Report to Margot Marsh Biodiversity Foundation
(October 2008)

Community Conservation Efforts in the Burica Peninsula, Costa Rica for Primates with Focus on the Panamanian red spider monkey (*Ateles geoffroyi panamensis*).

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Acronyms

ACOSA	Osa Conservation Area	Área de Conservación de Osa
ASOCOVIRENA	Association of Natural Resource Vigilance Committees	Asociación de Comités de Vigilancia de los Recursos Naturales
ADI	Association for Integrated Development	Asociación de Desarrollo Integral
CONAI	National Commission of Indigenous Matters	Comisión Nacional de Asuntos Indígenas
COVIRENA	Natural Resource Vigilance Committees	Comités de Vigilancia de los Recursos Naturales
CSA	Certificate of Environmental Service Payments	Certificados de Pago por Servicios Ambientales
FONAFIFO	National Forestry Financial Fund	Fondo Nacional de Financiamiento Forestal
ICE	Costa Rican Electricity Institute	Instituto Costarricense de Electricidad
IMAS	Mixed Institute of Social Aid	Instituto Mixto de Ayuda Social
ITCO	Institute of Lands and Colonization	Instituto de Tierras y Colonización
MINAE	Ministry of Environment and Energy	Ministerio de Ambiente y Energía
OIT	International Organization of Work	Organización Internacional de Trabajo
PRETOMA	Sea Turtle Restoration Program	Programa Restauración de Tortugas Marinas
PSA	Environmental Service Payments	Pago por Servicios Ambientales
SINAC	National System of Conservation Areas	Sistema Nacional de Áreas de Conservación
TNC	The Nature Conservancy	
UNA	National University	Universidad Nacional

Project Goal. This proposal seeks to catalyze the Ngäbe people living in the Punta Burica area to manage the land in a way conducive to the survival of the monkeys.

After a year and a half of being in the field in the northern region of the Burica Peninsula of Costa Rica (the last year of which has been financially supported by the Margot Marsh Biodiversity Foundation), the mission of *Amigos de los Monos* has been formulated. Its mission is "to ensure the longevity and health of the monkey populations of the Burica Peninsula. By using the endangered spider monkeys (*Ateles geoffroyi panamensis*) as flagship species and community conservation strategies, the project seeks to unite the multicultural community of the Burica Peninsula to achieve this goal in a socially sustainable manner." Much experience and knowledge has been gained by project catalyst, Katie Mann, associate of Community Conservation, which has altered

and broadened the goals of this conservation effort. This information shall be devolved in this final report.

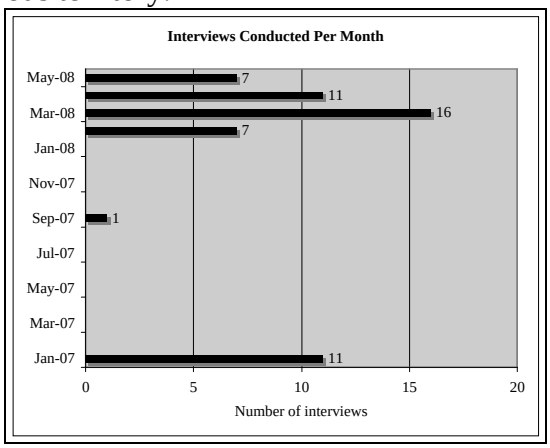
Proposal Objectives

1. **Learn about the Ngäbe community and their land tenure to help them in the land management.**
2. **Develop a strategy for the project.**
3. **Help the Ngäbe people to organize and create a project management committee.**
4. **Gather information on the primates and habitat of the area for eventual management.**
5. **Develop education program for students.**

1. Research on Ngäbe Culture and Land Tenure

The interview process has proven to be an excellent way to familiarize Mann with the community members in addition to understanding the realities of living in the Conte Burica indigenous territory. To summate the interview data, graphs and tables of the basic statistics of the most pertinent questions to the query are included below, in addition to text for further explanation and related research.

Interviews were written by Mann and reviewed by Philip Young and John Bort, the leading Ngäbe anthropologists, and were subsequently modified according to their professional suggestions (see APPENDIX 1). Due to the fact that most Ngäbe men are fluent in the Spanish language, the interviews were not translated into Ngäbere. The interviews were collected in a variety of ways. The first interview excursion in January 2007 took the form of house-to-house interviews where Mann was accompanied by volunteer translator Holly Hummel-Border, who previously had two years experience working as a Peace Core Volunteer with the Ngäbe in Panama, in addition to a Ngäbe guide. The Ngäbe guide assisted in clarifying any language barriers that existed. Mann independently carried out interviews, once she gained the ability to reliably communicate in Spanish, at a soccer championship that took place during 6 consecutive weekends the following year. Finally, interviews were carried out opportunistically in the villages surrounding the indigenous territory.

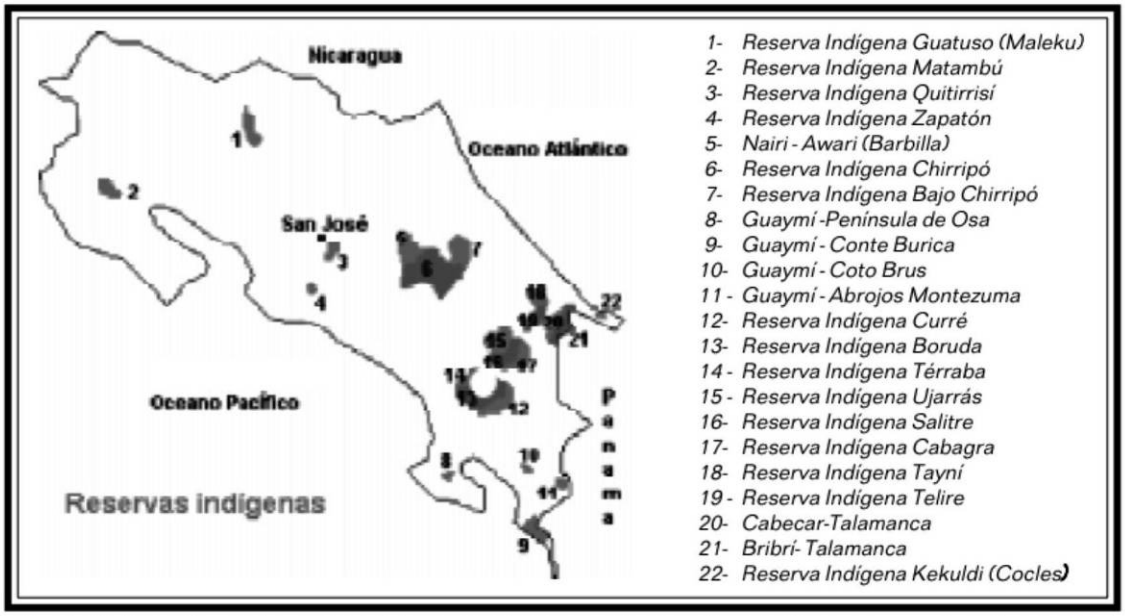


A total of 54 interviews were collected. Although it was expected to obtain 75 interviews, this amount of interviews has been found unnecessary since the majority of the individuals in the target area of Río Coco and Río Caña Blanca were interviewed, and then some. Interview length ranged from 12 to 90 minutes, with the average being 31 minutes.

Introduction

The Ngäbe (Guaymí) people are the second largest group of indigenous people in Central America, after the Maya. In historical documents they have been known as *Guaymí*, *Dorasque*, *Valiente*, among others. In the colonial times, the Ngäbe occupied large extensions of territory in the Panamanian provinces of Bocas del Toro and Chiriquí, in addition to parts of Costa Rica (Guevara Berger and Carlos Vargas 2000). The majority of the modern Ngäbe people reside in the Republic of Panama in the western provinces of Veraguas, Chiriquí and Bocas del Toro (Young 1971). They are subsistence slash-and-burn (swidden) farmers that live in a kin-based society in widely dispersed small hamlets. Due to an increasing population, degradation of traditional lands and external economic pressures, the Ngäbe began emigrating, or returning, to Costa Rica between 1920 and 1940 (Guevara Berger and Carlos Vargas 2000) in search of free lands (*tierras libres*) to live and work. The Ngäbe lived relatively isolated between 1940 and 1960, until the Interamerican Highway was built.

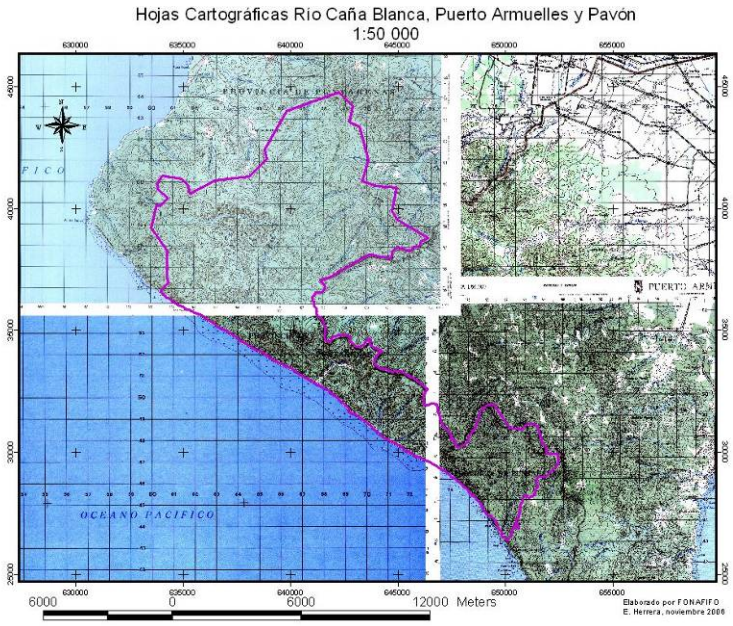
The Ngäbe are 1 of 8 indigenous groups in Costa Rica. The indigenous people of Costa Rica constitute 1.7% of the national population (Solano Salazar 2001) with 6.5% of the national territory dedicated to 24 indigenous territories (Barahona Carmona 2004).



Fuente: *Elaboración propia a partir de información de Corporación Herediana de Mercadeo, www.heredianet.co.cr*

Five of the indigenous territories are dedicated to the Ngäbe, consisting of the

Osa, Abrojos-Montezuma, Altos San Antonio, Coto Brus and Conte Burica (Reserva Indigena), all of which are located in the southern zone of Costa Rica, in the Osa Conservation Area (ACOSA). Mann is active in Conte Burica, the largest Ngäbe territory, consisting of 11,910 hectares in the Burica Peninsula in the Putarenas province in the counties of Corredores (Laurel District) and Golfito (Pavon District). It shares its southwestern border with Panama. It was declared an indigenous territory by way of the Executive Decree 8514-6 in June of 1978 (Reserva Indigena).



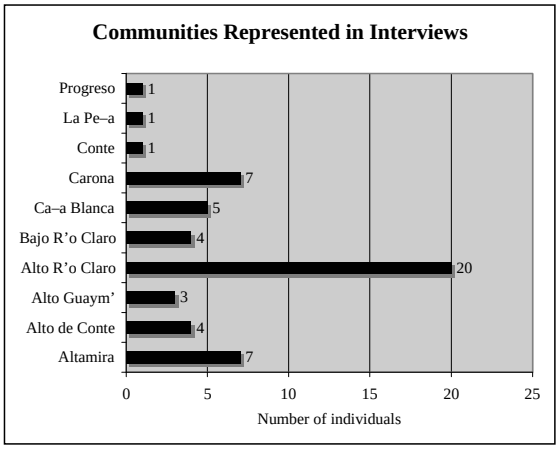
Analysis of satellite photos by Muñoz (2005) shows that almost 82% of Conte Burica is covered with primary forest, with 13% of the territory deforested.

Type of Cover	Total Area (has)	Percent
Water	97.63	0.81
Secondary Forest	305.36	2.54
Primary Forest	9,779.20	81.49
National Limit	163.92	1.37
Not forested	1,552.58	12.94
Clouds	101.7	0.85
Total	**12,000.45**	**100**

Source: Muñoz (2005)

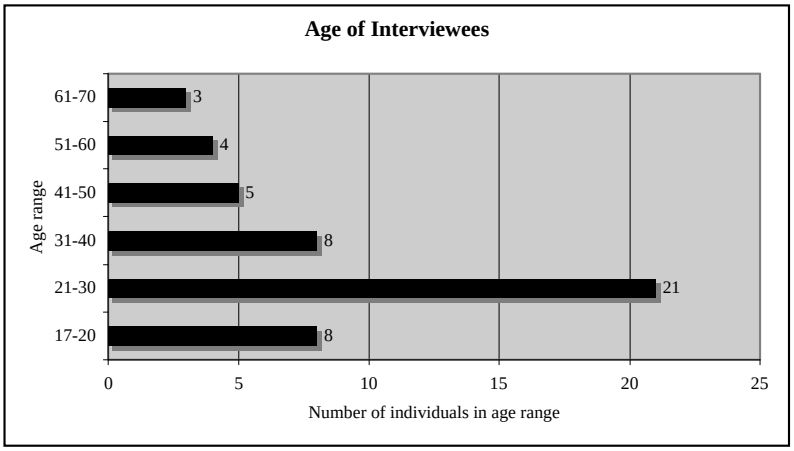
Muñoz (2005) reports that there are some 3,000 Ngäbe living in Conte Burica, a considerable rise since the 2000 census documenting 1,111 Ngäbe (Solano Salazar 2000). Conte Burica is comprised of 12 communities: Río Claro Altamira (kogökiabtö), Alto de Río Claro (kogoritbtä), Río Caña Blanca (ibiaritbtä), Buriquí (muriaritbtä), Las Vegas Río La Vaca (niviribtä), Los Planicitos (kwraritbtä), Alto de Conte (mölötubtä), Progreso, Carona (iriguibtä), La Palma (mölötubtä), Alto Guaymí (ngöbegue) and Santa Rosa.

Each community is distinguished by a primary school, with the exception of Río Claro Altamira, which has two schools. Nine of the twelve communities were represented in the interview process, with the heaviest emphasis in Alto Río Claro, which corresponds to the Río Coco area where the spider monkeys have their stronghold.



Basic Demographics

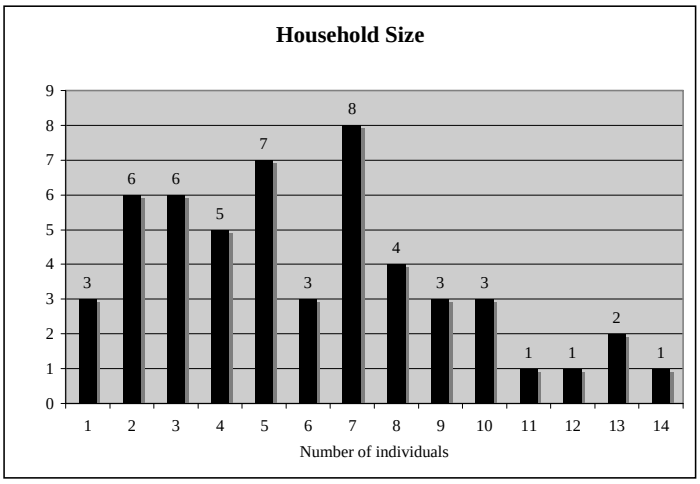
Of the 54 interviews obtained, 52 were with Ngäbe men and 2 with Ngäbe women, one of which has not been included in analysis, due to the acquisition of her husband's interview. The majority of interviewees were 40 years or younger, with the most prevalent age range being 21-30.



The bias in the younger age is due to the acquisition of the majority of the interviews at the soccer tournament and in villages, since it is the community's youth that partake the most in soccer tournaments and leave the home to take care of business outside of the indigenous territory. Seventy six percent of the interviewees were "married," meaning that they were partnered with someone, as it is not common practice to marry under the law. A common theme was that men were almost always married to younger women, in some cases with an age range as distinct as 30 years.

	Interviewee	Spouse
Mean	33.7	29.1
Median	29	24.5
Mode	29	21
Minimum	17	17
Maximum	70	65
# of responses	48	32

Household size varied, with the most prevalent household size of 7 individuals.



Household size does not reflect the size of the nuclear family, as households are largely comprised of nuclear families in addition to extended family and in-laws. It is common practice for a young family to reside with their parents/in-laws and it is not uncommon to meet aunts or uncles with the same age as their nieces or nephews.

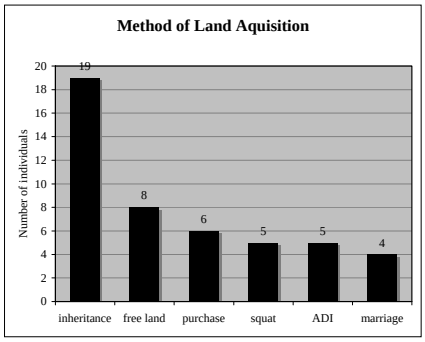
The majority of interviewees (74%) were born in Costa Rica, again reflecting the bias towards interviewing the younger Ngäbe population of Conte Burica. The average year that the interviewed Ngäbe emigrated from Panama was 1972, six years before the

	Costa Rica	Panama	Emigration year
Mean	28.6	50.1	1972
Median	28	48.5	1974
Mode	20	35	1970
Minimum	18	35	1950
Maximum	68	70	1988
# of respondents	35	12	28

official declaration of Conte Burica as a Costa Rican indigenous territory. Regarding the emigration from Panama, all respondents said that they, or their parents, moved from Panama in search of free lands to live and work.

Land Tenure

The majority of interviewees (86%) were in possession[1] of land, of which was acquired in a variety of forms, most commonly being inheritance. The "free land" category of land acquisition refers to the first generation of settlers that encountered the primary rainforests of the Burica Peninsula and claimed the land by clearing it and homesteading. The squatting category refers to individuals that took claim of land that had been cleared by another, but was left unoccupied, most commonly by non-indigenous people. The sale and purchase of lands can only take place between indigenous people (Ley Indigena 1977, art. 3) and are not considered legitimate unless overseen by the Association of Integrated Development (ADI), the externally imposed governing body of each indigenous territory. Those lands acquired via the ADI were distributed to the families by the ADI.



Interviewees were asked to estimate the size of their land, with the average size being 65 hectares with a range between 4 and 500 hectares. Property lines are marked using natural landmarks like waterways, mountain ridges and trees, in addition to public foot trails, fences and the clearing of ground vegetation in the forested areas. Lands are considered private, and permission is required from the land "owner" in order to use another's land for personal gain, such as the hunting of wildlife, or the growing of agriculture.

The possession of lands by non-indigenous people within the limits of indigenous territories represents one of the major conflicts that the indigenous people of Costa Rica are facing today, particularly in Conte Burica (Guevara Berger and Carlos Vargas 2000). Despite the illegality of non-indigenous people residing in or possessing land in an indigenous territory (Ley Indigena 1977, art. 3), forty percent of Conte Burica is in possession of non-indigenous people (Solano Salazar 2001), comprised of 80-90 farms (pers. com. Roberto Guerra, president ADI).

[1] Although individuals have possession of land, the only entity that has title to land is the ADI, inscribed in the Public Registry, authorized by the General Attorney of the Republic of Costa Rica (Ley Indigena 1977, art. 2).

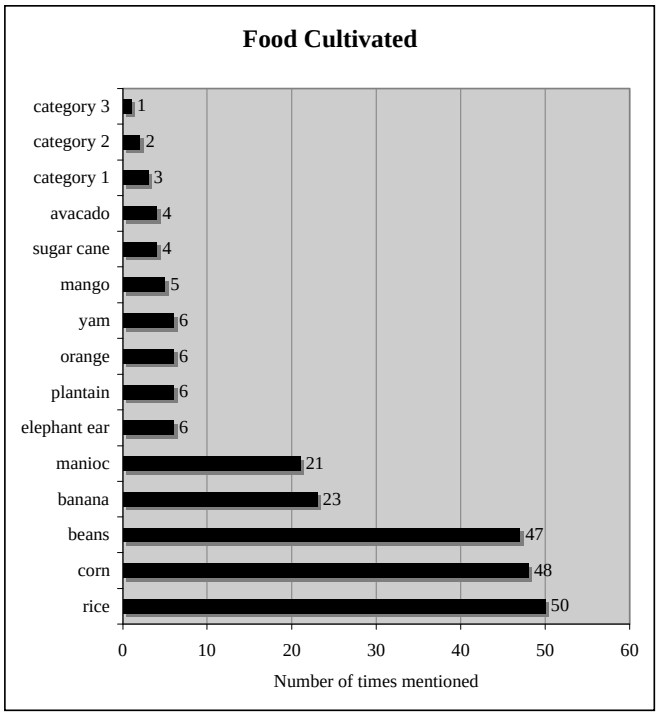
The non-indigenous possessors of land are broken into two categories. There are those of good faith (*buena fe*) and bad faith (*mala fe*). *Buena fe* refers to the people that had property title granted from the Public Registry, or obtained the right to possess the land, before it was declared an indigenous territory. *Mala fe* refers to the people that obtained land after the territory was declared and/or usurped the indigenous people from the land. In order to compensate those individuals of *buena fe*, the government must provide them with comparable lands outside of the indigenous territory, or an equitable payment. If they do not accept the relocation, they must be removed using the processes outlined in the Expropriation Law 7495. Those of *mala fe* are not protected by law and must be removed without compensation (Ley Indigena 1977, art. 5).

In order to ameliorate such problems, the National Commission of Indigenous Affairs (CONAI) was created in 1973 via Ley 5251. The fundamental objective of this law is to promote social, economic, and cultural betterment of the indigenous population with the intention of improving the living conditions and to integrate indigenous communities to the development process (art. 4a). In relation to property rights, it is an objective of CONAI to ensure that the state garantees individual and collective property rights to the indigenous people of Costa Rica (art. 4e).

CONAI has participated in some recuperation of lands, but none in Conte Burica (pers. com. Roberto Guerra, president ADI). Land expropriation is a major goal of the current ADI, not only for human rights reasons, but also for conservation motives. The Río Coco watershed located in the coastal northwestern area of the territory provides an excellent example of the conflicts over terrain. The majority of the Rio Coco watershed, where the remaining spider monkeys reside, is in possession by non-indigenous people, national and foreign alike. Over the year there has been illegal timber extraction in a property in possession of a non-indigenous Costa Rican. Despite the illegality of non-indigenous people extracting timber resources within the territory (Ley Indigena 1977, art. 6), the cutting continues for the assumed belief that the right is had because the individual is in possession of the land. It is relevant to note that article 6 states that the indigenous population can use timber resources, as long as they are exploited rationally (art. 7), controlled by gaining permissions from the ADI prior to cutting.

Subsistence Strategies

Ngäbe subsistence depends largely on their swidden agriculture practices, supplemented by occasional wild harvesting of plant foods, domestically raised animals, hunting of wildlife, and external purchases of basic food products. The principal crops grown by the Ngäbe include rice, corn and beans, supplemented by other crops and fruit trees.

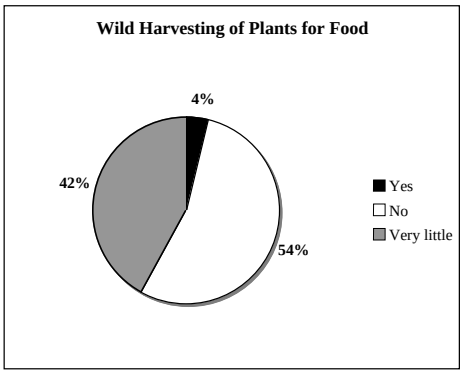


Category 1: vegetables, water apple, lemon, inga; category 2: fruit trees, coconut, guava, pineapple, pejibeye, cacao; category 3: citrus, tubers, squash, peach palm, rambutan, pepper, papaya.

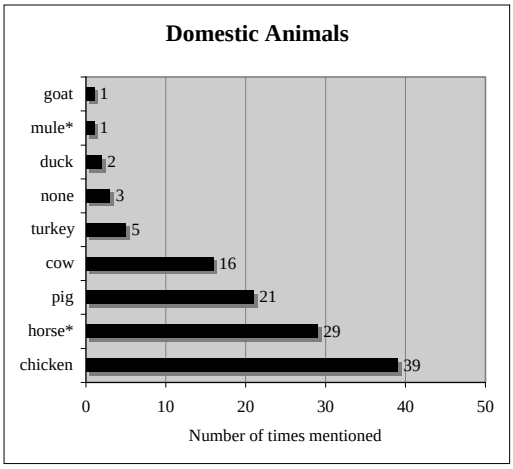
The swidden agriculture practiced by the Ngäbe is a yearly cycle of planting with the rains. In driest months from January-March, the Ngäbe cut an area of young secondary regrowth (*tacotal*), which can vary in age between 2 and 15 years. Although some secondary regrowth may be cut as soon as 2 years, it is preferable to wait at least five in order for the soil to recuperate. Primary forest is no longer cleared, as law prohibits it (Ley Indigena 1977, art. 7), however it is not unknown to "accidentally" lose edges of primary forest to fire adjacent to those areas being burnt. The slash is left to dry in the heat of summer and then it is burned. Planting of rice follows at the onset of the rainy season in June and harvest begins in August. A good rice crop will last between 5 and 6 months, with a bad crop producing for only 3 or 4 months. Rice is harvested as needed.

The corn and bean crops are also planted once a year. Corn is planted between August and November and harvested between January and February. The corn crop is used for human consumption, in addition to feeding chickens and pigs. The beans are planted from the end of the rainy season, in mid October, to the middle of December, and harvested between February and March. The bean crop is primarily sold to the external market with excesses being consumed in the home.

Wild harvesting of plant foods is not very common, and plants used were not systematically identified, since most of the respondents did not know the names of the plants and interviews did not take place in the forest.

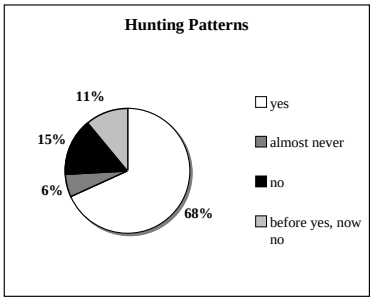


Chickens are by far the most common domestic animal that is consumed in the home, present in 74% of the households. Other fowl species are present in some homes and are used for producing eggs and meat. Pigs are commonly found, however they are usually raised for sale or slaughtered for celebrations. Cows are considered to be more of an emergency bank account, sold when families are in need of "fast cash."

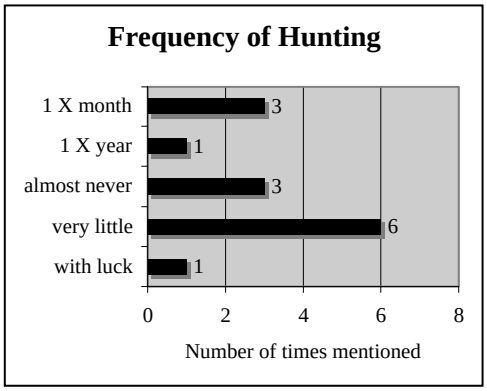


*Not consumed as food, but used for transportation.

Subsistence agriculture is additionally supplemented by occasional hunting in 74% of the households, which is a right reserved by law as a means to maintain culture and traditions (Ley Indigena 1977, art 23; Covenio 169 OIT). Hunting dogs are typically used to hunt terrestrial animals and guns and slingshots for arboreal animals.

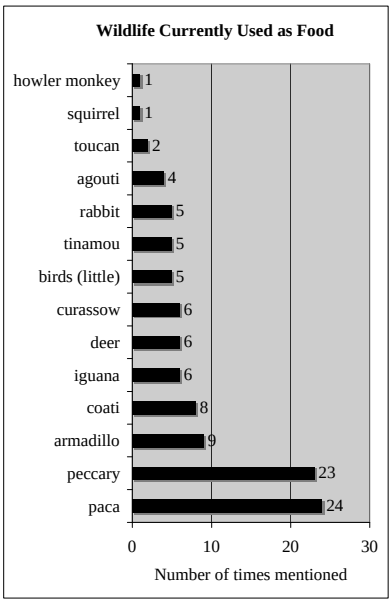


Of the respondents that currently partake in hunting, 34% commented on the level of hunting that they partake in. The most common response was “very little.” Regrettably this was not more systematically queried, however, its inclusion is deemed relevant.



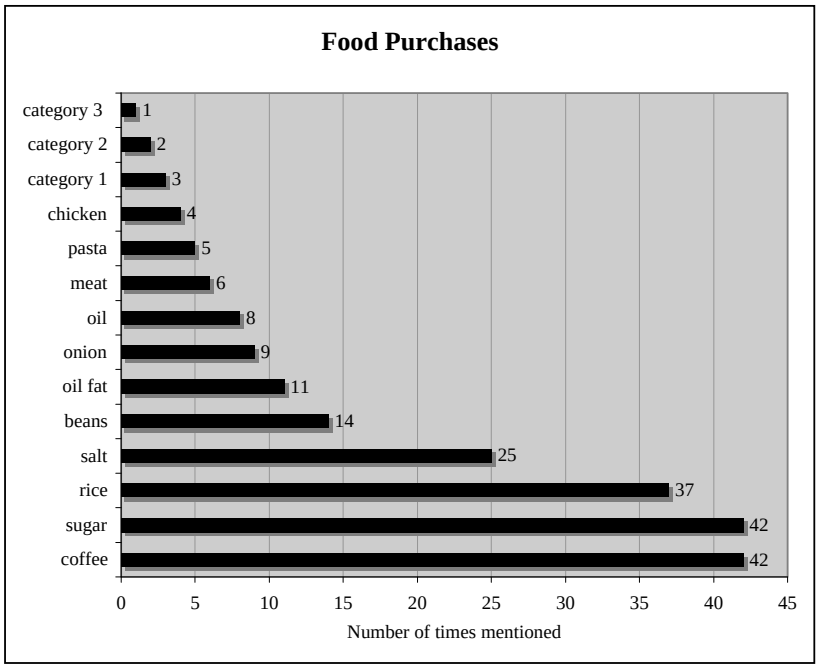
It was commonly reported that wildlife is hard to encounter, given the exploitation by the non-indigenous (*blancos*) who hunt for sport. It was common for respondents to comment that unlike the non-indigenous that hunt for sport, the indigenous hunt for household consumption. Although not ever reported in the interview process, indigenous people have been observed on a variety of occasions selling wild game outside of the indigenous territory, and also permit outsiders to hunt on their farms in exchange for food, liquor, or an equitable tip.

The most popular wildlife hunted were the paca (*Agouti paca*) and the white-lipped peccary (*Tayassu tajacu*), mentioned by 46% and 44% of the respondents respectively. Notably positive, the spider monkey was never mentioned as a current source of wild meat.



Twenty six percent of the respondents stated that they do not hunt, with 11% indicating that they used to hunt, but no longer do so. All of the latter respondents receive environmental service payments (discussed in detail below), which mandates complete conservation of natural resources in agreed upon areas of primary forest. Interestingly, of the respondents that state they do not hunt, 63% do not receive environmental service payments, nulling the assumption that they do not hunt because they receive payments. A more likely reason is that they do not receive payments because 60% of these respondents are not in possession of land or primary forest; therefore do not have the liberty to hunt.

All of the Ngäbe households purchase food from the markets in the territory's neighboring villages, with the top three purchases being coffee, sugar and rice.



Category 1: tomatoes, potatoes; category 2: milk, peppers, garlic, vegetables, soup concentrate, canned sardines, canned tuna; category 3: bread, oats, corn, carrots, cabbage, condiment sauce, everything.

Outside of hunting and feeding practices, the interviewees were questioned regarding their relationship to animals in three areas: wildlife as pests, wildlife as pets, and wildlife used for traditional medicine. The pest species for agricultural crops were indeed various, with 25 mentioned culprits, but the capuchin monkey (*Cebus capucinus*) and the white-nosed coati (*Nasua narica*) were clearly the dominating thieves in the mountains of Conte Burica, having raided the crops of 73% and 61% of the respondents (N respondents = 51). The most heavily predated crops were corn and manioc.

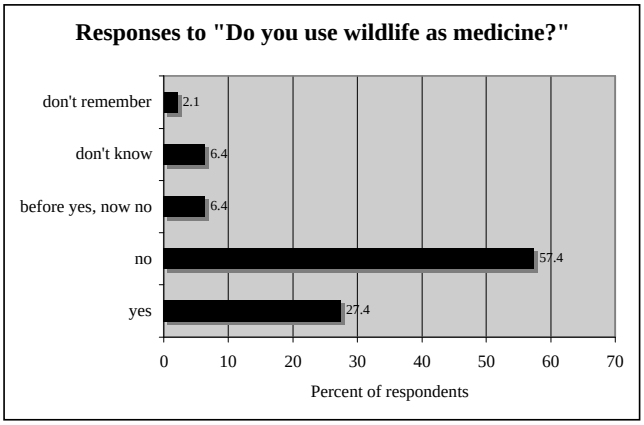
Unfortunately, pest control was not systematically queried. Some farmers stated that they do not do anything to prevent crop raiding, saying that the animals have the right to eat too. However, most people took a more proactive role, either scaring off pests with scarecrows or yelling at them. Some crop fields even had small thatch roof

huts for the farmers to hide in to watch over the fields. Some farmers killed the pests by shooting them or putting out poisoned bait. Nobody stated that they ate the meat of the capuchin monkey when they were killed, however the other animals that are viewed as food, such as the coati and peccary, were consumed in the house when killed.

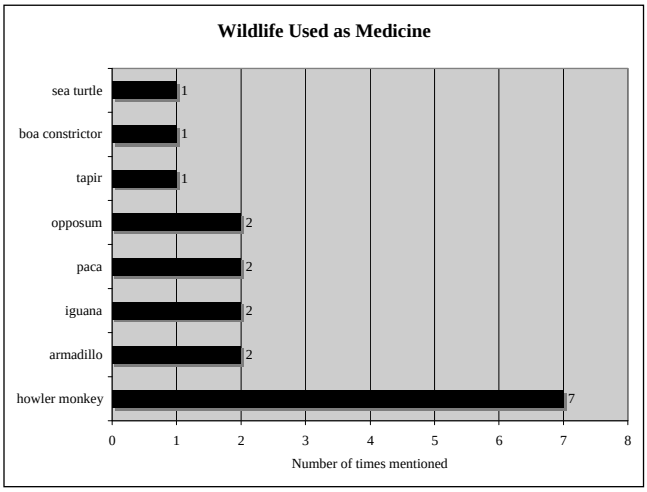
Agricultural Item	Predating Wildlife
Corn	Capuchin monkey, coati, birds, peccary, squirrel, rabbit
Manioc	Coati, peccary, paca, agouti, gopher
Rice	Birds, rats, crab, coati, gopher
Cacao	Capuchin monkey, coati, kinkajou
Beans	Deer, peccary
Bananas	Deer, capuchin monkey, squirrel monkey
Chickens	Birds of prey, cats
Livestock	Bats

When asked about wildlife kept as pets, 86% of the respondents (N=50) said that they do not keep wildlife in the home. Of those that do keep wildlife as pets, those reported species included a white-lipped peccary (*Tayassu tajacu*), a great curassow (*Crax rubra*), parrot like birds, a capuchin monkey and a squirrel monkey.

Wildlife used as medicine was a very interesting topic, with 57.4% of respondents (N=47) claiming not to use wildlife as medicine, and 6.4% stating that they no longer practice the use of wildlife as medicine.



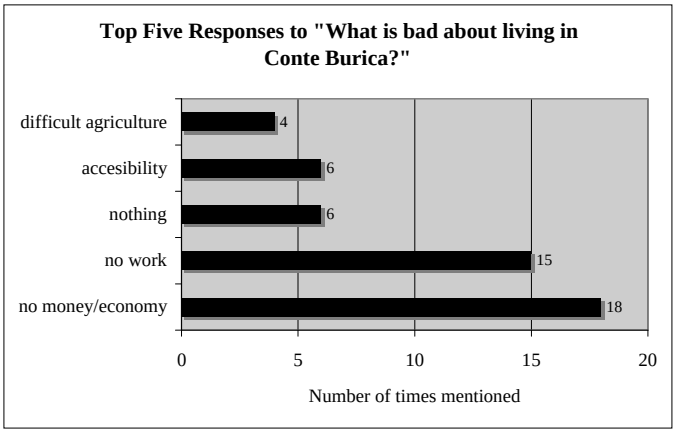
The howler monkey (*Alouatta palliata*) was the most popularly used wildlife for medicine. Interestingly, the now extirpated tapir (*Tapirus bairdii*) and the endangered sea turtle, were also mentioned, be it on one occasion for each one. Fortunately, the spider monkey was not listed as a species used for medicine, although there were reports of its former practice outside of the interview process.



The most common reported use of wildlife as medicine was for the relief of lung disorders associated with asthma, bronchitis, and the flu. The fat of various animals is drunk in order to loosen phlegm. The reported utilized animals include the howler monkey, the paca, the armadillo, the opossum, sea turtles, and the boa constrictor. This was also the reported as historic use of the spider monkey. When children lack appetite demonstrated by the eating of earth, they are fed iguana meat and the liver, lungs, and fat of howler monkeys to put an end to earth eating. The fat of pacas is also used to relieve cuts and scrapes. In the past tapir nails were used to remedy rheumatisms.

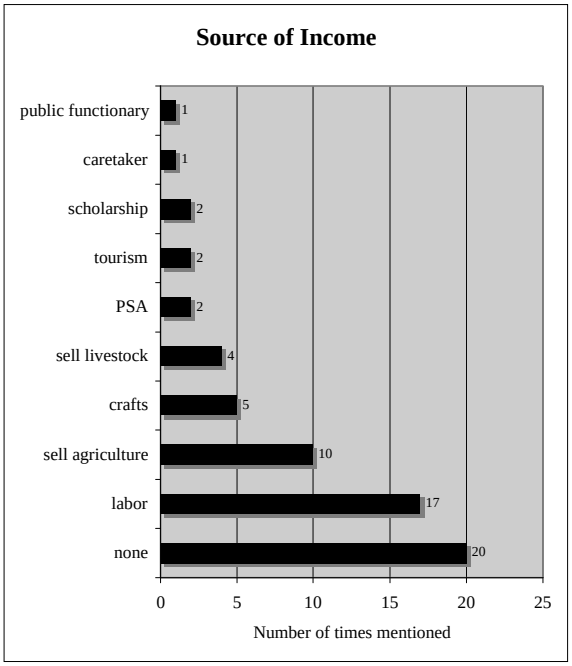
Socio-Economics

Perhaps the most productive aspect of the interview process was asking the simple questions of what were the likes and dislikes of living in Conte Burica. Responses to both questions were unquestionably linked to the remoteness of the indigenous territory. The most common dislikes of Conte Burica were the lack of money and work.



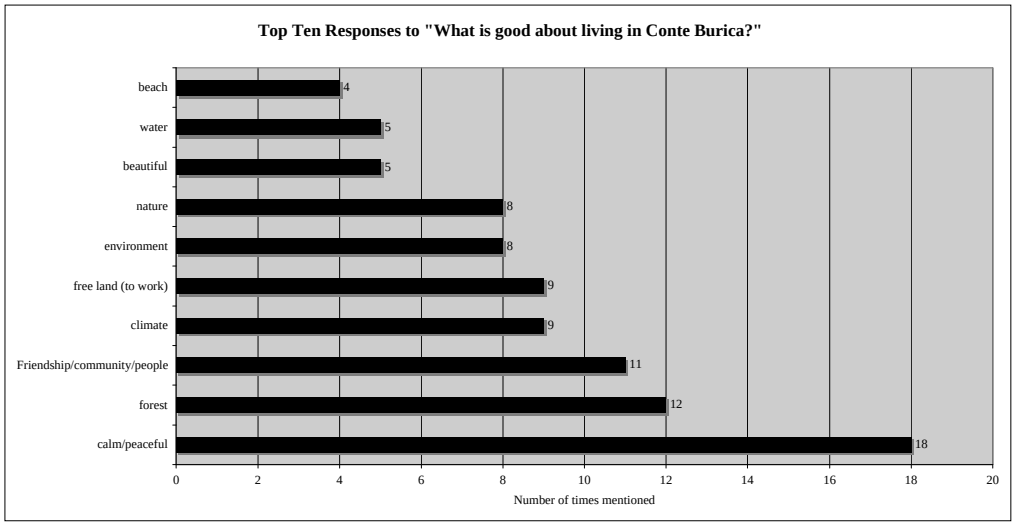
Forty percent of the respondents (N=50) claimed that they did not have a source of income. The most common source was occasional manual labor. Those people that

live nearer to the limits of the indigenous territory were more likely to have a source of income, due to the facilitated access to the labor and tourism markets.

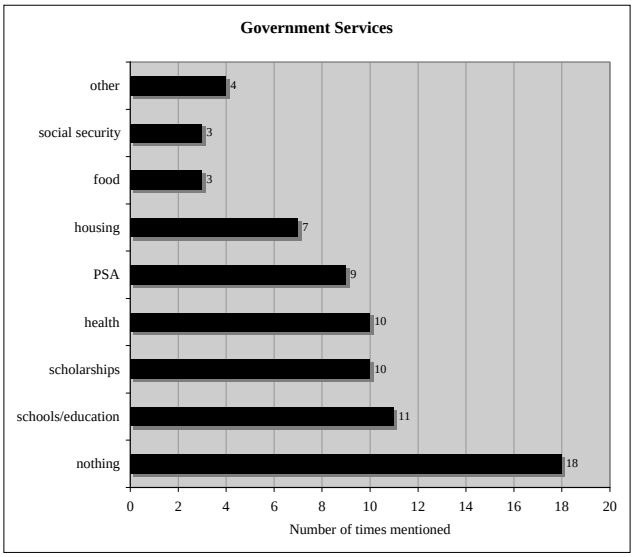


Given the clear hardships of having limited financial resources, the statement that there is nothing bad about Conte Burica made an unlikely appearance in the top five responses. An apparent hardship in Conte Burica is the accessibility, being located in the extreme south of Costa Rica. This is exacerbated by the fact that all beach travel is limited to times of low tide, making exits in time of emergencies for those people that live south of Punta Banco very precarious.

When asked what they liked about Conte Burica, the respondents (N=49) most commonly commented on its peaceful and mellow (*tranquilo*) atmosphere. The majority of the remaining top ten responses were related to the benefits of being surrounded by nature.



In order to gain an understanding of what sort of assistance the Ngäbe people receive, they were asked to name what services are provided by the government. The most common response was nothing.



This echoes what the available resources state, that the Ngäbe indigenous territories, especially the geographically isolated Conte Burica, are essentially neglected (Guevara Berger and Vargas 2000) by the state. Additionally, the municipalities in the counties of Corredores and Golfito lack significant projects to aid the communities. To demonstrate this, some development aspects of the Ngäbe territories in Costa Rica are summarized below with specifics regarding Conte Burica when available (Guevara Berger and Carlos Vargas 2000).

Regarding education, in 1996 there existed 23 schools in the 5 Ngäbe territories with 780 students taught by 30 teachers. Generally the schools are in bad condition. There was a need to build more houses for teachers and cafeterias. The majority of

schools are lacking in teaching materials and not all schools have achieved bilingual education, as mandated by law (Educación bilingüe y bicultural 1994, Decree 23.489-MEP). There are very low possibilities for the students to attend high school with traveling distances between 8 and 30 km. Secondary education is inaccessible, explaining why there is such a low level of Ngäbe teachers employed in the territories (Guevara Berger and Carlos Vargas 2000). Currently, in Conte Burica there are 13 primary schools, where half of the teachers employed are Ngäbe. The first primary school was built in 1980 in the community of Alto Guaymí. Although there are 3 high schools, in the communities of Alto de Conte, Alto Guaymí and Santa Rosa, secondary education remains largely inaccessible to the Ngäbe due to financial limitations and the logistic difficulties in traveling to school. Currently Mann is assisting the community of Alto Río Claro in soliciting help to build a high school in their community.

There is government aid in the form of scholarships from IMAS, the Mixed Institute of Social Aid. High school students are awarded monthly scholarships, whose amount increases with grade level. The scholarships are intended to be used to purchase school uniforms, school supplies, and food.

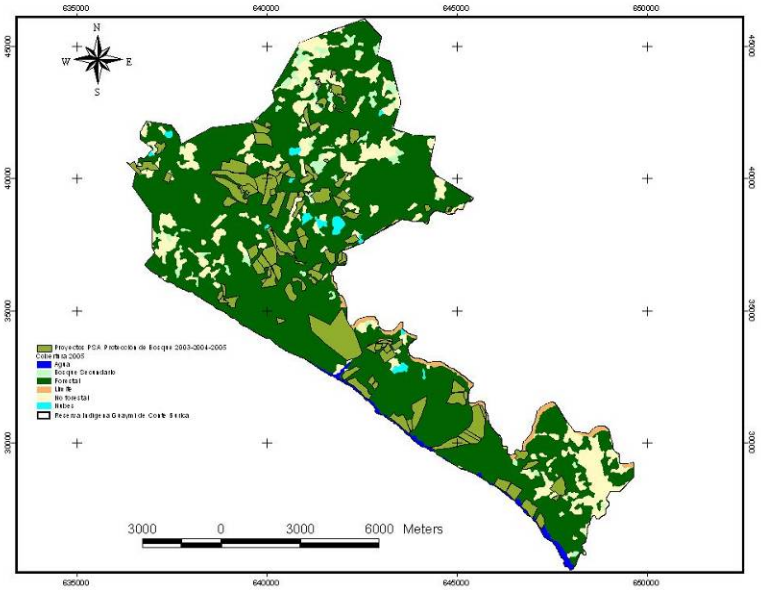
In the realm of health, the geographic isolation, the bad condition of roads and the social marginalization of the Ngäbe result in very scarce medical attention. The principal sicknesses include intestinal, vomiting, diarrhea, headaches, parasites, anemia, head lice, malaria, asthma, eye problems, malnutrition and tuberculosis. There are reported 2000 cases of TB in the Ngäbe of Costa Rica. There are almost no health posts in the territories and those that exist have bad equipment and are lacking medicines (Guevara Berger and Carlos Vargas 2000). The large distances to hospitals prevent many people from visiting them when they are in need of medical care. Currently in Conte Burica there is one health post that is open two times a month when medical technicians are scheduled to visit. Each medical technician can attend 40 people per visit. The two medical technicians employed in Conte Burica are Ngäbe people.

There have been some housing projects, with a large need for more (Guevara Berger and Carlos Vargas 2000). In Conte Burica, the housing varies according to geographic placement and the presence of primary rainforest. Those homes in sparsely forested areas typically have government or missionary constructed homes, due to the combination of easier access for external assistance and a lack of natural roofing materials, which are found only in primary forests. Currently in the community of Alto Río Claro there is a government housing project under way that will provide a house for each family constructed of locally sourced timber.

The Environmental Service Payment (PSA) program[2] has been active in Conte Burica since 1998. The full title of the project is “Program of Environmental Services for the Human Development of the Indigenous of Conte Burica” and is managed by the ADI Conte Burica with the institutional support of MINAE (Ministry of Environment and Energy) and FONAFIFO (National Forestry Financial Fund). The general objective of the

[2] The summary of the PSA program comes directly from Muñoz (2005).

program is to improve the quality of life for the Ngäbe living in the Conte Burica Territory with specific objectives of mitigating poverty, improving the conditions of life, protection of the territory and conservation of the natural habitat and biodiversity. The benefactors of the project include select owners of forested property who receive an annual payment for five years in order to protect the forest. Currently 35% of the community is receiving conservation payments, which represents 200 families spread amongst 9 communities. The PSA plots are represented by the light green in the map below, encompassing 1,800 has, with the unprotected forested area represented by the dark green. The map is expressed numerically in the following table, both sourced from Muñoz (2005).



Type of Cover	Area under PSA (has)	Potential Area PSA (has)
Water	0	0
Secondary Forest	0	305.355
Primary Forest	1,800	7,979.2
National Limit	0	0
Not forested	0	138.89
Clouds	0	0
Total	**1,800**	**8,423.44**

Prior to initiating a new contract for payments, the lands to be conserved are checked to assess the state of the forest. FONAFIFO then allocates annual funds that are dispersed by the ADI. Participating farm owners are obliged to: keep watch of the forest, maintain boundaries, control hunting and cutting of trees, prevent forest fires, and manage the family income. An independent forest engineer that is contracted by the ADI periodically checks the lands. If there is evidence of non-compliance in the designated conservation areas, such as the presence of hunting traps, shotgun shells, or cut trees, the payments are withheld and the money is reintegrated into the program to contract new farms. Payments are also withheld if community members are not complying with other

environmental regulations, such as the cutting of trees in primary forest without permissions and the selling of wild game.

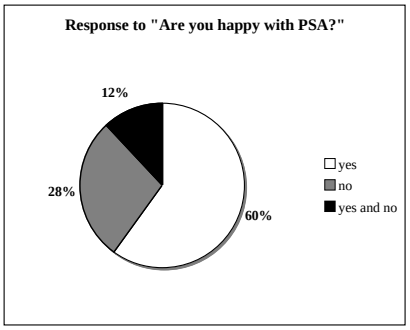
Prior to the start of the program each family was cutting approximately 2 has of primary forest each year for their agricultural practices. Since the program has been active, it is estimated that no more than 10 has of primary forest have been lost at the hands of swidden agriculture. After ten years of operating, the program has:

- integrated $500,000 into the territory,
- reduced poverty by 10%,
- protected 100% of the water springs used for human consumption,
- recuperated 20% of the deforested areas that have good soils for reforestation,
- reduced illegal hunting by 80%,
- and augmented wildlife in areas that have been previously deforested. Increased wildlife populations include the howler monkey, pacas and collared peccaries.

The program is the only source of funding for the ADI, which take 18% of the payments for administration and the development of social programs. Some programs include secondary education in Alto de Conte, betterment of roads, and school scholarships.

There is a high demand to participate in the PSA program; however there is an institutional limitation with FONAFIFO, with a maximum of 600 has of forest that can be contracted each year for each participating territory, due to funding limitations. As a result, not all of the forested areas are protected, nor do all of the community members benefit from the program. Consequently, a new project, Certification for Environmental Services (CSA) is being started in Conte Burica. This is very similar to PSA, with the major difference being that the funds come from wealthy individuals or corporations, rather than the government. As a result the only funding limitation will be a default of marketing the program. Participating donors receive a certificate of proof that they can then use for advertising as a way of demonstrating their fulfillment of social responsibility in the conservation of the Costa Rica's natural resources.

Fifty eight percent of the interviewees participate in the PSA program, with the average estimated size of land conserved being 21.3 hectares with a range from 5 to 70 hectares. Satisfaction with the project varied, with the majority of respondents being happy with it.



Those that were not happy with it believed that the payments were too small. Those that responded yes and no, were happy to be receiving something, but thought that the payment was not sufficient.

In regards to spider monkey conservation, all but one of the interviewees showed interest in the conservation of the spider monkeys. The most common responses as to why included: so that the children can know the monkeys, because there currently are not any, because they are not harmful to humans, because they are endangered, because if they are not protected they will disappear and that they are beautiful.

Mapping

Interviews were coupled with property walks under the Participatory Rural Appraisal (PRA) methodology. In these sessions Mann walked with the family patriarch along the property lines. Using a GPS unit the following data were collected: property lines, trails, rivers, significant trees, monkey sightings, agricultural areas, conservation areas, among other details. Seven properties were mapped.

It is important to note logistical constraints that have limited the volume of data collected in the mapping process. The lack of communication in the region and the large distances required to travel to make work arrangements considerably slows data collection, as people were not always present in the household. The mapping has also been limited by technical problems, which were partially ameliorated. This process is showing to be very useful in learning the terrain of the reserve, the settlement history, and the livelihood strategies of the people. It is additionally allowing essential time for getting to know the community members. Mapping ceased, since it was brought to Mann's attention that the ADI is negotiating a contract with an official cartographer to carry property mapping within Conte Burica. At this time, maps are not available, due to technical difficulties. They will be sent when they are ready.

2. Help Develop a Ngäbe Land Management Group

The inaugural meeting between *Amigos de los Monos* and the Ngäbe community was held in February 2007 at the community school *La Laguna*. This was an introductory meeting and was attended by 50 Ngäbe adults in addition to Dr. Robert Horwich and Peter and Liz Beth Aspinall, the founders of the Tiskita Foundation. The community conservation strategy was shared with the group, stressing the imperative role

that the community plays in designing and carrying out conservation efforts. It was explained that the role of project catalyst, Mann, is that of a bridge connecting the community with external funding agencies and international collaborators to support community initiatives. The community expressed concern for investing effort and energy to outsiders, whose participation is usually short-lived, leaving people with false hopes. In response a number of people spoke on behalf of the integrity and character of Mann, who has demonstrated the ability to follow through with commitments.

Shortly after the inaugural meeting a pair of spider monkeys were sighted twice outside of the indigenous reserve in the forests surrounding the village of Punta Banco, revealing that conservation efforts must extend beyond the Ngäbe to the Costa Rican and foreign landowners as well, thus explaining the broadening of the project mission (see above).

Beyond the inaugural meeting, organizing the community has shown to be the most challenging aspect of developing *Amigos de los Monos* according to the initial plan outlined in the awarded grant proposal. This is due to a complex web of social and logistical issues that have revealed themselves over the past year. The cultural heterogeneity of the area, with the subsequent social hierarchies and distrust, particularly among the Costa Ricans and the Ngäbe, provide a clear obstacle that must be delicately addressed. Naturally, the Ngäbe were also wary of Mann, unsure of her intentions and motivations, as mentioned above.

A close look at the Ngäbe reveal aspects that inhibit organizing a community group including traditional society, the isolated location of homes, the lack of modern communication, a low level of formal education, and the presence of government assistance, which includes the PSA program. Traditionally, the Ngäbe are swidden agriculturists that function in a kin-based society without a centralized governing system. Despite the politicalization of the Ngäbe and the presence of a modern governing body (ADI), few people participate actively in this process. Coupled with the isolation of homes and the lack of modern communication, organizing has shown to be difficult. This is further complicated by the presence of government assistance and the low level of formal education, which inhibit the ability of an external catalyst to motivate the people to work at a grassroots level. Until now, the people have only participated in top-down approaches to conservation and social welfare. One example is the PSA program. Other NGO's have reported the same difficulties of organizing the Ngäbe to work cooperatively in addition to other people in this area who have tried to initiate craft cooperatives with no success. Simply put, the need to improve the welfare of each family, and the resultant competition among families, prevents the ideal level of cooperation desired in community conservation initiatives.

In the face of these challenges, *Amigos de los Monos* has taken an adaptive, learning-process approach to community organization since its creation. Whereas the initial goal was to help develop a Ngäbe land management group, modeled after the Community Baboon Sanctuary in Belize, that would ultimately function independently, it has chosen to focus its energy on the group of COVIRENAs (Natural Resource Vigilance Committees) that were organized by the government agency MINAE in October 2006, months before the arrival of Mann (as mentioned in the awarded grant proposal).

The principal function of the COVIRENA Program is to support the participation of the civil society in the vigilance, protection and conservation of natural resources (Valverde Segura 2006). The program was created in 1992 and is regulated by the following environmental legislation of Costa Rica: article 50 of the Political Constitution, article 37 of the Forestry Law 7575, article 15 of the Wildlife Conservation Law 7317 and the Executive Decree 26923-MINAE (Mora Navarro et al 2004).

The general objective of COVIRENA is to strengthen and amplify social participation by organizing communities into committees to assist MINAE in ensuring that the environmental laws are followed. After a training period of 8 months, which consist of monthly workshops, the COVIRENAs are granted the authority to report illegal activity against the environmental laws. The environmental laws include the Forestry Law 7575, the Wildlife Conservation Law 7317, the Biodiversity Law 7788, the General Health Law 5395, the Environmental Organic Law 7554, the General Transit Law 7331, the Management of Garbage Regulation Decree 19409-S, the Terrestrial Maritime Zone Law 6043, the Water Law 276, and the Soil Use and Management Law (Mora Navarro et al 2004). COVIRENA groups in indigenous territories are also subject to the following legislation: Agreement 169 of International Organization of Work, Indigenous Law 1977 6172, and the Regulation for Forest Exploitation in Indigenous Reserves Decree 27800-MINAE. The training program includes an introduction to the above environmental legislation, the role of COVIRENA and the Direction of Civil Society, social and environmental diagnostics, and the development of a "work plan."

The COVIRENA Program existed under the organizational structure of the Direction of Civil Society, created in 1998 for the Executive Decree 27485-MINAE. The Direction of Civil Society organizes and promotes a national network of volunteers, including representatives from: communal groups, NGOs, public institutions, indigenous territories and of marine coastal zones (Valverde Segura 2006). A major problem that COVIRENA is facing on a national level is the elimination of the Direction of Civil Society by the State in 2008, leaving COVIRENAs without an institutional means to authorize work. The savior of the groups in the southern zone was the formalized ASOCOVIRENA, a nationally registered association. A solution is currently being sought for authorizing patrol work. SINAC (National System of Conservation Areas) has been given the responsibility, however, there has been no solution devised at this time.

Currently there are three active COVIRENA groups in Conte Burica, which are all assisted by ASOCOVIRENA. In 2006 the community of Alto Guaymí was inscribed and in 2007 the communities of Alto Río Claro and Los Plancitos were inscribed. There was a group active from 2000-04 in Altamira, however it is now defunct.

Amigos de los Monos has been working directly with the group in Alto Río Claro since January of 2007. This is the group that is responsible for protecting the principal habitat of the remaining spider monkeys in the Río Coco and Río Caña Blanca watersheds. With the support of the Margot Marsh Biodiversity Foundation a cellular telephone and a pair of walkie-talkie radios has been secured for the group in order to

improve the efficiency of work. The money needed to travel to purchase the phone and set up the phone line and pay the line has also been taken from these funds. It was requested of Mann, by the group, to have the group manage the remaining communication funds. It was agreed that if the group organized a fundraiser then half of the remaining communication funds would be given to the group before the fundraiser and the other half upon the completion of the fundraiser. In response the COVIRENAs and the Sport Committee of Alto Río Claro organized a soccer tournament with the funds split between the two committees in addition to the primary school for the community. The remaining communication funds from the Margot Marsh Biodiversity Foundation are still unspent and in the hands of the treasurer of the COVIRENA group.

A grant-writing workshop was held during the completion of a grant soliciting the Indigenous People's Assistance Facility (IFAD). The group learned the realities and complexities of soliciting foundations for financial assistance. Together, workshop participants decided that if the monies were received they would go towards supplying food for workdays, communication and field equipment, training for: conflict resolution, data collection techniques and computer literacy. Unfortunately, the competitive grant was not secured.

Amigos de los Monos has also involved the COVIRENA group of Alto Guaymí in monitoring efforts. Over a period of a month the COVIRENAs collected data on monkey presence and Mann later returned to mark the sightings in addition to creating a stronger relationship with the group. The group in Los Plancitos has solicited the help of Mann to secure communication equipment.

Currently we are working towards constructing a small cabin near the mouth of the Rio Coco to use as a protection post to logistically assist the COVIRENAs in their valiant efforts. The location of the cabin is crucial because it serves as the access point to the area of conservation concern that houses the spider monkeys and potentially allows volunteer forest guards to intersect illegal activity. Additionally, the volunteer guards live at least an hour's walk from this point, making a river cabin very useful for overnight patrols.

The process of realizing the cabin has been very slow and complicated, due to the need to acquire permissions from a variety of people. After months of trying to contact the American possessor of the land for permissions, we have come to a verbal agreement to construct the cabin. The ADI is also in accordance with the construction of the cabin. Thus far the area to build the cabin has been cleared and the wood has been cut, waiting to be transported to the building site in order to start construction.

Mann has solicited the ADI to doubly use the cabin as a communal business for lodging of researchers and volunteers, however she is still waiting for a response. Once the cabin is built, Mann will work to organize the community to form a committee to manage the cabin and together they will solicit the ADI for the cabin's additional use. It is in this way that Mann sees a viable and concrete way to organize the community that will not only contribute to conservation efforts, but also to the economic livelihood of the

community. ICE, the Costa Rican electrical company has agreed to donate solar panels, and a laptop computer has also been donated.

3. Develop Project Strategy

The development of project strategy has been very dynamic, due to logistics and cultural and socioeconomic realities. In February 2007, Dr. Robert Horwich, the director of Community Conservation and project mentor, visited the conservation site. During his stay he was able to assess the site and project first hand. He met a variety of project collaborators in addition to traveling widely in the area. He trekked to Río Coco, which hosts the spider monkey population. He spent a few nights with a collaborating indigenous family, in addition to visiting *La Laguna*, the community school that serves as a meeting place. Dr. Horwich was present for the inaugural meeting where he shared with the Ngäbe community his 25 years of experience with communities working to protect their natural resources. Experiencing first hand the logistical realities of living and working in the remote reaches of southwest Costa Rica, Dr. Horwich was able to reflect on his past experiences to identify potential problems and to inform appropriate actions and strategies for moving forward. He left the site confident with the foundation of the project and has continued to advise and assist project developments since his return to the United States.

A second community meeting was held by *Amigos de los Monos* in February 2008, where Mann provided a summary of the projects advancements. A visualizing activity was also held where the group was split into groups of men and women and they were asked to write about their desires/concerns for the coming twenty years. The men expressed concern for the increasing threats to daily life, including the increased costs of goods, the lack of preparation to find good employment and intervention of the law. The perceived solutions to these concerns were to ensure there were lands to cultivate food, a health post, the elaboration of economic projects and the need to protect the indigenous territories from non-indigenous people. The women desired that in 20 years there would be more animals, more educational opportunities, youth that are prepared professionally and equality. The matriarch of the community responded that only God knows.

After a year and a half, and considering all of the factors at play, Mann has come to the conclusion that the only viable way of working within Conte Burica is based on the double use of the protection post in Rio Coco with full permissions and support from the ADI. This will provide the logistical means to recruit other researchers and project collaborators, thus increasing the output of the project. It will also provide a tangible means to organize the community for conservation efforts that will create economic benefits in addition to training opportunities.

4. Gather Biological Data on Primates and Habitat

The primate surveys took place from late April to early September 2007, with their sporadic continuance from January 2008 through July 2008. The monkey monitoring was broken into three methodological aspects. The priority was to conduct all-day-follows of the spider monkeys that are threatened the most by extirpation in the area. In order to determine the presence of more than one group their has been a team of

4 Ngäbe men that work simultaneously in different parts of the forest documenting monkey groups as they encounter them. After a total of one month working in this way we have yet to encounter more than one group. There have however been reported sightings of a pair of spider monkeys in the most southern zone of the indigenous territory in addition to a pair in the forests surrounding the village of Punta Banco. The most spider monkeys sighted together were 14 individuals.

Date	A M	A F	A ?	J M	J F	J ?	B	Total
4.24.07	2	1	2		1			6
4.28.07			7			2	1	10
4.30.07	1	3			2			6
6.6.07		2						2
6.27.07								3
6.27.07	2	4						6
6.27.07								6
6.28.07		2			2		2	6
6.28.07	2	2	1		1			6
9.3.07	2	3						5
9.3.07	1	2						3
9.4.07	2	2	1		1		1	7
9.5.07	2							2
9.6.07	1			2				3
9.6.07	3	2			3			8
9.7.07	3				2			5
10.10.07		1	2			1		4
1.24.08	5	6		1	2			14
3.26.08	2	2		1	1		2	8
4.9.08	3	1			1			5
4.10.08	4	2				2	1	9
5.6.08	1	1						2
5.6.08	1	1						2
5.15.08	1	1						2
6.9.08	1	3			1	1		6
6.11.08	1	1				1		3
7.16.08		1		1			1	3

The second method of surveying the monkey populations was an adaptive approach to the realities of working in the area. Five local men were given a permanent marker, a small notebook, and flagging tape. They recorded all monkey sightings including the following information: date, time, species of monkey, number of monkeys, sex and age class of monkeys, activity of monkeys prior to detection, and the reaction of the monkeys to the people. They have been asked to mark the tree where the monkeys were detected so that at a later time, when ample sightings have been collected, they can walk with Mann to mark the sights with the GPS. The same task was given to the COVIRENA group in the Carona community, 12 km south of the Río Coco watershed which also houses large tracts of primary rainforest. This experimental methodology not

only aided in collecting biological data, but it expanded the economic benefits of the program, in addition to the number of people participating, helping to gain broader support for the conservation efforts.

Finally, line transect surveying was used in order to acquire encounter rates of the monkey species. Transects were set up in January 2008 and were walked periodically until July 2008, with the bulk of data collected in July, when two volunteers came to assist in data collection. Transects were not chosen randomly, due to the mountainous terrain of the area, rather they were established on ridgelines and valleys that were easily transversible. A total of 182.38 hours were spent on transect walks, covering 57.85 km, averaging a walking speed of 3.15 km/hr.

Transect No.	Distance (m)	Repetitions	Total (m)
1	1,125	14	15,750
2	625	13	8,125
3	825	4	3,300
4	1,700	12	20,400
5	725	3	2,175
6	475	1	475
7	775	5	3,875
8	1,250	3	3,750
		Total (m)	**57,850**
		Total (km)	**57.85**

There was a slight increase in the encounter rate of *Ateles* since the 2005 surveys, and a very slight decrease in the encounter rate of *Saimiri*.

	Alouatta	***Ateles***	***Cebus***	***Saimiri***
Individuals/km	0.43	0.59	2.49	0.97
Groups/km (2008)	0.07	0.10	0.41	0.05
Groups/km (2005)	0.13	0.07	0.25	0.06

	Alouatta	***Ateles***	***Cebus***	***Saimiri***
Average group size with range	8.33 (2-18)	5.25 (2-14)	8.29 (2-23)	16.34 (2-39)
Number of solitary individuals	2	0	5	0

5. Develop an Education Program for the Schools

The educational aspect of *Amigos de los Monos* has not been given priority during this grant period, due to time constraints and the plans to make the educational book were

put on hold due to personal reasons. Conservation education will be the focus of future *Amigos de los Monos* activity. The local high school students, which consist of both *Tico* and Ngäbe students, will be involved with the book by carrying out interviews with family elders to collect settlement history, traditional ecological knowledge regarding monkey food resources, and stories. This "homework" for the students has been approved by the director of the regional high school in Conte, which has a student body that covers many municipalities, allowing for a geographical broad range of data to be collected. This assignment will be coupled with a lecture on primate ecology and conservation, which will be given in early November (see APPENDIX 2).

In July 2008 Mann was asked by a group of university art students to collaborate on a day's activity regarding the monkeys. Mann gave a talk and the art students organized a monkey puppet workshop.

Pamphlets regarding the natural history and behavior of the monkeys have been created and translated into Spanish (see APPENDIX 4). These will be incorporated into the educational book. Bilingual posters have been created about why not to feed the monkeys (see APPENDIX 5). They will be plasticized and distributed throughout the region. There has been one issue the newsletter "Prehensile Tales" that has been translated into Spanish and distributed locally (see APPENDIX 6). Finally a website has been developed (www.amigosdelosmonos.org) in order to attract much needed volunteers and private funding. Mann has also given a talk about *Amigos de los Monos* at an eco-resort on the Osa Peninsula.

6. Additional Advancements (a number of meetings were attended by Katie – see APPENDIX 3)

Governmental agencies. As mentioned above, a very good relationship has been established with the COVIRENA organization, not only at the local level, but also the regional level of the Osa Conservation Area. The project also has a very notable reputation with the ADI. They were solicited in January 2007 for permissions to carry out the project in the reserve; however it was found that the permissions were not necessary since the project was not reserve-wide. This effort did not go un-noticed however and when the presidency of the reserve changed hands the former president recommended that the new president continue to support the work being carried out by *Amigos de los Monos*. There is positive relationship with the current pro-conservation governing board.

Mann has also been attending and participating in the Coastal Development Regulator Planning meetings for the Pavon District, which includes all of the target communities for conservation efforts.

Non-profit organizations. The Tiskita Foundation has been assisting *Amigos de los Monos* on a variety of levels. They donated a satellite photo of the conservation area extending from Punta Banco to the Río Caña Blanca watershed. They have also committed to donate the rent of associated researcher, Karen Browne (see below), to help build the COVIRENA infrastructure near to the river mouth. They have additionally

agreed to have their 350 ha private reserve as a release site for spider monkeys if a translocation or reintroduction is deemed appropriate in the future.

Research/Academic.

The progress of *Amigos de los Monos* has appeared twice in "Canopy," the in-house publication of the Masters program in Primate Conservation of Oxford Brookes University. One article was written by Browne (2007), another by Mann (2007) (http://ssl.brookes.ac.uk/primate/inhouse-journals.htm).

Karen Browne, from the MSc Primate Conservation program at Oxford Brookes University class of 2006-2007, carried out her research in Punta Banco from May to July 2007. She carried out interviews with locals and tourists alike in order to assess perceptions of the endangered Black-crowned Central American squirrel monkey (*Saimiri oerstedii oerstedii*) to inform appropriate educational materials.

In June 2007 three undergraduate conservation biology students from Prescott College received college credit for assisting Mann in data collection. They also developed a 3-week group independent study whose content would be developed and taught by Mann. Further realization of this depends on securing a logistical base to do so and student interest. One of the students wrote the content for a volunteer outreach packet, which is available on the website (www.amigosdelosmonos.org).

In late July 2007 Mann participated in the second symposium regarding the primates of Costa Rica and the national strategy for their conservation, which was held at the University of Costa Rica in San Ramon, Costa Rica. The symposium was organized by experts from *Universidad de Costa Rica- Sede de Occidente* (UCR-SO-PIBP), *Universidad Nacional* (UNA) and *Universidad de Ciencias Médicas* (UCIMED), including Ronald Sanchez Porras (general coordinator), Gustavo Guiterrez Espeleta, Grace Wong Reyes, Misael Chinchilla Carmona and Idalia Valerio. The symposium included 22 researchers and 35 participants from Costa Rica, Guatemala, Panama and the United States, all of which are developing studies in the country. The symposium provided a stellar opportunity for networking and sharing successes and challenges experienced throughout the country.

In September 2007 a Costa Rican agronomist, Julio Najera, who works for La Gamba research station located in the southern zone, visited the site in order to assess issues related to indigenous agricultural practices and the feasibility of reforestation efforts. Collaboration has taken the form of creating a users manual for the implementation, use, and management of a tree nursery for reforestation efforts.

In March of 2008 a potential PhD student came to visit the site to assess the feasibilities of carrying out her PhD work at the site. She was very enthusiastic about carrying out the related research for assessing the feasibilities of conducting a spider monkey reintroduction, however she has yet to commit.

In June of 2008 Mann visited the El Zota biological field station located in the

northeast of Costa Rica to give a lecture on the project to a group of students in a primate ecology and behavior field course.

Burica Conservation Strategy. This meeting was held on January 27, 2008 and was organized by Mann and was called after Ronny Muñoz, the forest engineer for the PSA project, and Mann had a chance to share conservation experiences in the Burica Peninsula of Costa Rica. The purpose of the meeting was two-fold; to gather and share experiences among those people that are currently carrying out conservation work in the region, in addition to strategizing beyond this group of people in order to involve the general community members of the area. In addition to Mann and Muñoz there were 13 other participants including representatives from the ADI, the Tiskita Foundation, COVIRENA, UNA/ICOMVIS, and a few members of the local community.

Pilot volunteer program. In July 2008 two young volunteers, Jake and Eli Schroppel participated in the pilot volunteer program for monkey monitoring. While they gained an irreplaceable experience in the field, the local community was able to experience first hand what was being proposed by Mann in relation to doubly using the protection post as researcher/volunteer hospitality. Three new guides were trained and very much enjoyed the opportunity to work and exchange with the foreign visitors.

Grupo AmAN. Mann has started meeting with a community group called *Grupo AmAN* (Friends of the Natural Environment) from Los Plancitos in response to their solicitation of Mann's assistance. *Grupo AmAN* is developing a project that involves a series of reserve-wide training sessions on conservation related issues including: family planning, waste management, reforestation and children's environmental education. Mann is assisting in formulating a grant proposal through a series of workshops, in addition to typing the materials for the group. The group must seek the support of the ADI in order to send in the grant application.

English volunteer program. Based on community member's requests, Mann has committed to find volunteer English instructors to live and work with Ngäbe families. There have yet to be any participating volunteers.

Fundraising. Website creation and maintenance (with content written by Mann) has been donated which will assist in project outreach and acquiring funds.
A soccer tournament was held in the community of Alto Rio Claro to raise funds for COVIRENA. This was as a result of the suggestion and encouragement of Mann. To compliment the community's fundraiser, Mann put out piggy banks in the towns of Pavones and Punta Banco with informational flyers 9SEE appendix 4) , in Spanish and English, to raise money for the protection post in the Rio Coco.
On account of Mann's networking, a donation has been made to the primary school in Alto Rio Claro.

7. Other conservation programs active in the Burica Peninsula

Tiskita Foundation

The Tiskita Foundation is a NGO run by the Aspinall family in Punta Banco. They have a 550-acre private biological reserve of primary, secondary and reforested areas, a well as 37 acres of tropical fruit orchards. The Aspinall family and the Tiskita Foundation play an integral role in local conservation and community development. They not only house the release site for the scarlet macaw reintroduction project, but also provide affordable housing for associated volunteers and other conservation researchers and practioners, including those associated with *Amigos de los Monos/*Community Conservation. They also buy lands to reforest and protect them. They have been continually assisting the work of COVIRENA and have agreed to provide the labor and materials for the building of the Río Coco protection post. They have been a major influence in the building of Punta Banco Health Clinic and primary school in addition to providing educational materials in the indigenous territory.

The Nature Conservancy

The Nature Conservancy (TNC) has been active in Costa Rica for more than 30 years. Relevant to Conte Burica, TNC has assisted in the institutional strengthening of COVIRENA in addition to funding a recent scientific study: Rapid Ecological and Socioeconomic Assessment of the Burica Zone, Costa Rica. TNC contracted ICOMVIS-UNA (International Institute in the Conservation and Wildlife Management, National University) to carry out the study. The general themes of investigation included studies of birds, amphibians, bats, terrestrial mammals, and vegetation, where Mann assisted in the collection of data in 6 of the 21 data points. TNC is currently negotiating a variety of conservation projects with the ADI, however there is nothing set in stone.

Amigos de los Aves

Amigos de los Aves (Friends of the Birds) is a NGO that has been running a macaw breeding center and started releasing birds in Punta Banco in 2002 on the property of the Tiskita Jungle Lodge. To date they have released 48 scarlet macaws, with a 93% success rate. The program partakes in a mild education program, consisting of posters distributed in schools and public places, in addition to coloring leaflets used in the primary schools. The program contributes to the ecotourism of the area, with a permanent biologist and a steady flux of volunteers that all contribute to the local economy. Mann informally assists in the acclimatization of volunteers in this program in addition to networking with the indigenous Ngäbe community.

PRETOMA

PRETOMA (Sea Turtle Restoration Program) has been active in Punta Banco since 1996. They started working in Punta Banco after the Tiskita Foundation solicited

their help for establishing a hatchery program. In 1998 they extended their efforts to Conte Burica and started a hatchery in Río Caña Blanca, which was moved to Río Coco in 2003 for logistical reasons. They have since stopped activity in Conte Burica due to logistics and the lack of adequate data. The sea turtle program has contributed significantly to the local economy of Punta Banco, with the project active for 6 months of the year.

Final Budget: June 2007-September 2008

Item	**Total expenditure**	**Margot Marsh**	**Description**
Per diem Mann	$5,019.70	$4,100	Housing and food, includes purchases for meetings
Travel/Per diem Horwich		$1550	
US-Costa Rica travel Mann	$637.57	$750	
Internal travel	$428.06	$300	Bus travel and horse rental
Guides	$786.32	$800	Monitoring, interviews, long travel within reserve
Office /Misc.	$696.38	$500	Supplies, telephone, internet, printer
Photocopies & Educational Materials	$452.81	$1,000	
Equipment	$701.99	$700	COVIRENA communication*, field gear, digital camera
Health	$477.17		Medicine, doctor visits
COVIRENA donation	$500.00		
Administration	$970.00	$970	
Total	$10,670	$10,670	

***COVIRENA Budget Presented to COVIRENA January 16, 2008**				
Reason	**Date**	**People**	**Colones**	**Dollars**
radios	7.20.07	Katie		43.19
Cell phone	9.25.07	Katie		
Cell phone line	9.25.07	Katie, Santos, Santos	120,500	
Travel to Neily	9.25.07	Katie, Santos, Santos	4,200	
Eat in Neily	9.25.07	Katie, Santos, Santos	5,500	
Inquire about phone		Santos Mitre	5,000	
Inquire about phone		Santos Mitre	5,000	
Pay phone line		Santos Watson	4,000	
Travel and food in Neily		Santos Watson	5,000	
			149,200	
*The leftover given to the COVIRENA committee is currently being spent ($125.26).			331.56	
			Donation	$500
			Spent	$374.74
			Leftover*	$125.26

References

Browne, K. (2007) Tracking ex-students in the field: Katie mann (class of 2004-2005). 5(2):9.

Guevara Berger, M. and J.C. Vargas (2000) Perfil de los Pueblos Indigenas de Costa Rica: Informe Final. RUTA/Banco Mundial. San José, Costa Rica. Downloaded on July 8, 2008: http://wbln0018.worldbank.org/LAC/lacinfoclient.nsf/8d6661f6799ea8a48525673900537f95/40e93b74784fc9d985256ee8005a94b1/$FILE/Perfiles_Costarica_spa.pdf

ICOMVIS-UNA (2008) Evaluación Ecologia Rápida de la Zona Burica, Costa Rica. Consultoría para The Nature Conservancy, TNC. Instituto Internacional en Conservación y Manejo de Vida Silvestre, Universidad Nacional (ICOMVIS-UNA). Presented April 2008 in Punta Banco.

Mann, K. Community developmenft and adaptability in community conservation projects: a look at Amigos de los Monos in its inaugural year. Canopy, 6(1):7-10

Mora Navarro, O., R. Romero Vargas and V. Valverde Segura (2004) Manual de Capacitación Básica para la conformación de Comités de Vigilancia de los Recursos Naturales (COVIRENA). Dirreción de la Sociedad Civil. Ministerio de Ambiente y Energía. San José, Costa Rica.

Muñoz, R. (2005) Sistematización de la experiencias del programa de conservación de bosques y desarrollo humano de Conte Burica.

Reserva Indigena. Downloaded on March 6, 2007: www.interfazweb.net/ifzclientes/CAG/Agenda%2021/doc/126caso_reservasindigenas.pdf

Solano Salazar, E. (2001) La población indígena en Costa Rica según el censo 2000. San José, Coordinación Area de Censos y Encuestas, Instituto Nacional de Estadística y Censos. Downloaded on April 6, 2008: http://ccp.ucr.ac.cr/noticias/simposio/pdf/solano.pdf

Valverde Segura, V. (2006) Creación de COVIRENAS en el Área de Conservación Tortuguero: Avances y Reflexiones.

APPENDIX 1 Interview Form

Interview I

Interview #:
Date:
Guide:
Community:
Length:
Interviewee and spouse:
Comments:

FAMILY

1. What people live in this house? Who?

2. Were you born in Costa Rica?

3. If not, when did you leave Panama? Why?

PROPERTY AND LAND TENURE

4. Is this your first home in Conte Burica?

5. When did you build your home?

6. How much land do you have here?

7. How do you demarcate boundaries?

8. How did you claim the land of your home?

9. How is land transferred?

10. Is land tenure permanent?

FOOD:

11. What plants do you cultivate?

12. What domesticated animals so you have? How many?

13. What plants do you use from the forest?

14. What animals do you use from the forest?

15. What food do you purchase?

ANIMALS:

16. What species are pests?

17. What species are pets?

18. What species are used for medicine?

ECONOMY:

19. What is your source of income?

20. Do you barter?

FOREST USE:

21. Do you have access to any area of the forest?

22. Are there communal areas in the forest?

23. Do you need permissions to cut trees?

OTHER:

24. What is good about living in Conte Burica?

25. What is hard about living in Conte Burica?

26. What services are provided by the government?

27. Do you have access to these services?

CONSERVATION:

28. Do you participate in conservation payments?

29. If so, how much land do you conserve?

30. How much do you receive per hectare for each year?

31. Are you happy with this arrangement? Why or why not?

32. Would you be interested in working to protect the spider monkey populations? Why or why not?

33. Would you be willing to attend a community meeting to discuss protecting the spider monkey population in Conte Burica?

34. Can Katie return to learn about your farming?

QUESTIONS/COMMENTS FOR KATIE

APPENDIX 2. Student Interview Form

Entregar al miembro de su familia de mayor de edad y que tiene mas conocimiento de la montaña.

Preguntas

Nombre del estudiante:
Edad:
Nombre de mayor:
Edad:
Pueblo/lugar de finca:

Que tiempo tiene viviendo en el lugar?

A que año llego a su finca?

Cuando llegó, cual especies de monos tenia en su finca?

Cual especies de monos encuentra ahora en su finca?

Si habia desaperecido unos especies de mono en su finca, cuales son y cuando era la ultima vez que usted los han visto?

Que comen los especies diferentes de los monos? Cual arboles en specifico usan para alimentar?

Mono titi

Mono carablanca

Mono congo

Mono araña

Para entregar (3 Partes)

1) Preguntar la persona de la entrevista a contar una historia sobre un clase de los monos. Puede ser folklorico o una memoria real. Entregar la historia en una hoja.
2) Pasar la historia a la maestra para editar.
3) Leer la historia a la persona que lo contó para hacer seguro que lo escribió bien.

Estas historias serán usadas por la monera a comprender la extensión y historia de la distribución de los monos aqui en la zona de Osa. Ademas, las histrorias serán usadas para hacer un libro educacional sobre los monos. Para que las historias sean incluidas en el libro tiene que recibir permiso escrito de la persona que lo contó y el estudiante diciendo lo siguiente:

Yo doy mi permiso a Katie Mann, la monera, para usar esta información por materiales educativos sobre los monos.

Firmar estudiante _____

Firmar mayor _____

APPENDIX 3.

Meetings Attended by Mann

Date	With whom	Location
6.23.07	COVIRENA	Alto Río Claro
7.07	National Symposium for Primate Conservation	San Ramón
8.4.07	COVIRENA	Alto Río Claro
8.23.07	COVIRENA	Alto Río Claro
11.25.07	COVIRENA	Alto Río Claro
12.1.07	ADI	Alto Conte
1.5.08	Forest engineer of PSA	San José
1.17.08	Burica Conservation Strategy	Punta Banco
1.31.08	COVIRENA	Alto Río Claro
2.13.08	TNC	Puerto Jiménez
2.23.08	Amigos de los Monos	Alto Río Claro
2.25.08	ASOCOVIRENA	Alto Río Claro
2.26.08	Education Committee Alto Rio Claro	Alto Río Claro
3.15.08	ADI	Río Claro Bajo
4.3.08	Regulator Plan for Coastal Development	Cocal Amarillo
4.14.08	With possessor of land in Rio Coco	Santa Mónica, CA
4.17.08	UNA/TNC	Punta Banco
6.7.08	ADI/COVIRENA	Alto Conte
6.19.08	Grupo AmAN	Alto Río Claro
6.20.08	COVIRENA	Alto Río Claro
7.14.08	Grupo AmAN	Río Coco
7.26.08	High School Committee Alto Rio Claro	Alto Río Claro
7.29.08	Grupo AmAN	Alto Río Claro
8.29.08	Grupo AmAN	Alto Río Claro
8.30.08	High School Committee Alto Rio Claro	Alto Río Claro
9.3.08	Regulator Plan for Coastal Development	Cocal Amarillo

APPENDIX 4. COVIRENA Brochure

Help to protect the Río Coco watershed

Make a donation to build a COVIRENA outpost

Who are the COVIRENAS?

The COVIRENAS are a network of environmental protection committees, staffed by volunteers and accredited by MINAE (Minstry of Environment and Energy) who work as inspectors and protectors of Costa Rica's natural resources. In the Indigenous Territory of Conte Burica there are 3 committees comprised of Guaymí men and women.

What do the COVIRENAS do?

The role of COVIRENA is to report activity that has a negative impact on health, soil, air, water, plant, wildlife and scenic beauty. Here in Conte Burica the focus is to prevent hunting, tree cutting, and to protect water springs, rivers and streams.

COVIRENA in Río Coco.

There is a COVIRENA group working to protect the Río Coco watershed which houses the area's last remaining spider monkeys. In the near future we will build an outpost in Rio Coco to facilitate the work of COVIRENA. It will also serve as a center for the Guaymí community to meet with scientists and conservationists in their effort to build a local economy based in environmental conservation.

This initiatve is a collaboration between COVIRENA and Amigos de los Monos

The mission of Amigos de los Monos is to ensure the longevity and health of the monkey populations of the Burica Peninsula of Costa Rica. By using the endangered spider monkeys as flagship species and community conservation strategies, we seek to unite the multicultural community of the Burica Peninsula to achieve this goal in a socially sustainable manner.

www.amigosdelosmonos.org


ARKive
© Adrian Hepworth / www.nhpa.co.uk

APPENDIX 5. Primate Education Brochure

Mono Colorado o Mono Araña
En peligro de extinción

Distribución: Panamá hasta oeste central de Costa Rica

Dieta: frutas
Hábitat: copas altas de bosque primaria
Territorio: 25-98 hectarias
Tiempo de vida: hasta 27 años
Gestación: 8 meses
Dependencía de bebé: 2 años
Madurez sexual: 6 años
Razón de reproducción: 1 nacimiento cada 3 años

Amenazas: pérdida del hábitat y la cazaría

Necesidades de protección:

El Mono Colorado es el mono en la Peninsula de Burica que esta mas amenazada. Ellos viven en la cuenca de Río Coco dentro del Territorio Indigena de Conte Burica. La cantidad de ellos fue en disminución acelerada. Ellos necesitan protección estricta para el hábitat. No debe cazaría ni tala de los árboles en el habitat de ellos. La presencía de cazadores en el hogar es muy estresante para los monos y pueda inhibir la abilidad de ellos para reproducirse y repoblar la selva.

Mono Titi o Mono Ardilla

En peligro de extinción

Distribución: suroeste de Costa Rica y noroeste de Panamá

Dieta: insectos, vertebrados pequeños y frutas
Hábitat: bosque primario, bosque alterado y bosque alterado con frutales
Territorio: 35-110 hectarias
Tiempo de vida: hasta 21 años
Gestación: 7 meses
Dependencía de bebé: 1 año
Madurez sexual: 3-5 años
Razón de reproducción: 1 nacimiento cada año

Amenazas: desarrollo por turismo, electrocutación y pérdida del hábitat

Necesidades de protección:

El Mono Titi es el mono mas amenazada en Costa Rica porque la distribución de ellos es tan pequeña. La practica de alimentación los monos es amenaza para ellos, porque esto ha cambiado la alimentación y el comportamiento. Por favor cuidar los monos titis salvaje y no alimentarlos.

Mono Congo

Distribución: sur de Mexico hasta la costa noroeste de America Sur

Dieta: hojas y frutas
Hábitat: bosque primario y bosque secundario
Territorio: 27-91 hectarias
Tiempo de vida: hasta 20 años
Gestación: 6 meses
Dependencía de bebé: 1.5 años
Madurez sexual: 4 años
Razón de reproducción: 1 nacimiento cada 2 años

Amenazas: pérdida del hábitat y la cazaría

Mono Cariblanca

Distribución: Honduras hasta la costa noroeste de America Sur

Dieta: frutas, nueces, bayas, semillas, cascara de árboles, insectos, vertebrados pequeños, huevos, arañas y cultivas de humanos
Hábitat: bosque primario y bosque secundario
Territorio: 50-100 hectarias
Tiempo de vida: hasta 30 años
Gestación: 6 meses
Dependencía de bebé: 1 año
Madurez sexual: 4 años
Razón de reproducción: 1 nacimiento cada 2 años

Amenazas: pérdida de hábitat

APPENDIX 6. Newsletter

May 2007
Volume 1, Issue 1

Prehensile Tales

The official newsletter of *Amigos de los Monos*

Prehensile tails are very strong and serve as a fifth limb, which aid in locomotion and feeding. They are unique to some species of American primates like the spider and howler monkeys.

in this issue:

How it all started…

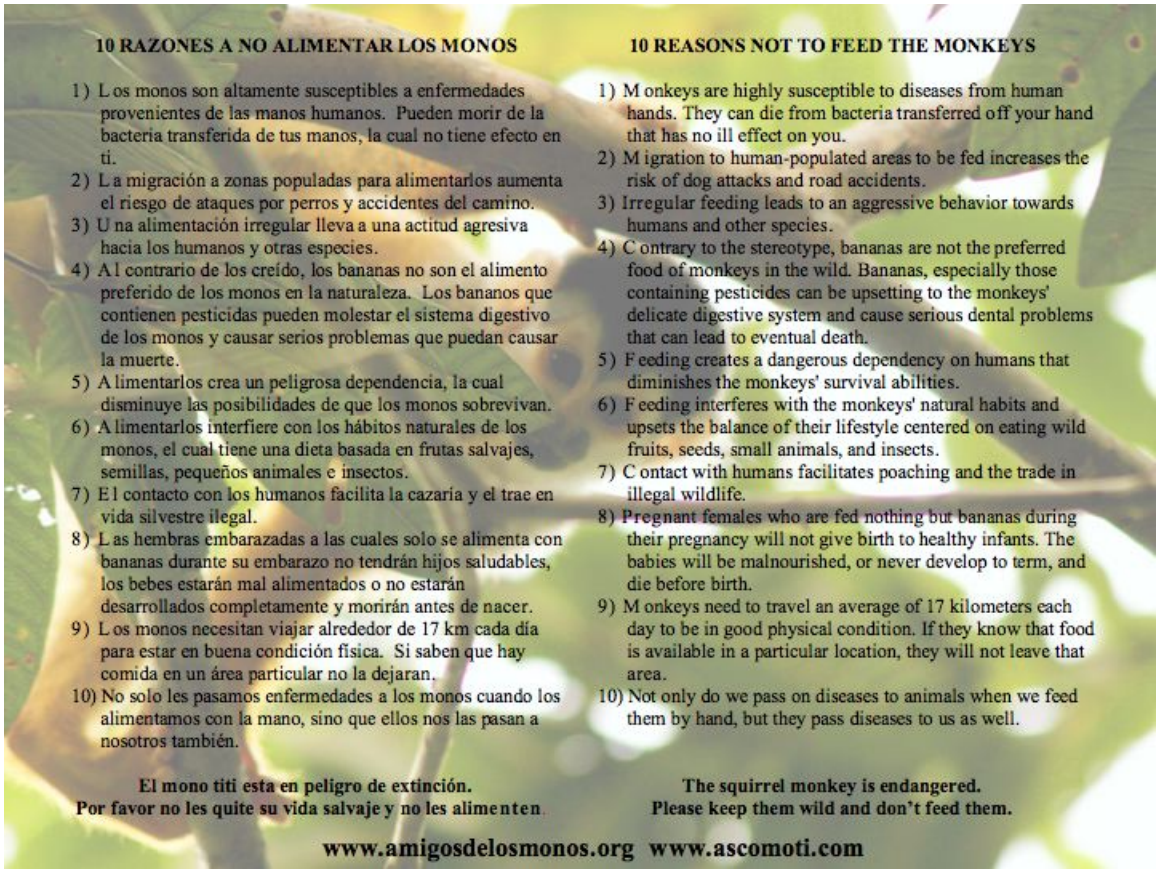
Amigos de los Monos project catalyst, Katie Mann, studied for her Master's in Primate Conservation at Oxford Brookes University ('04-'05) in Oxford, UK. She carried out a "pilot study to assess the need for primate conservation efforts in northern Punta Burica, Costa Rica" (published by Documenta Naturae), in response to the outreach of Canadian Gabriel Schmerler looking to support a primatologist in conservation efforts surrounding the village of Punta Banco. It was concluded that of the four primate species that reside in this area of Costa Rica, the spider monkey was in clear danger of extirpation, that is, local extinction. Additionally, concerned individuals approached Mann from the Guaymí (Ngäbe) Conte Burica Indigenous Reserve, who share their rainforest home with the elusive spider monkey. They were eager to collaborate on a conservation program.

While developing the project from the States, Mann had the privilege of sharing the project at the June 2006 Society of Conservation Biology Annual Conference. There she took a class with Dr. Robert Horwich and Scott Bernstein MSc called "Catalyzing Successful Community Conservation Projects." This class marked the beginning of a working relationship with Dr. Horwich's non-profit organization, Community Conservation, Inc. A seed grant has been awarded by Primate Conservation, Inc. that is supporting the work of mobilizing the community to form a conservation group whose goal is to prevent the loss of the spider monkey from the forests of the Burica Peninsula. The outlook for the project is hopeful, with a broad network of logistical support, while the project continues to secure much needed funds to realize the long-term goals.

Species Highlight: Panamanian red spider monkey

The Panamanian red spider monkey (*Ateles geoffroyi panamensis*) is the flagship species for *Amigos de los Monos*. A flagship species is an endangered, charismatic species that serves to attract attention and resources to an area for conservation efforts. The spider monkeys live in the forests of Río Coco and Río Caña Blanca, neighboring river valleys south of Punta Banco, in the indigenous reserve. The locals estimate that there are 30 monkeys left, making them extremely vulnerable to extirpation. The conservation status of all animals is directly related to their natural history and behavior. In the case of the spider monkey, they eat mostly fruit. This creates hardships for the spider monkey for two reasons. Firstly, their high-energy diet allows them to travel great distances and as a result they have well exercised muscles. This makes them a preferred source of wild meat, and their numbers have declined dramatically in the last 30 years as a result of hunting. Secondly, the fruit trees that spider monkeys depend on occur at low densities, and their home range is large in order acquire adequate food. Consequently, spider monkeys are dependent upon large tracts of undisturbed primary rainforest and are very sensitive to changes in habitat. The settlement cont. page 4

APPENDIX 7. No Feeding Primates Brochure



10 RAZONES A NO ALIMENTAR LOS MONOS

1) Los monos son altamente susceptibles a enfermedades provenientes de las manos humanos. Pueden morir de la bacteria transferida de tus manos, la cual no tiene efecto en ti.
2) La migración a zonas populadas para alimentarlos aumenta el riesgo de ataques por perros y accidentes del camino.
3) Una alimentación irregular lleva a una actitud agresiva hacia los humanos y otras especies.
4) Al contrario de los creído, los bananas no son el alimento preferido de los monos en la naturaleza. Los bananos que contienen pesticidas pueden molestar el sistema digestivo de los monos y causar serios problemas que puedan causar la muerte.
5) Alimentarlos crea un peligrosa dependencia, la cual disminuye las posibilidades de que los monos sobrevivan.
6) Alimentarlos interfiere con los hábitos naturales de los monos, el cual tiene una dieta basada en frutas salvajes, semillas, pequeños animales e insectos.
7) El contacto con los humanos facilita la cazaría y el trae en vida silvestre ilegal.
8) Las hembras embarazadas a las cuales solo se alimenta con bananas durante su embarazo no tendrán hijos saludables, los bebes estarán mal alimentados o no estarán desarrollados completamente y morirán antes de nacer.
9) Los monos necesitan viajar alrededor de 17 km cada día para estar en buena condición física. Si saben que hay comida en un área particular no la dejaran.
10) No solo les pasamos enfermedades a los monos cuando los alimentamos con la mano, sino que ellos nos las pasan a nosotros también.

El mono titi esta en peligro de extinción.
Por favor no les quite su vida salvaje y no les alimenten

10 REASONS NOT TO FEED THE MONKEYS

1) Monkeys are highly susceptible to diseases from human hands. They can die from bacteria transferred off your hand that has no ill effect on you.
2) Migration to human-populated areas to be fed increases the risk of dog attacks and road accidents.
3) Irregular feeding leads to an aggressive behavior towards humans and other species.
4) Contrary to the stereotype, bananas are not the preferred food of monkeys in the wild. Bananas, especially those containing pesticides can be upsetting to the monkeys' delicate digestive system and cause serious dental problems that can lead to eventual death.
5) Feeding creates a dangerous dependency on humans that diminishes the monkeys' survival abilities.
6) Feeding interferes with the monkeys' natural habits and upsets the balance of their lifestyle centered on eating wild fruits, seeds, small animals, and insects.
7) Contact with humans facilitates poaching and the trade in illegal wildlife.
8) Pregnant females who are fed nothing but bananas during their pregnancy will not give birth to healthy infants. The babies will be malnourished, or never develop to term, and die before birth.
9) Monkeys need to travel an average of 17 kilometers each day to be in good physical condition. If they know that food is available in a particular location, they will not leave that area.
10) Not only do we pass on diseases to animals when we feed them by hand, but they pass diseases to us as well.

The squirrel monkey is endangered.
Please keep them wild and don't feed them.

www.amigosdelosmonos.org www.ascomoti.com