived from the use of that knowledge with its originators (Pfeiffer & Uril, 2003). Alternatively, outside experts and scientists have ignored local knowledge, to the frustration of some local peoples. There are countless ways in which local knowledge can aid scientific inquiry, but accessing that knowledge can be difficult.

Part of the difficulty lays in basic communication factors such as lack of contact people, language barriers, poor or nonexistent telephone/email accessibility, and difficulty reaching remote/rural communities in developing countries. Another stumbling block is the perceived (and sometimes real) arrogance of outside scientists by local people. One guide who specializes in birdwatching expressed frustration that if he tries to tell biologists that a certain species of bird eats a certain food, they say he is crazy: “I think sometimes they don’t respect local people’s forms of knowledge, and they think they are the Gods” (G16).

There are several ways in which the TMP reveals issues surrounding local knowledge and science. The traditional ecological knowledge of local and native peoples has been incorporated into the research at various stages, and there are potential future uses for such knowledge. A related theme is the conflicts that can arise when knowledge is improperly credited or scientific expertise is valued over local knowledge and experience.

### ***Scientists Employing Traditional Ecological Knowledge in Research***

In 1994 Charles Munn published one of the first popular articles about clay licks in *National Geographic*. The article promotes the macaw clay licks of southeastern Peru as tourism destinations and describes the scientific studies being conducted at Manu National Park and Tambopata Research Center. Munn, a scientist from the U.S. working with the Wildlife Conservation Society, wrote that in 1984 when he first saw a macaw clay lick in Manu National Park “Other biologists and I assumed that it was the only

macaw lick in the world.” Of course, native peoples from Madre de Dios have been aware of the existence of avian and mammal clay licks for unknown ages, using licks as hunting grounds because of the animals they attract. Apparently Munn eventually realized the value of traditional ecological knowledge in locating clay licks, and reported that by 1994 scientists had “counted 18 major licks in southeastern Peru *and heard reliable reports from the region’s native people of 15 others*” (1994: 125, emphasis added). Such reliance on traditional ecological knowledge is often not formally acknowledged by researchers in their scientific publications.

### *TMP Utilizing Local Knowledge*

In a few instances, TMP lead researchers have actively solicited and incorporated local knowledge to further research and conservation objectives. The traditional ecological knowledge of local people has played an important, if subtle, role in the success of TMP. Techniques to aid macaw reproduction form a major part of TMP’s research agenda and conservation legacy.

The hand raising and release at TRC of macaws saved from starvation (the *Chicos*) yielded scientific results that have been used to develop declining wild populations of endangered species and created a valuable ecotourism resource for RFE. According to Munn, the “idea that macaws could be raised by humans and still successfully interact with wild flocks came from the practices of the Machiguenga Indians [of Manu National Park], who would cut down trees to take nestlings as pets” (1994: 138). TMP, RFE, and macaw populations across Latin America have all benefited from how Machiguenga pet management practices inspired macaw researchers to experiment with hand raising techniques.

Traditional ecological knowledge of people from the Native Community of Infierno was also incorporated into TMP’s nest work initiatives. In a January 2009 presentation at Tambopata Research Center (TRC), Donald Brightsmith described how TMP researchers asked an NCI member working for RFE to help them locate Blue-and-gold macaw nesting sites. This man led TMP researchers to the palm swamps near TRC. It was this knowledge, probably passed down through Ese Eja generations as a site for

macaw hunting, that enabled the palm topping artificial nest work described in Part I of Chapter 5.

*The Potential Value of Local Knowledge to TMP & Difficulties of Access*

Accessing local knowledge can be difficult. However, such knowledge could be useful in answering some of the major questions recently raised by TMP lead researchers. Brightsmith has asked local guides about their knowledge of sites where the critically endangered Blue-headed Macaws have been seen or heard (G5). Another example relates to the still unknown number and location of all macaw clay licks in Peru.

Identifying and mapping clay licks is an important step in interpreting macaw feeding behavior and movements, which have serious implications for the conservation of macaw species. During a presentation for Earthwatch Expedition participants in January 2009, TMP Project Manager Alan Lee described how he is tackling this matter as part of his Ph.D. research. To answer this question about the locations of all known clay licks, Lee has contacted hundreds of scientists from all over the world who study *Psittacidae* species in South America. He developed a survey asking these experts to identify the locations of all sites at which they have observed macaws eating soil. Email and phone communication have been essential in this task, and this study will yield a more exhaustive list than ever has been compiled before. Nonetheless, over such a vast area there are probably countless clay licks unknown to foreign scientists.

On the other hand, people who live along rivers with avian clay licks can identify exactly where these are located. For example, during the interviews I conducted for my research many people mentioned the existence and location of numerous, specific macaw clay licks (several of which have commonly known local names) along stretches of the Tambopata and Madre de Dios Rivers about 100 kilometers long. However, gathering this sort of site-specific knowledge over a wider geographical area would prove inordinately difficult in areas of Peru populated by riverine communities, many of whom do not have electricity or telephone service.<sup>30</sup>

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<sup>30</sup> For example, my own efforts to organize an environmental education workshop in the Native Community of Infierno (NCI), which is much less remote and isolated than many riverine communities, could have easily been thwarted by difficulties in communication. Although the idea had already been approved by all parties, I was unable to contact anyone in NCI to arrange

### *Knowledge & Conflict: Global Science, Local Problems*

Giving due credit to local people's knowledge and valuing their contributions to science is more than just a matter of semantics – when it does not happen it can create conflict and feelings of resentment at the local level. Responsibility for ensuring proper acknowledgement of local knowledge and involvement in scientific research and appreciating its value lies with all parties in the mutually beneficial triumvirate: conservation biologists, tourists and ecotourism operators, and volunteer tourists and volunteer tourism organizations. This problem can be exacerbated by the telling and re-telling of stories through international media and interpersonal situations, as in the interactions between the RFE guides and tourists described below.

Asked about the experiences gained by working with RFE and the Macaw Project, one guide first mentioned several positive attributes of both (ninety-five seconds of dialogue). He then began to discuss “what the Macaw Project does not do well,” an explanation lasting more than seven minutes. His primary complaint, to which he returned repeatedly, was that many tourists with prior knowledge of TMP think that Donald Brightsmith is the Macaw Project:

There are many people who talk a lot about how Donald Brightsmith is the owner of the project. I talked with other guides and we shared information the tourists brought to us, including reports that the tourists read in magazines, that they watched in films, in videos made in Tambopata. And they spoke a lot about ‘Donald Brightsmith, Donald Brightsmith, Donald Brightsmith.’ ...we entered into a discussion with some tourists about the Macaw Project [to say] yes it is true. ... He has spent many years in this and has contributed a lot. But it has arrived to the extreme.

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the dates because the village does not have reliable phone service and no Internet access. Were it not for the help of a Puerto Maldonado volunteer with email and a cell phone who has a standing bi-weekly date to visit Infierno, I would have been unable to organize basic logistics for my workshop. The first day I went to NCI by taxi, the muddy road was almost impassable and we arrived two hours late for our meeting. These are just normal conditions, unremarkable to anyone who has lived or worked in developing countries, but they make it exceedingly difficult to contact communities and systematically incorporate their valuable knowledge of local species, resources etc. into scientific research.

... I have discussed this a lot with [G16], who is one of the people most representative of the Native Community of Infierno, that there were things that are not going very well or the information that some tourists have was not the truth. ...this 'parrot lover' tourist that [G16] had guided mentioned a magazine with some text about Donald Brightsmith, that he spoke of his project in Tambopata, of the project that he has grown. And that he is the person in charge of directly receiving all the funding for the project and that thanks to him the project could continue.

*[Researcher making an interpretive statement to clarify his meaning: And it's like not giving credit to Rainforest, because everything began with Eduardo and Kurt?]*

Exactly. ...and I know, because I have heard from some of the native people of Infierno, how the project began, how it is that Eduardo arrived in Puerto Maldonado before working in Manu, the same with Kurt, how they began from the very basics. And then, already years later, Brightsmith arrived to the project. (G5)<sup>xix</sup>

The plot of this narrative offers insight into some of the more subtle tensions created by the combination of scientific research and tourism, and the importance of giving due credit to the contributions of local people and Peruvians when representing TMP research in international arenas.

Tourists arriving in Tambopata with prior interest in TMP's research focus on the project's renowned Director, ornithologist Dr. Brightsmith, to the chagrin of some local guides who are annoyed because they believe he is claiming credit for the project when in fact TMP existed for years before he arrived. The guide's statement contains a subplot about the tensions sparked by tourists' focus on the reputation of an internationally recognized scientist, rather than Peruvian contributions and the birding expertise of local people. Clearly both guides (G5 and G16) are concerned about how the Macaw Project is portrayed in international media and upset by the misinformation they hear from tourists.

The Tambopata Macaw Project website maintained by Donald Brightsmith clearly states that the project was initiated by Eduardo Nycander:

Intense investigations were conducted from 1990-1993 under Eduardo's direction. After this point the research continued at a slower pace as Eduardo's focus shifted towards creating the ecotourism company Rainforest Expeditions. In 1999, I (Don Brightsmith) joined the team and took over the direction and day-to-day operations of the Macaw Project with the blessing and aid of Eduardo. (TMP website)

Variations of this story are given in most descriptions of the project I have read. Yet the perception of the guide quoted above suggests that birders interested in macaws place undue emphasis on Brightsmith himself as the TMP's current director, overshadowing TMP's Peruvian and local origins.

A scientist from the United States, Brightsmith has promoted the project vigorously in the past decade, writing up TMP research results for both popular and scientific publications and gaining new sources of research funding. Brightsmith's TMP website provides links to over a dozen articles he authored and co-authored for peer-reviewed journals and scientific conference proceedings. Such a proven publishing record is required to build a career in academia and gain research funding. At the same time, academic connections and grant proposal writing experience make funding more accessible to career scientists than to other people engaged in field research, such as TMP's founders. Scientific funding organizations are notorious for placing importance upon the identity of the lead Principal Investigator (PI) because they want to ensure their money will be well spent and produce scientific results.

### *Earthwatch Institute*

Shortly after joining TMP, Brightsmith wrote a proposal for Earthwatch Institute (EWI) funding and was granted EWI sponsorship beginning in 2001.<sup>31</sup> A significant portion of EWI funding for research is derived by selling "expedition" tour packages to people who are eager to spend time in the field assisting with scientific research. Of

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<sup>31</sup> Like much scientific funding, EWI funding is tied to the particular PI even if the research is part of a larger ongoing project. However, it is not uncommon for EWI to maintain funding for a project even if the lead PI changes. This usually happens over several years during which the original PI adds a co-PI in a renewal proposal and continues to coordinate the project, eventually removing his or her name from subsequent proposals in following funding cycles.

EWI's total annual income, 32% is from volunteer contributions and 8% from membership fees (EWI, 2007: 47). EWI expedition marketing emphasizes the PIs with whom volunteers will be working and the significance of their research to larger environmental issues.

In the case of TMP, Brightsmith has added Alan Lee as co-PI for EWI funding, so either of them may receive and lead EWI expedition groups in Peru. The expedition page for the 'Macaws of the Peruvian Amazon,' on EWI's website offers a 'Research Goals and Activities' tab, with a 'meet the scientists' section featuring profiles of Lee and Brightsmith that is twice as long as the single paragraph 'research summary' section.

Volunteers' interaction with PIs is a major component of EWI expeditions. In an analysis of the costs and benefits of working with Earthwatch, Brightsmith (DJB) reflects that: "The main cost of working with Earthwatch for DJB was the time and energy required to manage the teams. *The group members were very interested in interacting with the lead researcher(s)* and this, along with the intensive training and frequent formal and informal presentations, required a great deal of energy" (Brightsmith et al., 2008a: 2839, emphasis added). This passage struck me during my work as an intern at EWI, and in my evaluation notes for the project, submitted as part of my final internship report, I suggested:

While it makes sense for EWI to promote the qualifications of PIs and their research, EWI could probably take steps to alleviate some of the pressure described by DJB, lessening the likelihood of PI burn-out. For example, EWI could place greater emphasis in their pre-expedition materials on the qualities of the entire research team, elevating the value and uniqueness of the opportunities EWI expeditions provide for volunteers to interact with younger biologists and experienced assistants (and cross-cultural interactions, if they are non-Western) working on projects. (Gish 2008, Appendix A3: 6)

As an intern for EWI, my suggestion was driven by concern about EWI maintaining the longevity of its projects and good relationships with PIs. Through my thesis fieldwork, I have seen another aspect of this issue – how EWI's emphasis on the identity of the PI,

rather than the ongoing research project itself, might contribute to feelings of resentment and conflict amongst actors at the field site.

Directly following his monologue on the TMPs shortcomings, the guide quoted above began to discuss Earthwatch. He mentioned that:

...I only had one opportunity to guide a group from Earthwatch. It was a very, very nice experience. But they mentioned to me that in the first years Donald had been coordinating everything about Earthwatch. But in later years he was not present [for the expeditions], for three years of groups Donald was not present with Earthwatch. Many people that came to the project – to contribute to the project, to help the project – well they made cancellations because the idea they have is that Donald was like the person with most knowledge in this area, about these macaws, about the project. And many people cancelled their trip because they concentrated on [the fact that] Donald was not going to be present for the talks that they give to Earthwatch and all this, and [instead] it was going to be [PS4] or it was going to be [another jefe de campo] or even better Alan Lee, and Alan Lee knows a lot about the project also. (G5)<sup>xx</sup>

According to him, many Earthwatch tourists were too attached to the idea of interacting with Brightsmith. Unconvinced by the expertise of other people whom this guide considers extremely knowledgeable, these tourists cancelled their reservations when they discovered Brightsmith would not be present. All of the other people mentioned by the guide have lesser academic credentials than Brightsmith, but extensive field experience and are intimately familiar with TMP and the birds of the Tambopata River.

## **Economics & Ethics in Ecotourism**

### ***Tourism financing Bio-centric Development***

Finding financing for the bio-centric development initiatives of the Tambopata Macaw Project has always been challenging. During the early 1990s the TMP “raised \$45,000 in cash and in-kind donations from individuals and companies in Peru” (Nycander et al., 1995: 442). Much of this early financing came from “a Lima brewery,

Cervecería San Juan, and Rainforest Expeditions” (Munn, 1994: 137). Since the early 1990s ecotourism has provided TMP with vital funding and logistical support to make its activities possible.

In 1999, RFE hired Dr. Donald Brightsmith to direct the TMP, and by 2001 he was able to secure additional funding from Earthwatch Institute (EWI), which covered about 30% of project costs from 2001-2007 (and continues to support the project). RFE sponsorship during this time provided 65% of TMP funding and the additional 5% was “donated by bird clubs, zoos, and private individuals.” RFE’s contributions consisted of “about \$3282 worth of salary, goods, services, and discounts per month” totaling approximately \$280,000 (Brightsmith et al., 2008a: 2835).

Given the high costs and logistical difficulty of operating a research facility to conduct continual scientific monitoring in a remote area, it is unlikely that the TMP could have endured over the past two decades without RFE’s generous sponsorship. (Several people I spoke with in Peru mentioned the existence of another research station upriver from TRC that was built in the 1990s but has fallen into disuse). The additional funding and labor provided by adding EWI volunteer tourism to RFE ecotourism has bolstered the financial sustainability of the Macaw Project. Thus, in analyzing how the “mutually beneficial triumvirate” functions volunteer tourism and ecotourism provide the essential funding that makes bio-centric development possible.

### ***Consumer Demand Driving Ecotourism?***

For ecotourism to be an effective tool for conservation and development its principles must be upheld by tourism operators. Companies’ motivation to uphold the principles of ecotourism is often couched in terms of economic success. As described in Chapter 4, this sort of economic reasoning underpins theories like ecological modernization: “the core of ecological modernization is that there is ‘money in it for business,’” which includes selling “‘green goods and services’” (Dryzek in Langhelle, 2000: 306). The assumption is that consumer demand drives businesses to react with ecologically and socially responsible behavior.

Rainforest Expeditions (RFE) owners use a similar argument to explain their business model in a co-authored academic journal article. Nycander and Holle (1996) state that ecotourism, like all industries, is “dependent upon market forces.” They assert:

...by investing in scientific research, local development, and environmental education we are assuring success in the traditional aspects of the ecotourism business (profit, customer satisfaction, marketing, etc). Unlike other businesses in the industry, we believe spending in these areas is a necessary investment rather than a cost which must be undertaken in order to be perceived as environmentally responsible. ...we are in effect stating that customers will eventually *require* these investments ... rather than merely favoring operators who invest in these areas.

(170, emphasis theirs)

RFE’s owners rationalize their choices as making good business sense because such environmental and social responsibility is, or will be, demanded by tourists.

Thirteen years after the publication of Nycander and Holle’s article, I tried to assess why guests of Tambopata Research Center selected RFE over other tourism operators. More research is needed in this area, and a larger sample population is required to infer any statistically significant conclusions. However, my results do not support Nycander and Holle’s assumption that a majority of tourists are motivated to support RFE primarily because of their social and ecological responsibility.

The most prominent examples of how RFE is upholding the tenants of ecotourism are its collaborative project with the Native Community of Infierno (NCI) and support for the Tambopata Macaw Project. While some interview and survey respondents were aware of these initiatives before arriving, most were not and even fewer cited these projects as being a primary factor influencing their choice in tour operator. Of twenty-one tourists asked (n = 12 interviewed and 9 surveyed), about one-third (n = 8) were aware of the Macaw Project before arriving at TRC, and only three were previously aware of RFE’s collaboration with NCI. Most people who did know about one or both of the projects had read descriptions on RFE’s website or in guide books.

Several people mentioned during interviews that they thought RFE should do more to highlight these projects in their marketing and to ensure that guides are actually

informing their passengers about them during the trip. A tourist who cited TMP as the most important factor motivating his choice of tour operator said, “The fact that the Macaw Project is going on, I mean, I read it and it caught my eye, but it wasn’t trumpeted and it should be. You’ve got to put your best foot forward” (T9). Several tourists mentioned that they learned very little about the NCI project throughout their trip. Their guides never clearly explained the NCI project. These tourists learned about it by asking probing questions about the relationship between the lodges (T9), through the TMP presentation at TRC (T6), or it because it was briefly mentioned when they received a snack box with food products prepared by NCI (T7). At least two of these three tourists had even been guests at Posada Amazonas before coming to TRC.

#### *From Niche Market to Mass Ecotourism*

A significant portion of all the tourists who stayed at TRC from January-March 2009 arrived there via recommendation, referral, or booking through another tour agency (pers. obsv.). Nine (n = 4 interviewees, 5 surveyed) of twenty-one tourists asked had booked a package through a mass tourism company like GAP Adventures or Intrepid Traveler. During my fieldwork, it occurred to me that perhaps these agencies book tours based on ecotourism criteria, and chose RFE because it meets ecotourism standards, effectively pre-screening tour operators for concerned ecotourists. Under such circumstances, tourists might arrive uninformed about RFE’s particular projects, but their demand would still be driving the kinds of “investments” made by Nycander and Holle that put ecotourism into practice at RFE.

GAP Adventures provides RFE with many bookings through inclusion in their package tours. I asked a former RFE guide now working for GAP whether GAP has an ecological focus to its tours. He replied that it does not; GAP is a mass tourism company. However, he commented that GAP chooses companies that work with communities, “more ecotourism,” and mentioned RFE’s collaboration with NCI.<sup>32</sup> (Apparently he

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<sup>32</sup> A review of GAP’s website shows the guide’s assessment of the company is accurate. Operating on all seven continents, with a volume of 100,000 tourists annually, GAP is a competitor in the mass tourism sector. GAP emphasizes their participation in “sustainable tourism.” Of their seven “Ecotourism Operator Standards,” only one addresses environmental impacts; the other six address social issues like local ownership and participation. The more

primarily associates ecotourism with social responsibility, whereas I am biased towards its environmental standards.) As we discussed it further, he noted that when he first began guiding with RFE (about eight years ago) there were many fewer tourists and they tended to be much better informed about RFE's project with NCI and the Macaw Project than are RFE's current clientele.

Over the years RFE has grown and shifted from the smaller ecotourism market into the mass tourism sector. Whereas RFE's clientele was once composed primarily of "ecotourists" making educated choices to support RFE because it upholds the tenants of ecotourism, it seems a significant portion are now unwitting tourists who book vacations through an agency and end up at RFE by "accident" (T5 and T6). Five tourists of the twenty-two asked specifically mentioned they had little or no previous ecotourism experience. Thus, while RFE is still an ecotourism exemplar, the majority of their clientele may not qualify as ecotourists.

Indeed, it seems RFE's standards are not set by market demand, but rather because RFE owners are conservationists who are truly committed to both the social and ecological principles of ecotourism. This example undermines arguments that it is "consumer demand" driving a greening of the marketplace. My results indicate that in the case of RFE, socially and environmentally responsible tourism is more the product of ethics than economics.

### ***Economic Motivations for NCI Participation in Ecotourism & Conservation Ethics***

In the opinion of one guide from NCI, people from the community who now refrain from hunting and logging, now do so primarily because they receive direct economic benefits from Posada Amazonas collaboration, not because ecotourism has instilled them with conservationist ethics:

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general 'About GAP Adventures' section of the website describes highlights over the company's history. Of the twenty-seven entries for 2001-2008, ten address sustainable tourism issues. Of these ten entries, three relate to ethics in tourism (e.g. the owner being an invited speaker at prestigious events or awards given to the company), five relate to the company's philanthropy (e.g. work through GAP's non-profit foundation Planeterra), and only two are environmental (e.g. tree planting campaign). Among these twenty-seven "highlights," no awards from any environmental organizations are listed, nor are their ecotourism/sustainable tourism claims verified through any ecotourism or sustainable tourism certification programs.

Of course, the community sees it primarily from an economic point of view, without realizing that we are equally supporting conservation. ...I don't believe that first people think, 'I am going to do tourism because I want to conserve the forest and the animals.' No. In fact, it's because we want money. I believe that is first, and obviously, well, conservation is made in this way. And between these things people learn to respect animals more, and about the conservation of flora and fauna in general.

(G16)<sup>xxi</sup>

Whether or not they are directly employed as a guide or RFE staff member, all NCI households receive annual cash payments based on a percentage of the income from the Posada collaboration. They also reap the benefits of the numerous community development projects made possible by income from the lodge, such as the establishment of a secondary school in NCI. According to this guide, having seen how tourism directly benefits them and that the success of their lodge is based on wildlife viewing, his fellow NCI members have reduced the level of previous economic and subsistence activities that heavily impact the forest (at least in highly visible areas along the river banks in the vicinity of the lodge). Eventually, this may lead to increased conservation awareness.

#### *Ecotourism Instilling Conservation Ethics?*

Asked if working in tourism has changed his environmental perspective, another guide from NCI described how it makes you evaluate what you do and "opens your mind further than what you had thought before." He mentioned that now it sometimes pains him to see things in the community "like people throwing garbage." However, said he realizes that:

...these people don't have this perspective, this ideology. For me, what is lacking is more information or they are not directly working, knowing more deeply how it should be here. Yes, they know you don't have to do these things, but they do it from habit. (G15)

His response highlights the issue of individual change versus larger social changes, and the importance of direct participation in this process.

Thus, I asked him whether having NCI members participate in the guide course and then return to the community was having an affect on the community in general. He replied:

Well, yes, you can take back all the information you have learned. But ...if I set myself to inform them in a social meeting, of sports, a party, whatever, and I set myself to converse with them, they aren't going to listen to me. Why? Because it doesn't matter to them. Or for the majority of people it doesn't matter, and so they are just going to laugh at what I am talking about, what I say about nature, the environment, what I have learned about this. They are going to laugh because it doesn't matter to them. So everything that one learns here, sometimes one just has it for oneself, because you don't have anyone to discuss and share it with.

(G15)<sup>xxii</sup>

This narrative illustrates how people are unlikely to care about things with which they are not directly involved, especially things like abstract conservation concepts. Although all NCI members are indirectly involved and receive some economic benefits from the Posada Amazonas collaboration, this guide believes most are not interested in listening to conservation messages, even when transmitted by their fellow NCI members. It seems the direct and active participation of local people is of key importance if ecotourism is to be an agent of social change in terms of conservation ethics rather than just economic development.

The perspectives offered by the NCI members I interviewed support the findings of a study about how participation in ecotourism has changed natural resource use and livelihoods in NCI (Stronza, 2007). The results show that ecotourism affects households differentially depending on the intensity of family members' engagement in tourism. Higher levels of participation and direct employment in ecotourism as an RFE guide or Posada Amazonas staff member correlated with reductions in the number of hectares cleared for agriculture and the frequency of hunting (220-222). This change appeared to be based less on conservation ethics newly gained by working in ecotourism and more on the reality of time constraints, as people are simply too busy working wage jobs to continue with these subsistence activities.

## **The Bio-centric Approach to Development: A Labor of Love**

By making macaws rather than humans the object of development, the Tambopata Macaw Project (TMP) is not focused on economic growth or material gains. TMP does contribute to community development through its links with Rainforest Expeditions' ecotourism ventures. However, the objectives of TMP's macaw development are non-economic benefits for multiple species and non-material personal and professional growth for humans who labor not for money but for love of biodiversity. In exchange for their efforts, they gain personal experience, the satisfaction of learning, and the feeling that their work supports not just the conservation but active recovery of macaw species whose populations are rapidly declining throughout most of their range.

*Guacamayos* labor for macaws is akin to that of parents for children, after all “*los Chicos*” means “the kids.” While it can be argued that parenting is not altruistic and is ultimately self-serving, neither is a parent's labor motivated by capitalist economic rationale. Getting so intimate with another being creates emotional bonds of caring. Scientific researchers can develop these feelings for their study species:

As a scientist you do feel a certain connection with your study species ...  
and it does make you attached to it in a certain sense and also its  
environment. (PV1)

Macaws will always have a special place in my heart. (PV12)

It's like you understand them. ... You really understand the animals with  
who you work, that if I do this, it will react that way, because you  
understand the psychology of macaws. (PV9)<sup>xxiii</sup>

These emotions can be powerful motivators or stressors, making a person want to do all they can to ensure this other creatures' needs are met. This is the premise on which conservation campaigns featuring flagship species are based.

### *The Power of Participation*

Putting time and energy into a project also creates a vested interest in its outcomes and the general well-being of species in that order. Reflecting on the personal impacts of his volunteer work with TMP, one person said that after donating months of labor to data collection he would likely read more of the scientific papers written using TMP data. He wants to see the analysis and learn more about the applications and long-term impacts of the research to which he contributed (PV3).

Contributing to such work can also create feelings of loyalty in people who are not scientifically trained or biology specialists (as are most *guacamayeros*). An RFE staff member with considerable experience at a variety of tourism companies told me it bothers him that the unspoken policy of most staff at Tambopata lodges is to kill all snakes encountered even if they are not venomous and pose no threat to humans (S1). Later in the interview he described previous work as a research assistant and guide for several Tambopata biodiversity studies, one of which was inventory of snakes headed by a herpetologist. The next day he caught a thin brown snake and proudly showed it to me and another interested *guacamayero*, pointing out that it was not venomous, admiring the shine and color of its skin. It is quite possible he was already interested in and comfortable with snakes before working on that research project. However, extensive experience with a particular order of creatures does enhance one's appreciation of and interest in them.

My personal experiences as manager of the Monteverde Butterfly Garden in Costa Rica and a *guacamayera* in Tambopata also support this assertion. Such work cultivates interest and trains one's attention. After giving hundreds of environmental education talks about insects and tours of butterfly gardens, now I spot butterflies wherever I go and many of my Tambopata photos feature cool butterflies, bugs, and spiders. Similarly, birds are on my radar screen after working for the Macaw Project. Only mildly interested in birds before, I notice them more frequently now, and even try to distinguish their calls and identify particular species.

### *Ecotourism Experiences*

Given the right circumstances, such intensive contact may not be necessary to create emotional ties between humans and animals. Three RFE tourists interviewed mentioned they had never previously cared for macaws, but after their experience in Tambopata they now like them. A man who grew up in the city and “didn’t even know what a macaw was” before his trip said that the TMP presentation was “the first time I’ve felt like I’ve actually taken an interest in birds.” Reflecting on the impact of the trip he said, “I’ve never really been an animal person, I guess I’ve become a little more fond of animals” (T2). The impacts these newfound feelings of affection will have are impossible to gauge.

However, the comment of another of these three tourists offers some interesting insight into this matter. I asked her, “Is there something that you will take with you from this visit that will make you think differently or act differently, or some kind of new knowledge or lessons? Something that’s moved you?” She replied:

Actually I considered starting donating money to the macaw project or something like that. I’m not sure if I’ll do it. ...so far I’ve engaged myself into other sorts of projects. But I think this again made it very clear to me that protecting the rainforest is just one of the more important issues in this world. ...

I didn’t really like parrots before. Now I do. Birds in general are just not my favorite kinds of animals. But the macaws are just really, they’re so pretty and so social. You can just watch them hanging out together and they are just doing funny things all the time and they are just they look so intelligent. They look so, I don’t know, happy, positive. So a photo of them is going to go on my wall. ... [Before] I always thought [parrots] were kind of weird and stupid, and just kind of say whatever you tell them to say. But it’s not like that. (T13)

Although she did not actively participate in the project, or even see a macaw chick, experiencing wild macaw behavior and learning about the scientific research conducted by the TMP drastically changed this tourist’s views about parrots and macaws.

Economic realities necessitated developing RFE tourism as a means to support continued macaw research, but the ends have remained macaw development and

conservation. This is what makes RFE stand out from other eco/tourism operators and motivates RFE owners to fulfill ecotourism's tenants. As one guide explained, she works for RFE because of their:

... attitude of conservation and not so much to profit from this. ... They also think about the environment. ... I left to work elsewhere and returned. The other companies did not have the same [attitude]. They profit with this [conservation], and I did not like it, for this I returned again. (G4)<sup>xxiv</sup>

This sentiment was also expressed by TMP Project Manager Alan Lee. He contrasted RFE with supposedly "eco" lodges that buy animals so tourists have something to see, where "conservation is happening as a means to an end." Lee also emphasized that RFE owners Eduardo and Kurt were *guacamayeros* themselves. They are "biologists steeped in conservation ethic" who have used their entrepreneurship and management skills to build a business with macaws' interests at heart.

#### *Volunteer Tourism Experiences & Participatory Research*

Active participation can be a powerful agent of change bringing humans to better understand and truly identify with the struggles faced by particular peoples, and even non-human species. The results of this pilot study support the arguments of scholars calling for more participatory research methods in scientific studies (for example, see Stronza & Gordillo, 2008; Pfeiffer & Uril, 2003). While some social scientists are beginning to integrate participatory methodology into their projects, participatory research is much rarer in the natural sciences.

The Tambopata Macaw Project engages tourists, guides, students, and other volunteers in scientific research. One *guacamayero* noted that he was impressed by how open and accessible TMP is to involving tourists in the project. At TMP, "tourists can actually become involved with the research. It's not a private affair." He has worked on several research projects yet said "I haven't seen a research situation like this ... research projects are usually pretty exclusive" (PV7). Such inclusion is an important step towards more participatory natural science studies.

Research projects sponsored by EWI engage a broader audience than most science because they incorporate significant numbers of non-scientists in the data collection process. As stated in its mission, Earthwatch operates on the premise that actively participating in field research raises the consciousness of ordinary citizens and promotes “the understanding and action necessary for a sustainable environment.” The Tambopata Macaw Project has done an excellent job of engaging EWI volunteer tourists and its own long-term volunteers in conservation research. Focusing on building the capacity of Peruvian biologists is also a major ongoing objective. Efforts are made to recruit students from Puerto Maldonado universities and support the development of other macaw projects in Central and South America. Such participation can undoubtedly have a profound impact on one’s worldview.

Unfortunately, the majority of EWI expedition participants are tourists and corporate “fellows” from developed countries who visit field sites for a few weeks and leave. Hopefully the experience does inspire changed behavior, reduced consumption or increased environmental activism. However, studying and establishing evidence of such claims is extremely challenging. One of the functions of EWI’s new Measures of Success is to help the organization overcome this challenge by creating a basis for assessing the conservation outcomes and impacts of the projects it sponsors, both through participant education and field site conservation.

In addition to sponsoring opportunities for foreign volunteers and budding biologists from Peru and abroad, if TMP, EWI, and RFE truly want to affect change the “mutually beneficial triumvirate” should focus on providing more participatory research experiences for ordinary local people. For instance, the triumvirate could sponsor one Puerto Maldonado resident to join each “Macaws of the Peruvian Amazon” team, giving them the chance to have a potentially live-changing volunteer tourist experience. Doing this would increase the scope of the concentric circles emanating from TMP’s bio-centric approach to development.

## CHAPTER 7

### Conclusions

The Tambopata Macaw Project (TMP) is central to the history, identity, operation, and tourism appeal of Tambopata Research Center (TRC). As one Field Team Leader said, quoting one of TMP's lead researchers, "without us there would be no R; we put the R in TRC" (PS6). The success of TRC is what has enabled Rainforest Expeditions to grow and prosper as a company, and the labor of volunteer/tourists has made TMP's work possible. The results of this thesis research show how the three components of the triumvirate are interlinked and overlapping, but not interlocked. As described throughout this thesis ecotourism, volunteer tourism, and conservation biology are independent components that create a synergistic whole which does generate bio-centric development. This chapter contains some conclusions which can be drawn from this research.

#### **The "Mutually Beneficial Triumvirate" & Bio-centric Development**

Like other current biodiversity and ecotourism hotspots,<sup>33</sup> biologists who arrived from afar interested in scientifically studying and conserving the region's species were among Tambopata's first tourists. Beginning in the 1980s, macaw researchers on the Upper Tambopata River dedicated themselves to developing a basic understanding of macaws and aiding in their protection. As research progressed, these scientists identified the specific challenges macaw species face and aimed to address these problems using experimental techniques such as artificial nest boxes. These activities directly bolstered local macaw populations and form the basis of the bio-centric approach to development described in this thesis.

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<sup>33</sup> For example, Monteverde, Costa Rica followed a similar trajectory of tourism expansion with its industry growing exponentially from a few hundred biologists per year beginning in the 1980s into a site visited by hundreds of thousands of tourists each year. See 'The Santa Elena Experience' case study used in Wearing (2001) for a complete description of the history of tourism in Monteverde and Santa Elena.

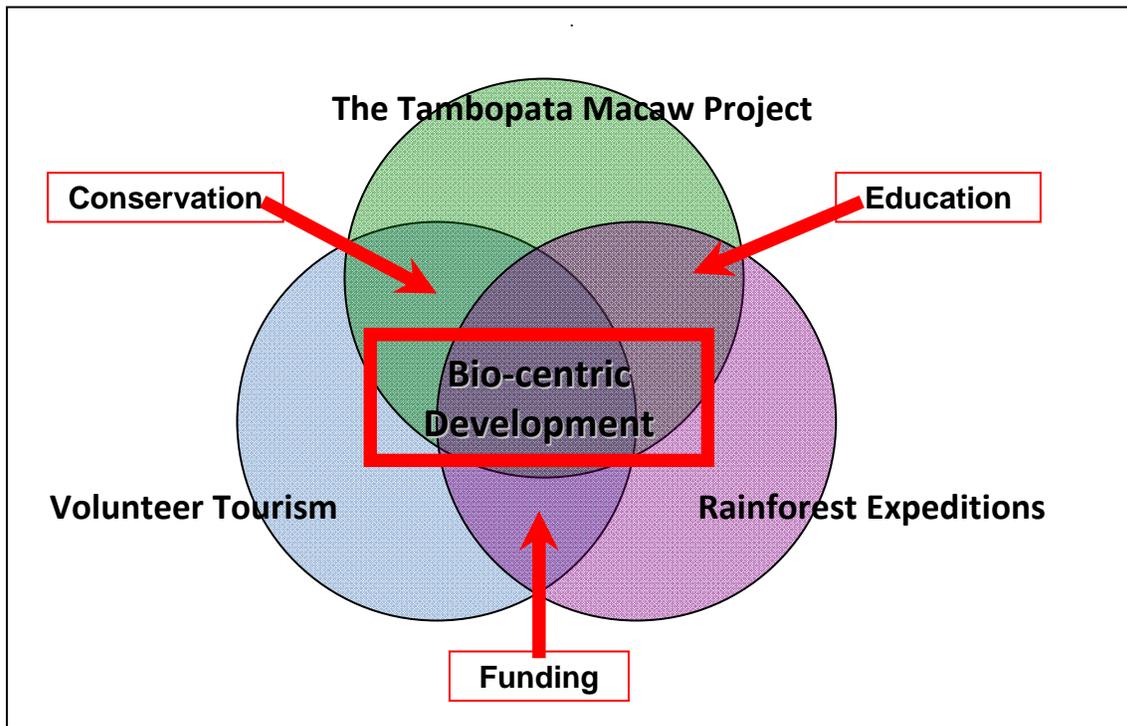
Macaws' potential as a tourism resource was clear to the researchers who established TMP and they sought to develop a tourism industry that would provide local people with opportunities linked to the conservation of these birds (see, for example, Munn et al., 1991). TMP researchers founded an ecotourism company offering tours that featured their scientific studies. Macaws and the clay licks where they gathered to feed by the hundreds were actively promoted as tourism attractions, and Tambopata's tourism industry grew. This growth was fueled by publicity about the region's incredible biodiversity, especially macaws as a highly visible flagship species. Ecotourism money generated by Rainforest Expeditions and volunteer tourism fees paid to Earthwatch Institute has funded the Macaw Project's bio-centric development work.

In this multi-faceted triumvirate relationship, interactions between the three components create opportunities for environmental education, participation, and capacity-building with local people, Peruvian nationals, and foreign volunteer/tourists. Macaw development generates human development. By meeting the needs of endangered species, humans can fulfill an ethical duty to prevent their extinction and reap benefits for themselves at the same time. The case study described in this thesis shows how this process of bio-centric development is taking place in Tambopata, Peru.

### *A Synthetic & Symbiotic Assemblage*

The ethnographic approach used in this research has shown that the "mutually beneficial triumvirate" of ecotourism, conservation biology, and volunteer tourism is not a triangle with three discrete sides. A more appropriate way to envision the triumvirate is as a Venn diagram composed of three overlapping elements (as shown in Figure 7.1). At the heart of this arrangement is the bio-centric development work described in this thesis – it is the outcome of the synthesis generated by the triumvirate, benefiting both macaws and human beings. Assemblage theory (DeLanda, 2009) provides a good framework for understanding the relationships between these components and how the triumvirate functions.

**Figure 7.1: The “Mutually Beneficial Triumvirate” & Bio-centric Development.**



As this thesis demonstrates, the relationship between RFE, TMP, and volunteer tourism is symbiotic. Despite certain tensions and trade-offs, the actors in each party ultimately benefit. DeLanda points out that in such assemblages relationships between “self-subsistent components – such as the wasp and the orchid – ... may become obligatory in the course of coevolution” (2009: 11). The Tambopata Macaw Project and Rainforest Expeditions have co-evolved and developed this sort of symbiotic relationship. DeLanda also stresses the autonomy of components in an assemblage, and their different capacities which arise through their interactions (2009: 11). In this case, the capacities arising from the interaction of components are described in the overlapping sections of the Venn diagram above: volunteer tourism and ecotourism generate a capacity for funding; the capacities of volunteer tourists and conservation biology research make conservation possible; conservation biology research and ecotourism generate education. Taken together, these components have the capacity to generate bio-centric development.

### *Autonomy & Interdependence*

The autonomy of these components has some interesting implications for the functioning of the “mutually beneficial triumvirate.” Tambopata Macaw Project would not survive without its volunteers and the sponsorship Rainforest Expeditions provides. According to one RFE guide, when he asked during a guide course presentation what would happen if TMP disappeared, Eduardo Nycander replied: ““Rainforest is not going to disappear, because the Project is not going to disappear”” (G5). The co-evolution of these entities has created a symbiotic relationship in which, while the components are still autonomous, their fates are linked.

However, the level of interdependence and benefits derived differs for each of the three components. Macaw Project activities could not take place without the funding and labor provided by Earthwatch Institute (EWI) expedition participants and long-term TMP volunteers. Yet EWI and the volunteer/tourists are not equally dependent upon TMP; there are a host of conservation biology projects seeking funding and many opportunities available for volunteer/tourism. Rainforest Expeditions is 100% dedicated to TMP, but (as discussed in Chapter 6) this seems more related to the personal history and conservation ethics of the co-owners than for reasons of financial dependence on TMP marketing. In the opinion of TMP Project Manager Alan Lee, Rainforest Expeditions’ owners spend “a huge amount of money to sponsor the Macaw Project and they don’t need to because they could make lots of money without it.”

Finally, not all social groups involved in the triumvirate benefit equally from the relationship. As described in Chapter 6, guides expressed frustration with TMP research activities at the *Colpa Colorado* which take place at a cost to their ecotourism activities. In addition, a portion of actors from all social groups interviewed mentioned that TMP should increase opportunities for local education and participation.

### ***Increasing Staff Education & Local Participation in the Triumvirate***

The three organizations that compose the “mutually beneficial triumvirate” described by Brightsmith et al. (2008b) have similar goals. Rainforest Expeditions was founded in 1992 “with the purpose of combining tourism with education and research to support the conservation of the natural destinations in which it operates” (Nycander &

Holle, 1996: 169). A current major goal of the Tambopata Macaw Project is “to provide opportunities for young scientists ... so that Peru and other parts of Latin America will have a cadre of trained scientists willing and able to tackle conservation and research problems” (TMP website). The mission of Earthwatch Institute is “to engage people worldwide in scientific field research and education in order to promote the understanding and action necessary for a sustainable environment” (EWI, 2007: 2). Participation, education, and capacity-building to aid conservation are shared interests, providing a basis for the triumvirate relationship between these three organizations.

The approach taken in this thesis research was to talk with actors from the social groups who make up two of these organizations. This ethnographic perspective reveals a gap in the participation, education, and capacity-building opportunities of the Tambopata Macaw Project at the local level with regard to RFE staff and the general public of Puerto Maldonado. Given the stated education and conservation objectives TMP and RFE share and the great importance of learning as a motivation and benefit for the RFE staff members interviewed, a concerted effort should be made to offer them more educational opportunities with the Macaw Project. This should take the form of presentations to the staff, but also opportunities for the staff to join in *guacamayero* activities during paid time. For instance, staff members eager to learn about TMP could apply to work as *guacamayeros* for a month and RFE could pay their full regular salary during this period.

When interviewing Donald Brightsmith, I asked about TMP’s primary conservation impacts. He replied, “Honestly, I’m not sure they’ve been here in Peru,” and described how TMP research has been applied in Puerto Rico and Bolivia to aid highly endangered species. It is increasingly recognized by conservation organizations that local education and participation is central to achieving desired conservation impacts *en situ*.

After concluding my fieldwork in Peru with the workshop for the students from the Native Community of Infierno, I was contacted by TMP lead researcher Alan Lee and notified that TMP has received an offer for funding to create a local environmental education program. I referred him to the Puerto Maldonado volunteer who helped with the April workshop and she has developed a proposal to create such a program. Hopefully increased local participation in and education about TMP research activities will lead to greater conservation benefits directly in Tambopata from TMP’s work.

## **Volunteer Tourism & Ecotourism**

### ***Participation***

As alternatives to mainstream tourism, volunteer tourism and ecotourism are supposed to engage tourists in a more meaningful way and benefit local people. This is embodied in the principles of ecotourism that stress environmental education and local empowerment (principles 3 and 5 as described by Honey, 1999). Volunteer tourism is supposed to be “a direct interactive experience that causes value change and changed consciousness in the individual which will subsequently influence their lifestyle, while providing forms of community development that are required by local communities” (Wearing, 2001: x). Although not stated explicitly, it is apparent from this description that *volunteers* are assumed to be the ones whose values and consciousness are actively changing while *hosts* passively receive the community benefits from such activities.

My results indicate that *both* parties are actively learning, growing, changing, and increasing their consciousness and aware they are engaging in these processes. In fact, RFE staff and guides were more likely than TMP volunteers to state this explicitly. While ecotourism principles state this as an expected outcome, the concept of volunteer tourism may need to be expanded to allow local people to reap the benefits of the volunteer tourist experience. Indeed, volunteer tourism organizations like Earthwatch Institute and the research projects they sponsor, like the Tambopata Macaw Project, should do more to provide environmental education and volunteer tourism opportunities for people from the field sites where such scientific fieldwork is conducted.

### ***Experience & Values***

Volunteer tourism and ecotourism experiences are supposed to raise participants’ consciousness and shift their values. Wearing suggests that: “In a global society that increasingly finds dogma and marketing used to instill values and exploit social relations, volunteer tourism represents both an opportunity and a means of value-adding in an industry that seems to represent consumer capitalism at its worst” (Wearing, 2001: ix). My research indicates that the most important motivations and benefits for both

volunteers and hosts participating in ecotourism and volunteer tourism are indeed non-material and non-economic.

The value-added aspects most frequently expressed by host interviewees were: learning about nature and culture, cross-cultural interaction and exchange with different kinds of people from all over the world and their own country, understanding themselves and others better through these relationships, satisfaction from working for a company that helps conserve the forest, its flora and fauna, pride in the biodiversity of their homeland and teaching visitors about it etc. These benefits are not framed in terms of capitalist economic rationale. While many TMP volunteers, and RFE staff and guides did mention the importance of their current position in terms of future employment, these kinds of responses were given much less frequent and by many fewer people than the non-economic sentiments expressed above.

Thus, the predominant sentiments expressed by the tourist, guide, staff member, researcher, or volunteer/tourist involved in the “mutually beneficial triumvirate” are eco-centric. Actors interviewed for this thesis research highlighted learning, the importance of contributing to conservation, and how their experiences remind them of connection to something greater than themselves and create connection to non-human species and natural entities. Anthropocentric motivations like economic growth and material gain were much weaker than these eco-centric considerations. This indicates that the bio-centric development being generated by the “mutually beneficial triumvirate” influences not only the macaws and researchers, but also touches other actors less directly involved in TMP activities.

### **The Human Obsession:**

#### **Anthropocentrism, Anthropomorphism, & Bio-centric Development**

“What makes macaws so appealing?” I asked TRC visitors. As described in Part II of Chapter 5, *Guacamayos* and tourists commonly listed a myriad of traits: macaws are beautiful, colorful, intelligent, social, charismatic creatures. Several people described macaws in terms of human attributes, saying macaws “stay together as a couple, like married, so cute to each other” (T5), they are “funny” and “tricky” (T5). Despite knowing they “just want food,” one tourist said “when macaws look at you they seem really

interested” (T3). These statements anthropomorphizing macaws demonstrate our species’ tendency to project human qualities onto the animals we care about. Perhaps we tend to care more about species that make anthropomorphism easy, like macaws.

People also described their appreciation for macaws in terms of the emotions these birds evoked in them. Struggling to describe his feelings, one man said, “Seeing macaws makes your heart ....” Trailing off, he put his hands to his chest, and then opened his arms wide. His wife quickly agreed, “Yes. They open the heart” (T5). A retired anthropologist who spent his life studying humankind and did not care much for macaws before his visit to TRC summed it up: Macaws are “large, noisy, colorful, kind of comical birds. They touch on a lot of human emotions that we all share” (T4). Lacking a shared language, we translate the communications and behaviors of other species into human terms.

No matter our intentions, human attention always seems to come back to our own kind in the end. Perhaps, as proposed by some environmental philosophers, this is the natural tendency of all species: ants are ant-centric, macaws are macaw-centric, and humans are anthropocentric. When asked about favorite memories from working on the project, even *guacamayeros* who have immersed themselves in biological research for months or years usually mentioned the people they have met, the friends made. Despite being a conservationist who has dedicated years to studying birds in remote jungle locations, TMP Project Manager Alan Lee did not hesitate to reply that his favorite memories were of nights out on the town with friends, adding “I guess in the end it’s the human element, isn’t it.”

However, as demonstrated in this thesis, our innate need for human companionship and interactions does not preclude meaningful social relationships with non-human species and equal care for their wellbeing as for that of human beings. This is the essence of the eco-centric approach to nature, equal respect for the needs and rights of other species and the planet as for our own species. Taking a bio-centric approach to development can help humanity make the changes necessary to correct the damages wrought by centuries of relating to nonhuman nature on an anthropocentric basis.

## **Bio-centric Development vs. Conservation**

Conservation biology research is conducted within the auspices of value-neutral scientific objectivity, and until recently biodiversity conservation has been marked by a hands-off approach. The creation of protected areas was permissible, but tampering with nature itself goes against the social norms of natural science culture. For some good reasons scientists have implored each other not to intervene in processes of “natural selection” and evolution, like those which would have condemned the *Chicos* to death. Unfortunately, arguments that we should let “nature take its course” effectively ties the hands of scientists and conservationists concerned with biodiversity loss. Placed in such a position, I have heard many frustrated conservationists comment that they want to do more than stand back and “document the extinction” of species. In assessing the biodiversity crisis and scenarios for mitigation Novacek & Cleland (2001) specifically call for active intervention “beyond simple measures of wilderness preservation” (5466). This is essentially a proposal to take a development approach to conservation.

As opposed to conservation, development has been pursued with the specific aim of tampering with natural selection, from which we are trying to free our own species. Projects undertaken in the name of “development” are all about intervening to change existing conditions, improve the quality of life, and assist the human populations they target.

Given the human-induced ecological crises we currently face, development practitioners and conservationists should take a page from each other’s books. Conservationists should take a more active, interventionist approach to addressing the problem of biodiversity loss. Developmentalists should help them by turning some of their concern for humankind, and their financing, to caring for some of the millions of other species inhabiting this planet; especially the “most needy” populations, endangered species facing the threat of extinction.

Such a union of conservation and development is the spirit of “bio-centric development,” as exemplified in this thesis by the Tambopata Macaw Project’s developmental approach to biodiversity. I have argued that TMP’s conservation biology work represents a form of development intervention on behalf of macaws, which also

benefits humans. Thus, I suggest a new approach to the theory and practice of development that enables analysis of such projects. In addition, existing methods like the actor-oriented approach to development studies can be modified to meet this challenge by expanding the terms of analysis, like “social actor,” to incorporate non-human species. New concepts and re-conceptualizations of existing social theories will be needed to analyze such interventions.

Bio-centric development is made possible by the ecotourism, conservation biology, and volunteer tourism triumvirate and the interactions occurring through the combination of these components. This assemblage has generated distinct sets of social relationships between both human and nonhuman actors, which are pursued on a basis that is more eco-centric than anthropocentric. Such a triumvirate represents a valid way to organize and generate social conservation interventions given our contemporary circumstances. However, I am not certain it represents a model that can be replicated elsewhere.

### ***A Model for Bio-centric Development?***

As described throughout this thesis and re-iterated at the beginning of this chapter, the Tambopata Macaw Project and Rainforest Expeditions co-evolved in a very specific the context. While writing this thesis and discussing the “mutually beneficial triumvirate,” various people have mentioned similar cases to me where ecotourism and volunteer tourism are being used to support research projects developing populations of other endangered species (primates in Indonesia and Kenya). This indicates that such a triumvirate relationship is not unique to the Tambopata Macaw Project and Rainforest Expeditions, but that tourism is being used elsewhere towards similar ends. A rich area for future research would be comparative examinations of these other projects using similar methods and approach as those used in this thesis.

However, in evaluating whether the “mutually beneficial triumvirate” could provide a model for bio-centric development, an important consideration is whether any of the components of the triumvirate could be alternated for other components or if additional components could be added to accommodate different circumstances. The conservation biology component is essential for the expertise it provides about the needs

of endangered species. Ecotourism and volunteer tourism are ideal because of the opportunities they provide for education and inclusion of regular people in scientific research activities and capacity-building of conservation scientists. However, as described in Chapter 6 (in the ‘Tourism Financing Bio-centric Development’ section) the funding these forms of tourism provide for conservation biology activities is vital. Were either of these tourism components lacking, other sources would be needed to finance bio-centric development.

Given the huge costs of interventions designed to meet the needs of endangered species and the number of critically endangered species facing imminent extinction, tourism alone will not be sufficient to finance the extensive bio-centric development programs necessary. In fact, even dedicating all conservation funding to such efforts may be insufficient and at the expense of other crucial aspects like financing protected areas management. Following decades of critiques, conservation organizations have made concerted efforts to include human communities in their programs, initiatives that require spending conservation dollars in the name of human interests. With this thesis, I am suggesting that development make at least a matching donation towards financing programs to meet the needs of non-human species and natural entities.

### **Paradigm Shift: From Anthropocentrism to a Bio-centric Approach to Development**

As I have outlined in this thesis, bio-centric development interventions like that of the Tambopata Macaw Project can help fix some of the serious problems faced by endangered species as a result of human actions. I believe that humans have a moral obligation to maintain the natural entities of the planet on which we live and the other species who also inhabit Earth. We are not separate from nature, but we are different from other species. In fact, it is this difference which imparts our ethical duty – human abilities have allowed us to alter the processes of nature binding other creatures. Our consciousness enables us to choose a different path now that the environmental problems created by anthropocentric development are so glaringly apparent. Doing so will necessitate a shift in thinking no less drastic than that required by Copernicus’ discovery over 500 years ago that Earth is not the center of the universe. Human beings are not the

center of the universe, but one species on a planet that is also home to tens of millions of others.

Such a radical shift in theory and praxis will not be easy, but it is possible because humankind has done it many times before. Copernicus' idea sparked the scientific revolution – what might we be able to achieve by harnessing the power of the human consciousness and our current technological abilities to a bio-centric approach to life? We should adopt an eco-centric worldview because humans are not the center of the universe, but one element connected to all others. We should take this approach to development because development is a force of change that has helped re-shape the world more in the past 100 years than in the previous 1,000. Bio-centric development addresses several of the most serious criticisms of existing approaches to both conservation and development and can help fix some of the environmental and social problems to which they have contributed.

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## Appendix I: List of the Tambopata Macaw Project's Primary Study Species

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<b>Common Name</b>	<b>Scientific Name</b>
Blue-and-Yellow Macaw	<i>Ara ararauna</i>
Scarlet Macaw	<i>Ara macao</i>
Red-and-Green Macaw	<i>Ara chloroptera</i>
Chestnut Fronted Macaw	<i>Ara severa</i>
Red Bellied Macaw	<i>Ara manilata</i>
Blue Headed Macaw	<i>Primolius couloni</i>
Mealy Parrot	<i>Amazona farinosa</i>
Yellow Crowned Parrot	<i>Amazona ochrocephala</i>
Blue Headed Parrot	<i>Pionus menstruus</i>
White Bellied Parrot	<i>Pionites leucogaster</i>
Orange Cheeked Parrot	<i>Pionopsitta barrabandi</i>
White Eyed Parakeet	<i>Aratinga leucophthalmus</i>
Dusky Headed Parakeet	<i>Aratinga weddellii</i>
Black Capped (or Rock) Parakeet	<i>Pyrrhura rupicola</i>
Cobalt Winged Parakeet	<i>Brotogeris cyanoptera</i>

## Appendix II: Interview Guides

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### *Guacamayeros*

Volunteering dates & lodge:

A: What are your motivations for participating in the Tambopata Macaw Project (TMP)?

B: Is TMP contributing to development, and, if so, how?

C: How would you describe the relationship between ecotourism and TMP? How has ecotourism affected your experience as a guacamayero?

D: What are your favorite memories from working on the project?

E: In your opinion, on a scale of 1 (not valued/not important) - 5 (highly valued/highly important), how highly valued/how important is TMP to staff, guides, and tourists?

F: Are *guacamayeros* tourists? Why or why not?

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### *RFE Guides*

How long have you worked for Rainforest Expeditions? What did you study before working as a guide?

A: Why do you want to be a guide? What are your motivations to work for RFE?

B: What makes RFE different from other ecotourism companies?

C1: What are RFE's initiatives to support conservation?

C2: What are RFE's initiatives to support development?

D1: How important is the Tambopata Macaw Project to ecotourism at RFE?

D2: Do you show chicks to your passengers at Tambopata Research Center?

D3: Do you show the artificial nests to your passengers at TRC?

D4: Did you participate in RFE's guide training? Why or why not?

E: What do you think of TMP?

F: What are the good things and the difficult things about working in ecotourism?

G: Are *guacamayeros* tourists? Why or why not?

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### ***RFE Staff***

How long have you worked for RFE?

A: What are your motivations to work for RFE?

B: What makes RFE different from other ecotourism companies?

C1: What are RFE's initiatives to support conservation?

C2: What are RFE's initiatives to support development?

D1: How important is the Tambopata Macaw Project to ecotourism at RFE?

D2: How does TMP affect your work/life at the lodge?

E: What do you think of TMP?

F: What are the good things and the difficult things about working in ecotourism?

G: Are guacamayeros tourists? Why or why not?

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### ***RFE Tourists***

A: Why did you choose RFE? Why Tambopata Research Center?

B1: Before arriving, did you know about the Tambopata Macaw Project?

B2: Before arriving, did you know about RFE's collaboration with NCI?

B3: If so, how important were these to your choice of tour operator?

C1: Did you see macaw chicks?

C2: Did you see *Chicos*?

D1: How important was it for you to see macaws on your visit (scale of 1-5)?

D2: How important was the TMP to your tourist experience (1-5)?

E: What are the most memorable experiences from this trip?

F: What will you take with you from this visit? How has this experience impacted you?

G: What makes RFE different from other eco/tourism operators?

### Appendix III: Tourist Survey

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Participation in this survey is completely voluntary. Responses will be used to inform the MSc thesis in International Development Studies of Elisabeth Gish, a graduate student at Wageningen University. Her thesis fieldwork is focused on the Tambopata Macaw Project (TMP) and aims to investigate how TMP and its connection with ecotourism through Rainforest Expeditions contribute to conservation and development. Thank you for your assistance!

**Number of nights at each lodge:**

**Posada Amazonas (Posada):**

**Refugio Amazonas (Refugio):**

**Tambopata Research Center (TRC):**

**A: Why did you choose Rainforest Expeditions (RFE) as your tour operator? Why did you choose to visit Posada, Refugio, or TRC?**

**B: Before arriving, did you**

**B1: Know about the Tambopata Macaw Project? ..... Y / N**

**B2: Know about RFE's work with the Native Community of Infierno? ... Y / N**

**B3: If yes, how important was this to your choice of tour operator? .....Y / N**

**C: How did the scientific research being conducted by the Tambopata Macaw Project contribute to or affect your tourism experience?**

**C2: Did you see macaw chicks? ..... Y / N**

**C3: Did you see the Chicos? ..... Y / N**

**C4: Did you see macaws at their nests? ..... Y / N**

**C5: Do you consider yourself a birder? ..... Y / N**

**D: On a scale of 1 (not valued/not important) - 5 (highly valued/highly important)**

**D1: How important was it for you to see macaws on your visit? 1 2 3 4 5**

**D2: How much value did the Tambopata Macaw Project add to your experience? 1 2 3 4 5**

**E: What are the most memorable experiences from your trip?**

**F: Are there new lessons or knowledge that you acquired on your trip? If so, what are they and will they impact your behavior in the future?**

**G: What distinguishes Rainforest Expeditions from other ecotourism operators?**

**H: What makes macaws so appealing to people?**

## ENDNOTES

### Original Quotations in Spanish

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#### Chapter 1

<sup>i</sup> “... los humanos, no somos tantos peligrosos, creo yo, para los guacamayos, porque son muy pocas las personas... que matan guacamayos. Por ejemplo, un cartucho para shotgun, cuesta creo que es 1 sole y un guacamayo es muy pequeño para una familia. Entonces prefieren matar un peccary a un guacamayo.” (S1)

#### Chapter 5

<sup>ii</sup> “Porque, básicamente por lo que era como una manera mas de entrar un poco mas con Rainforest. Era de, de alguna manera de eso entonces, era bien complicado a entrar a guiar a Rainforest. Pero en alguna manera tenia que hacerme conocido, de uno manera tenia que ganarme a la gente, y una buen manera *para mi* era ayudando y al mismo tiempo yo conocía mucho mas para cuando yo iba a [dar lo paso?] de hacer guía de Rainforest. Podría hablar mucho del Proyecto con muchos detalles y eso que me dieron esa facilidad de- o darme las puertas abiertas.” (G5)

<sup>iii</sup> “... sabemos cuando los lobos se hacen su (*mimicing the movement of their head and noise they make*) es una forma de decir, ‘oye ustedes están en mi lugar, váyanse.’ Entonces nos vamos entonces. Pero en otros lugares, la gente no se vayan empieza a seguir, solo para que los pasajeros pueden sacarse una buena foto.” (G11)

<sup>iv</sup> “La mayoría de turistas, de pasajeros, han visto algún loro, a un perico en una jaula. Porque los llevan, y que es ilegal y todo eso. Y que mejor que ellos pueden ver a los loros en su habita natural, no? Y explicarles, porque no solo es, ‘ah, están allí, esta en la colpa.’ No. Nosotros nos tenemos la información del Proyecto Guacamayo. Y por eso los podemos decir tales horas que pueden ir, porque van a la colpa, acerca de que cuantos huevos tiene y cuantos de ellos sobreviven de bebés. Es muy importante que los turistas les gusten saber de eso. Porque como te dijo, la mayoría lo han vista en jaula, en sus países. Es mas dicen, ‘oh, yah, tengo igual en mi casa!’ Entonces yo también tenia una así en mi casa porque no sabia acerca de este Proyecto, y que tan importante es. Entonces una toma consciencia, y se da en cuenta que encerrándose los pobre animalitos sufren mucho. Entonces, es importante también porque ellos se abren los ojos.” (G9)

<sup>v</sup> “Lo problemática del Proyecto Guacamayo, que siempre van a estar los young chicks que fueran hand-raised antes. Que estas volando y tratando de robar la comida de los turistas, que es algo bien interesante por los pasajeros que llegan, por los visitantes. Porque tienen una experiencia cercana con un ave que es casi silvestre, casi porque no es 100% silvestre porque es en contacto con personas, no le teme las personas. Entonces la problemática es que ... se acostumbraron y por eso ellos van a caer en cada desayuno a coger un panqueque o un pan o algo, a robar la mantequilla también. Entonces eso no esta bien, eso es lo problemática. Que supuestamente la investigación debería ser para ayudarlo a ellos a estar en una situación normal, no?” (G8)

<sup>vi</sup> “Que cuando en la hora de desayuno, y ellos saben exactamente cuando es, bajan el pichón, sus hijo, tambien va a seguir al padre ... Si he visto casos en que la cría que es silvestre, 100% silvestre, baja acompañando los padres y empieza a aprender cosas que no son dentro de su

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comportamiento natural. Estar en contacto con las personas, que en eso nunca se vea en un estado silvestre, 100% silvestre natural. Entonces esto es el problemático.” (G8)

vii “No son turistas definitivamente. No. ... Son personas que hacen investigaciones, que aportan para la conservación, quedándose y poniéndose bastante tiempo de su vida en lo que ellos creen. En esta caso, *guacamayeros* están poniéndose su vida trepando los árboles, no? O poniéndose su dedo que puede ser cortado por una mordida de guacamayo. ... Son investigadores. Y investigadores nunca son turistas, al menos que solamente viajen y buscan lugares para relajarse.” (G8)

viii “...casi vivimos de la misma manera, compartimos la misma área. ... Nos hacemos más amigos con los *guacamayeros* y los *guacamayeros* se quedan más tiempo. En el trato personal el guacamayero no es un turista, es más que un turista. Es mas amigo que un turista que tu sabes que va a ir horita en tres días. ... un *guacamayero* es un amigo mas, es un guía mas, que hay que se siente en la mesa con tus turistas, que están aca mirando tele, tomando chelas juntos cuando bajan a Puerto Maldonado juntos, que te cuentan del Proyecto, y que tu les cuenta de chamba, que duerma a veces en el mismo área. ... Pasan más o menos por las mismas dificultades que un guía. Si llueve acá [*muestra a los huecos en el techo de la casa de guías*] bueno los *guacamayeros* también van a estar afectados... Pienso que para mi, un *guacamayero* es un amigo, mas que un turista, pero probable que se vaya en dos o tres meses después. La relación es diferente....” (G12)

ix “En realidad, no porque los guacamayeros llegan hacer parte del lodge. Entonces no son unos turistas [*una pequeña risa*]. De hecho en los primeros días si porque todo por ellos van a ser nuevo, pero después van a estar tanto tiempo en el monte que también van a ser una ayuda para ti porque te van a decir, ‘oye, ha visto tan animal en tan trocha.’ Entonces esta es mas como una ayuda porque tienen información que vas a necesitar o tienes información que ellos van a necesitar. Entonces es una ayuda mutua en realidad.” (G13)

x “terminan mas involucrado de lo que creen con el proyecto, con los guacamayos y todo. No, no creo que son tipo de turista” (PV9).

xi “... Para empezar son voluntarios, que vienen a trabajar mientras aprenden. Entonces el hecho de que los que consideremos turistas podría ser en cierta manera también, porque de alguna maneras son personas que no tienen eso en su lugar, verdad. No tienen esto contacto inicial. Entonces cualquier persona que viene a visitar un lugar podría ser considerada una turista. Sin embargo, el hecho mismo de que están haciendo investigaciones los convierten en investigadores. Entonces yo creían que son mas investigadores. Ahora, que hay ciertos días en los cuales tienen días libres y pueden ir hacer turismo, se ir a pasar libremente eso también podría poner con un pocito de turistas. ... Mas investigadores obviamente, pero también tenemos nuestras pocitos turistas, del ‘Que es eso? Porque esta aquí?’ Y si alguien dices ‘cállese, estoy trabajando,’ tu sigues preguntando. (PS7)

xii “...seria mejor que mas personas del Puerto Maldonado se involucran con el proyecto y que se divulgue, yo no entiendo porque no se divulguen en Puerto Maldonado sobre el proyecto en realidad. No entiendo. No entiendo porque. Y sobre todos los proyectos de conservación. Porque me parece que los mas interesados son los este, son las personas del lugar y seria un, un mejor, un impacto favorable por el proyecto.” (S1)

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<sup>xiii</sup> “Antes yo casaba. He comido guacamayos. Casi todos los animales, howlers, Spider monkeys. ... Hubo un cambio en mí cuando estaba asistente científico. Porque los gente que trabajan en el bosque como *loggers*, no son felices porque el trabajo es muy duro. Pero cuando fui al bosque como asistente de investigación... disfruté el bosque porque miraba algo por descubrir. Antes fui como un monstruo, ‘Voy al bosque a sufrir.’” (S1)

## Chapter 6

<sup>xiv</sup> “Porque esa información de CDs, del *Real Macaw* y documentales que hacen en TRC por ejemplo, son documentales que son llevados al extranjero pero acá en Puerto Maldonado no se queda. Entonces la gente de acá, que yo creo que debería saber un pocito sobre el Proyecto no sabe nada. Tu preguntas culpa, ‘ah sí, culpa queda a siete, ocho, diez horas de acá, quince horas. Queda muy lejos.’ Pero no saben que estás haciendo allá. O entienden por culpa que era un lugar que hace mucho años se cazaban muchos animales, y nada más.” (G5)

<sup>xv</sup> “...no es lo que solamente Rainforest Expeditions es el Dios, porque nos han hecho igual, y nos cuesta nuestros sacrificios también – el hecho de no cazar, el hecho de aceptar a no cazar que es parte de nuestros costumbres ancestrales, el hecho de no talar. El cual que ahora que lo entendemos que, después de les dando explicaciones, tiene mucho sentido.” (G16)

<sup>xvi</sup> Gente aman los guacamayos.... Los vean y se vuelvan locos. Es un show ... salir en la noche. Parece una ceremonia .... Levantarte temprano, antes de amanezca, sentarte. Es como un show, es como una ceremonia. Como llega? La primera pareja, luego otra, luego los loros, los guacamayos. Para mí este un show. Yo estoy en una película allí. Yo estoy en un cine sentado, mirando. Puta! Es una ceremonia increíble! ... Para mí es una ceremonia, es un ritual. ... Y la gente lo encantan, lo encantan. (G11)

<sup>xvii</sup> “Por respeto a los aves vamos a ir igual temprano, no vamos a ir perturbar. No va a llegar a perturbar. Más perturbación obviamente hace ciertas pasos de la investigación, lo cual está bien también porque de esta forma va a saber más de las animales. Pero igual nosotros- o nosotros como guía, en general la actividad de turista, no le va a quitar ni poner nada, al contrario le va a poner con beneficio al turista.” (G16)

<sup>xviii</sup> “... por ejemplo, nosotros teníamos unas turistas que están muy interesados en loros, y nosotros yendo guías, a veces locales, les explicamos las restricciones que existen en el Proyecto. Y en algunos oportunidades trataban de conversar, de explicar, a la persona que esta en carga del Proyecto como jefe de campo. Y en muchos oportunidades no, no entendían, o no da mucha ayuda a eso tipo de turista. Estaba tan interesado en el Proyecto, no tanto recibir información si no en captar un poco mas sobre el Proyecto. Por ejemplo, si hay la posibilidad que un turista está con un investigador en el punto de observación. Que esta la investigador, no le daban acceso. ... cuando estamos con turistas muy enfocados en ver la actividad ... el Proyecto trataba de captaba mucho loros. Pero cuando se van a captar a estos loros, a estos guacamayos, para poner un tipo de collar, sí se hace mucho impacto allí y no compartíamos mucho eso tipo de cosas con algunos guías.” (G5)

<sup>xix</sup> “Hay mucha gente que habla mucho de que el dueño del proyecto es el Doctor Brightsmith. Yo conversando con ... algunos guías, y compartíamos información que los turistas traían a nosotros, incluso reportes que los turistas leían en magazines, que miraban en filmaciones, en videos hechos en Tambopata. Y se hablaba mucho como de ‘Donald Brightsmith, Donald Brightsmith, Donald Brightsmith.’”

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...con algunos turistas entramos en discusión de que el Proyecto Guacamayo, es de, sí es cierto ... Lleva muchos años en esto y ha aportado muchísimo. Pero ha llegado al extremo. ...he discutido mucho con [G16], quien es una de las personas mas representativa entre los guías de la Comunidad Nativo de Infierno, que era cosas que no están yendo muy bien o las informaciones que algunos turistas tenían no era la verdadera ... . [E]ste turista “parrot lover” que [G16] había guiado mencionaba que el tenía un periódico o “un magazine” con algún texto acerca de, de Donald Brightsmith, que él hablaba de su proyecto en Tambopata, de el proyecto que él ha había criado. Y que él es la persona que esta en cargaba de recibir directamente todos los fondos para el Proyecto y que gracias a él, el proyecto podría continuar. Y así, esto tipo de cosas.”

*[Researcher makes an interpretive statment to clarify his meaning: Y no es como dando crédito al Rainforest, porque todo empezó con Eduardo y Kurt ...]*

“Exacto. ... Yo sé, y por lo que he escuchado de algunos personas nativas de Infierno, como empezó el Proyecto, como es que Eduardo llegó a Puerto Maldonado antes de trabajando en Manu, igual que Kurt, como empezaron desde muy básico. Y luego, ya años más tarde, llegó Brightsmith con el Proyecto.” [G5]

<sup>xx</sup> “...una sola oportunidad [guiar] este grupo de Earthwatch. Muy, muy bonita experiencia. Pero que me mencionaban que en los primeros años como que Donald había sido como coordinaba todo lo de Earthwatch. Pero años posteriores ya él no, no estaba presente, los tres años del equipos, no estaba Donald con Earthwatch. Mucho gente que venia al Proyecto para aportar el Proyecto – para ayudar al Proyecto [¿17:23 pues?] se hizo cancelaciones porque la idea que se tiene es que Donald era como lo, una persona que más conocimiento tenía en esta área, sobre estos guacamayos, sobre esto proyecto. Y mucha gente canceló su viaje porque centraron de que Donald no iba a ser presente en las charlas que se dan a Earthwatch y esto, que iba a estar [PS4] o que iba estar [otro jefe de campo] o algo mejor Alan Lee, y Alan Lee sabe muchísimo del Proyecto también.” (G5)

<sup>xxi</sup> “De repente, la comunidad lo vea primeramente desde el punto económico y sin darse en cuenta estamos igual apoyando conservación. ...no creo que primero piense que, ‘Voy hacer esto turismo porque quiero conservar el bosque y los animales.’ No de hecho porque queremos plata. Yo pienso que es lo primero, y obviamente, pues, porque no de esa manera hacer conservación. Y entre esas cosas aprender a respetar más los animales, la conservación de flora y fauna en general.” (G16)

<sup>xxii</sup> “Bueno, sí pueden llevar una información de todo lo que han aprendido. Pero ... si yo me pongo a informarles a ellos en una reunión social, de deporte, de fiesta, lo que sea, me pongo conversar, no me van a escuchar. ¿Por qué? Porque ellos no les importa. O sea la mayoría de la gente que vive no lo importa y entonces se ríen de lo que voy a hablar, lo que digo esta de la naturaleza, que del medio ambiente, que he aprendido esto. Se van a reír porque no les importa. ... Entonces todo lo que uno aprende acá, a veces uno lo tiene para uno porque no tienes con quien conversar, con quien compartir.” (G15)

<sup>xxiii</sup> “Es como los entiende. ... Realmente entender los animales con quien trabajan. Que si hizo esto va a hacer esto, porque entiendes el psicología de guacamayos.” (PV9)

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<sup>xxiv</sup> “... la actitud de conservar y no tanto lucrar con esto. ... También pensar en el medio ambiente. ... Salí para trabajar y volví. Las otras compañías no tenían el mismo. Lucran con esto, y no me gusto, por eso regreso de nuevo.” (G4)