

# Can tourism change the traditional use of Potsotaroki (*Trichilia pallida*)?

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**Abstract** — The traditional people who live from the resources that come from the forest had kept an almost symbiotic relation with their surrounding land, using the resources. However the contact with factors that are different from their culture, including tourism, can generate variations in the way of traditional handling, causing impacts in the environment. In this paper we analyze the traditional employment of the tree bark from “Potsotaroki” (*Trichilia pallida*), used as dye in the production of cotton handcrafts. The evaluated factors have the goal of registering the status of this forest species, and its relation with the natural process of insertion of the indigenous communities in the dominant social system. The research was done in an Asháninka community, from the high forest in the Peruvian Amazon.

**Index Terms** — Asháninka People, Indigenous handcraft, Potsotaroki, *Trichilia pallida*

## 1 INTRODUCTION

In their contact with modern societies the Asháninka indian communities have undergone many changes, mainly in relation to their utilization of natural resources, some overexploited, others under-exploited. Such was the case of forest species Potsotaroki (*Trichilia pallida*), whose usage techniques have been subjected to changes and whose amount of extracted bark has increased with the years.

This research describes the traditional aspects of the use of forest species *Trichilia pallida* as natural coloring for garments and accessories, a property that has been registered by indians in both Peruvian and Brazilian forests. Harvesting techniques are recorded along with the changes observed during the past years as a consequence of their contact with exogenous factors to the

Asháninka culture, among them, insertion in the market, intermediaries such as NGOs and the government, and tourist visitation.

This research is aimed at: *i*) documenting the traditional process of dying and the products that utilize the species *Trichilia pallida*; *ii*) assessing the influence of tourism and other outside factors on the traditional use of the species *Trichilia pallida*.

## 2 METHODOLOGY

The study was carried in two villages of the Asháninka ethnic group: the Camantavishi Indian Community and the smaller outlying Shima Village, both in the Peruvian Amazon, within the buffer zone of a system of protected areas.

This research can be categorized as an intercrossing of biological and anthropological sciences, or ethno ecology as incorporated to “Ethno science” in the 1960’s [1]. That approach permits an interdisciplinary view of the subjects of the study and encompasses greater amplitude of the spectra involved.

As a choice among the qualitative research methodologies a case study was used in which the Camantavishi community

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was analyzed in depth [2]. by means of participant observation and partially structured or semi-structured interviews [3], [4]. Forty-three women and twenty-three men were interviewed. In the participant observation, we followed the people in charge of bark extraction and of making handicraft. The whole procedure was evaluated, from collecting plant dyes to making the final product.

To verify whether damages were being caused to the forest species we traveled the ways and paths where the group collected Potsotaroki bark. As a companion to the inspections we had a member of the Indian group designated by the group chief. Track coordinates to the *Trichilia pallida* trees were recorded and the locations of usable species were geo-referenced along with regeneration data. Data collection led to mapping of species concentration in the more accessible areas to the community in the study. Data were later compared with those of forest inventories taken by NGO *Asociación Cutivireni* – ACPC in 2005 [5].

### 3 RESULTS

#### 3.1 Harvest techniques

Three cutting techniques were recorded for harvesting the bark: **1) Selective cut:** part of the bark is cut off around the stem and a narrow 20cm- to 55-cm border is left to allow nutrients to flow to the top of the tree; **2) Total cut:** a complete ring is cut off to obtain the most bark available. Machetes and stones are used for cutting as high from the ground as possible with the help of hands and feet. Often nearby trees are used as ladders to higher reaches. As a consequence of the use of this technique many bark-stripped and rotting individuals were observed; and **3) Felling:** the bark can be collected to its full. According to villagers' accounts, that type of harvest is generally carried when they need a larger amount of raw material or when many

cuts have been made into the same tree and little bark is left. In that case it is most convenient and faster to fell the tree and remove the remaining bark.

Villagers reported that upon finding a Potsotaroki tree in an area chosen for their crops they cut it down and kept only a small portion of the bark to be utilized by their wives in the future. The rest of the tree would later be burnt along with the other slashed trees. When the tree is on the borderline of the cropland it is felled, but left in the area so that other families may use its bark. In conversations with the former chief of the community he informed that in his time (at least one decade ago) they did not cut down a Potsotaroki tree.

Harvesting techniques seem to depend on the profile of the family that will utilize the bark. An older couple will opt for the selective cut in order to attempt to keep a safety margin. A young couple will try to save time and collect the greatest amount of bark when they go into the forest to search for the plant, opting for the total cut or for felling when that seems to be the case. As presented in table 1, there is a great difference between villagers in the Camantavishi nucleus and those in adjacent Shima, whose ages range between 30 and 40 years. Older people say they make a selective cut as opposed to villagers in Camantavishi, where an average proportion opts for that technique and the rest prefer total cutting or felling of the tree.

It must be highlighted that age range in the main village is 20-52 years, with greater proportion of women between 25 and 35 years old. In Shima age ranges from 20-40 years and 50% are between 30 and 40 years old. That age bracket, when related to the type of cut and use of *Trichilia pallida* may indicate that there is a greater tendency among young women to use cutting techniques that are harmful to the species as well as to substitute pre-dyed fabrics with artificial coloring for the natural dyes.

TABLE 1

TYPES OF CUT AS REPORTED IN INTERVIEWS

Camantavishi Village <sup>(1)</sup>		
Frequency		
	Absolute (nr)	Relative (%)
Selective cut	24	58.5
Total cut	4	9.8
Felling	13	31.7
Total interviewees	41	100.0

Shima Annex <sup>(2)</sup>		
Frequency		
	Absolute (nr)	Relative (%)
Selective cut	13	100.00
Total cut	-	-
Felling	-	-
Total interviewees	13	100.00

<sup>(1)</sup> nr:41<sup>(2)</sup> nr:13

### 3.2 Possible impact-generating factors

From the results of interviews one can infer that a change occurred in the way the forest species is being used nowadays. During the interviews we tried to identify and later characterize the probable factors that determined those changes.

#### 3.2.1 Availability of natural resources

The greater the distance to the individuals to be harvested, the longer the time and the greater the difficulty to obtain the final product. The availability of a resource can be measured in the field by real technical means such as those done in forest inventories (objective factors) or through other means such as the perception of distance that each person reports (subjective factors). This study took into account that people's references of time and space, which are different from those of someone who has access to mechanical means of transportation. As shown in table 2, in the main village of Camantavishi most people report that the *T. pallida* trees are relatively close to home, while all villagers of more remote Shima reported that the

species is easy to find. The village is more distant from exogenous factors such as intermediaries and tourists.

TABLE 2

PERCEPTION OF ACCESSIBILITY OF *T. PALLIDA*

Availability of species	Main center of community	
	Observations	
	Absolute (nr)	Relative (%)
Near	13	31.71
Far	28	68.29
Total interviewees (Nr)	41	100.00

Nr: 54

Availability of species	Shima	
	Observations	
	Absolute (nr)	Relative (%)
Near	13	100.00
Far	-	-
Total interviewees	13	100.00

During guided visits after the species, trees mature enough to be harvested were georeferenced along with regeneration data. A map was then drawn plotting those data and the harvesting routes followed by villagers. Travel time from the center of the community to the first tree was approximately one hour; that to the last individual was five hours. Thirteen adult trees and three young plants were located.

Data from the 2005 forest inventory by NGO ACPD and routes followed by Indians to reach the dyes were then integrated. From the species concentration map one can observe the magnitude of the area to be traveled in order to locate new individuals as well as their location as related to protected areas. The inventory indicates that there is a high concentration of *T. pallida* on the slopes above 700m altitude. That form of natural association is characteristic of the *meliaceae* family. The availability of the resource is high as compared to that of other species inventoried in the communities and in the protected areas [5], [6].

### 3.2.2 Tourist visitation

Tourism in this zone is mainly of a scientific and ethnic nature. When asked about the presence of tourists during the past years, 74% of interviewees stated that the number has remained unchanged, while 26% mentioned that number had increased (fig 1).

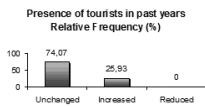


Fig. 1. Perception of number of tourists in the community

Those figures could be compared with statistical data that indicate actual tourist visitation, but it is not a custom nor is there any local norm that regulates visitor control. Data on diversity and number of visitors to those zones are referenced by oral transmission of information provided by indians, which are valid for this study.

Supporting the reports on the presence of tourist visitors, 90% stated that the main buyers of their handicraft are the intermediaries and only 10% stated that buyers are tourists that pass through the community on their way to Parijaro Falls or those brought in by NGO ACPC.

### 3.2.3 Contact with intermediaries

The main intermediaries identified by indians are traders, NGOs and government institutions. When traders arrive in the communities, generally every 15 days, they bring a variety of products of interest to indians such as milk, canned tuna, flashlights, batteries, soap, matches, synthetic-dyed cotton fabric, beer, biscuits, pans, blankets, radios, etc. [7]. As means of payment indians barter produce and forest products, as well as dyed fabrics.

The question on indians' perception about the influence of intermediaries on the quantity of bark utilized was limited to the presence

of ACPC during the past years (2000-2005). Through its projects, the NGO is the only source of continuous demand for the indian products. As recorded in the community, of the 41 interviewees in Camantavishi, 65.85% of villagers stated that they did not notice any type of change after the arrival of the NGO and 34.15% noticed some changes.

## 4 SOME CONSIDERATIONS

There is a clear reduction in the use of Potsotaroki (*Trichilia pallida*) for day-to-day clothing. Until 2003 a high percentage of women observed (60%) were wearing Cushmas dyed with Potsotaroki and in 2006 only 8 women (20%) were seen in dyed Cushmas. Reduction in three years was 40% in the use of natural dyes. That phenomenon is observed not only in Peruvian communities, but also in Bolivia's Tsimane population, where plant dyes are progressively disappearing due to substitution of artificially dyed cotton fabrics brought in by traders for the natural fibers [8].

As well-mentioned by Rojas [9], when a society adopts certain behaviors that belong to another cultural frontier, one of the reasons for that change is greater efficiency of one method against another. The process of dyeing with *Trichilia pallida* is considered long and time consuming [10], [11], requiring greater dedication, often to the detriment of other tasks that are equally important within the family nucleus; that may explain the changes observed.

Camantavishi's community is currently exposed to many factors of change, among them tourism, the presence of NGOs, government institutions and intermediate traders. It may be stated that the latter act indirectly as tourists as they take handicraft to be sold in town. From the data presented it can be deduced that the impact that a "direct tourist" visitor can cause was considered minimal, for the number of visitors during the past years remained unchanged.

## 5. REFERENCES

- [1] Marques, J. G.. O Olhar (des) multiplicado. O papel do interdisciplinar e do qualitativo na pesquisa etnobiologica e etnoecologica. In: AMOROZO, M.; MING, L. C.; SILVA, S. P. Métodos de coleta e análise de dados em Etnobiologia, Etneoecologia e disciplinas correlatas. Rio Claro: UNESP /CNPQ. 2002. p.30-46.
- [2] Trivinhos, A. N. Introdução à pesquisa em ciências sociais: a pesquisa qualitativa em educação. São Paulo: Atlas, 1987. 175 p.
- [3] Haguette, T. M.. O objeto das metodologias qualitativas. In: \_\_. Metodologias qualitativas na sociologia. Rio de Janeiro: Vozes. 1992. p. 55-92.
- [4] Viertler, R. 2002. Métodos Antropológicos como ferramenta para estudos em Etnobiologia e Etneoecologia. In: AMOROZO, M.; MING, L. C.; SILVA, S. P. Métodos de coleta e análise de dados em Etnobiologia, Etneoecologia e disciplinas
- [5] ACPC- Asociación Cutivireni. Inventario e Plan de Manejo forestal en la comunidad Indígena Camantavishi. Lima. 2005. 50 p.
- [6] Kometter, R. Expedientes técnicos para la recategorización de la Zona Reservada Apurimac. Lima: Conservación Internacional-Perú. 123 p. Documento producido por el proyecto GEF/ Banco Mundial-CI-Perú. 2001
- [7] Peralta, P. Análisis de los circuitos económicos en Vilcabamba. Lima: ACPC; CI-Perú. 150 p. Informe de evaluación para la recategorización de las Áreas Protegidas. 2001
- [8] Reyes, V. G. Indigenous People, Ethnobotanical knowledge, and market economy. a case study of the tsimane' amerindians in lowland Bolivia. 2001. 273p. (Thesis-Doctor of philosophy) - University of Florida, Florida. 2001
- [9] Rojas, Z. E . Los Asháninka: un pueblo tras el bosque, Contribución a la etnología de los campos de la selva central peruana. Lima: [s.n]. 1994. 354 p.
- [10] Veber, H. 1996. External inducement and non-westernization in the uses of the Ashaninka Cushma. Journal of Material Culture. London, v.1, p. 155-183, Jul 1996
- [11] ACPC-ASOCIACIÓN CUTIVIRENI. Diagnostico de las capacidades productivas en las Comunidades Asháninka del río Ene. Lima. 2001. 32 p.

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