ISSN: 2230-9926

Available online at http://www.journalijdr.com

IJDR

International Journal of Development Research
Vol. 10, Issue, 10, pp. 41555-41560, October, 2020
https://doi.org/10.37118/ijdr.20195.10.2020

RESEARCH ARTICLE OPEN ACCESS

PALM TREES AND EXTRACTIVISM WITH CHIQUITANA ETHNICS: SAN NÍCOLAS DEL CERRITO COMMUNITY - SAN IGNÁCIO DE VELASCO – BOLIVIA

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ARTICLE INFO

Article History:
Received 18th July, 2020
Received in revised form
17th August, 2020
Accepted 20th September, 2020
Published online 30th October, 2020

Key Words:
Arecaceae. Chiquitano. Traditional knowledge. Ecological management. Challenges.

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ABSTRACT

In various regions of the world, ethnic groups have developed survival strategies using local flora. This work is the result of studies on forms of appropriation and management with Arecaceae, highlighting practices and knowledge of the Chiquitana ethnic group, in the community of San Nícolas del Cerrito, San Ignácio de Velasco, Bolivia, border with Brazil. Data collection was carried out through semi-structured interviews and participant observation. With the analysis of the collected information, it was possible to classify that they carry out extractions of nine species, of which they use five for diverse ends, meeting the basic human needs. Babaçu "Cusi" (Attalea speciosa Mart. Ex Spreng.) Stands out as the most used species, responsible for twelve products, constituting the ethnic ecological cultural heritage. The community is in the cerrado biome, with little diversity of Arecaceae species, but with greater use of products compared to the Yuracaré ethnic group of the Amazon biome, which has a greater variety of species. Extractive practices are guided by cosmological, biological and environmental factors, there are challenges for their maintenance, as some practices and derived products have been abandoned, due to factors such as: the regional economy, new customs and the education of new generations.

Citation: ***Ms. Denildo Da Silva Costa and Dra. Célia Alves De Souza.*** "Palm trees and extractivism with chiquitan ethnics: san nícolas del cerrito community - san ignácio de velasco – bolivia*", International Journal of Development Research*, 10, (10), 41555-41560.

INTRODUCTION

The man-nature relationship is one of the oldest practices in terms of plant management (Galvão, 1979), and it can subtract several wood and non-wood products, according to the species available in each region. This work investigated the extractive relationship with an indigenous group today, the Chiquitano. People defined by Costa (2006) as generic ethnicity, representing an amalgam of dozens of peoples and cultures unified in Jesuit religious missions in the late 17th and 18th centuries, central region of South America. This process of interethnic relations that constitutes them culturally, today shared by the territorial political frontier of Brazil and Bolivia, where their villages and communities are in the department of Santa Cruz (Bolivia) and states of Mato Grosso and Mato Grosso do Sul (Puhl, 2011). Culturally interacted with the Cerrado biome (Bosque seca Chiquitano), the Chiquitanos manage vegetables for different purposes, where on this rich floristic diversity, Beechet al (2017), describes Bolivia as occupying the eleventh position with 2934 species, in a list led by Brazil with 8715 species. The vegetable highlighted by the research were palm trees, Silva et al. (1977), ponders as common names for all species belonging to the Arecaceae family. Considered as the third most used vegetable in the world by man, to obtain products and derivatives (JOHNSON, 2010; BALSLEV et al., 2016). They have approximately 2,600 species (BAKER; DRANSFIELD, 2016), divided into about 200 genera and six subfamilies (JOHNSON, 2010), each representing an important line of evolution (DRANSFIELD, 2008), of which 90% are found in tropical forests in in terms of drainage and altitude, palm trees are subject to characterization by distinct species associations (Henderson, 2002; Couvreur; Forest; Baker, 2011). About Arecaceae in Bolivia, according to Moraes, Zenteno-Ruiz and Fuentes (2017), 66 species are found, representing 2.3% of the plants, with 6 endemic species. According to Johnson (2010), Buriti (Mauritia flexuosa L. f) is the most abundant palm in Latin America, a continent that is second only to Asia in species diversity. South America is the source of most of the commercial heart of the world; however, this type of extraction

prevents natural regeneration, eliminating a natural source of seeds. Homma (1993) classifies extractivism into two categories: predatory and non-predatory: the predatory definition is the result of which annihilation, when the exploitation of the natural resource extinguishes a certain species and also when the speed of regeneration is lower than the extraction capacity. An example of this process is the extraction of wood and palm hearts. Non-predatory extractivism is that which, even with the withdrawal of the product, maintains the integrity of the parent plant, such as, for example, the extraction of latex from rubber trees, from Castanha-do-pará, and from Babaçu coconut. For traditional communities, extractivism is a practice that faces many challenges and resistance, which is why Castro (1997) considers these spaces as producers of knowledge and holders of management methods, essential to the preservation of biodiversity. The objectives of this study were to verify the forms of appropriation with extractive management with the Arecaceae and to dialogue with the current consequences of these practices, highlighting the knowledge of the Chiquitana ethnic group about the processes in the San Nícolas Del Cerrito community, San Ignácio de Velasco, Bolivia.

MATERIALS AND METHODS

The research took place between the years 2015 and 2016 in the locality figure 01, of a qualitative anthropological nature (BERNARD, 2006), two work fronts were carried out: cabinet studies with readings of specific bibliography and field work (MALINOWSKI, 1978; BERNARD, 2006 and LÉVI-STRAUSS, 2012). The fieldwork for data collection, based on participant observation, living in community (WHYTE, 2005 and BERNARD, 2006), in this phase the research was assisted with a field notebook and interviews with semi-structured questionnaires (BERNARD, 2006) methodology that provided freedom for the informant to dialogue beyond the proposed questions. To interact with the informants, the Snowball methodology (BAILEY, 1994; ALBUQUERQUE et al. 2008) was used, where extraction specialists are identified and appointed by community members, becoming a key informant. in the appointment of other extractivists, configuring a network of informants interconnected by practices and knowledge. All nine extractivists were interviewed, where they sometimes accompanied the forest. The data analysis was organized in a qualitative way, from individual samples to collective cultural data (BERNARD, 2006).

RESULTS AND DISCUSSION

The history of the community of San Nícolas Del Cerrito began in the 1970s, with a process of migration from other communities in the region, currently consists of thirty-two families, having an indigenous structure of Christian missionary heritage. The Chiquitano as an indigenous group do not have agricultural production oriented by trade, but by self-consumption, articulating an economy that combines agriculture, hunting, fishing and gathering, activities that for the law do not represent any criteria to define the extent of ownership and from the earth. Balza (2001) defines them as Selvicans, that is, who performs forest management with agriculture. With the advent of the colonizing process and later with national policies, they were classified as peasants (denomination the population of peasants, rural producers) and their territories were titled in small areas.

Plant extraction with Arecaceae is carried out without commercial purposes and with different species for: food, various constructions, medicinal, ritual and domestic utensils. The name in the community for all Arecaceae is the term Palma (palm tree, in Spanish) and species-specific classifications: Cusi: Babaçu, “Babaçu grande” (Attalea speciosa) and Cusicito: Indaiá, “Babaçu Pequeno” (Attalea eichleri). Of the 66 species of Arecaceae in Bolivia (Moraes, 1996, 2015 and 2017), for the region (Vides-Almonacfid, Reichle and Padilla, 2007) list 19 species and Molina (2014) classifies ten species of edible palms used by traditional communities. In San Nícolas Del Cerrito, they related the knowledge of nine species, of which five are used for different purposes, all managed species are found in Brazil. Below is the table on palm trees and management in San Nícolas del Cerrito:

The products of Arecaceae, fall into the wild extraction modality, classified as primary products, (JOHNSON, 2010). Among the extractivists, the tools used to collect these plants are machete, sickle and, in some cases, the chainsaw. A very common practice is the management of palm trees kept next to the gardens that are preserved together with the cultivars. Montoya and Moraes (2014), in research with the Yuracaré ethnic group also in Bolivia, listed 14 species of palm trees in 43 uses. In San Nícolas Del Cerrito, 5 species are used, which produce 24 products. The differences are justified because the Yuracaré are based in the Amazon biome, a place that has a greater diversity of species; the Chiquitano, in the cerrado biome, which does not have so many varieties, but the proportion of uses and products is greater in relation to the low diversity of species. Among the Yuracaré, the average of 3.1 products per palm and the Chiquitano accounted for an average of 4.8 per species. Regarding style and classifying the material cultural tradition, Balza (2001) classifies as semi-nomad countryside, adaptations to the savannah biome with the manufacture of portable and disposable objects for seasonal mobility. Palm trees with cut petioles in the regeneration process are evident throughout the community. Occurring in the two types of predatory and non-predatory extraction (Homma, 1993): the predatory practice occurs with two species: Babaçu (Attalea speciosa) and Bocaiuva (Acrocomia aculeata) to obtain heart of palm. For making jasaiés (different cargo baskets) it is not predatory, as it only subtracts apical meristem (shoots) that soon regenerates. Extractive practices with palm trees are not restricted to sexual genders (men and women practice it, differentiating the more exhaustive work in charge of male activity), they are carried out respecting the lunar cycles, climatic cycles of the seasons and the biological phases of the plants. As two interviewees report:

"We cut straw in the forest at the full moon phase, it is the moment that has the longest durability against the pets and resists the longest". (A. O, 65 years old). “The best time to work with straw is after August, with dry weather, without rain, the work done lasts longer” (L. R, 60 years old). For collections, territorial spaces of the community and outside are used, in private areas of farms. What Balza (2001) distinguishes between land and territory, the space of the community area corresponds to land demarcated by the state, but not corresponding to traditional territory. When the resource is outside the Chiquitano's environment, permission is required, which is usually granted by farmers due to ties of friendship, religious cohabitation or labor relations.

Table 01. Known palm trees, used and quantities of products in the extraction in San Nícolas del Cerrito

Amount Palm Trees	Scientific name	Chiquitana Language	Spanish	Portuguese	Use	Use Plant part used	Products	Quantity of products
1	*Acrocomia aculeata* (Jacq.) Lodd. Ex Martius	Totaixh	*Totaí*	Bocaiuva	Yes	Fruits[1] - Mesocarp (pulp) Frutos[2] - Almonds Trunk - Sheath	[1] Food; [2] Food; [3] Food.	03
2	*Mauritia flexuosa* L.f	AsuaIxh	*Palma Real*	Buriti	Yes	Leaves[1] - Blade and Petiole Leaves[2] - Petiole	[1] Brooms; [2] Large cargo baskets; small household baskets; Sieves and; construction of fences;	05
3	*Allagoptera leucocalyx* (Drude) Kuntze	Masunukutush	*Motacuchí*	Coco da Vassoura	Yes	Leaves[1] - Blade and Petiole Fruto[2] - Almonds	[1] Broom [2] Food	02
4	*Attalea speciosa* Mart.	O-Kusixh	*Cusi*	Babaçu	Yes	Leaves[1] - Blade and Petiole Leaves[2] - Petiole Leaves[3] Apical meristem Fruits 4 - Almonds Trunk 5 - Sheath	[1] Housing coverage and; religious object; [2] Construction of fences; Construction of housing and walls; roof construction; [3] Oval cargo basket; freighter basket; round; fan; mat e; objects imprison birds; 4 Food; 5 Food	12
5	*Attalea eichleri* (Drude) Henderson	Nasucusixh	*Cusicito* *Cusi Chico*	Indaiá	Yes	Leaves[1] - Blade Leaves[2] - Blade and Petiole	[1] Religious object; [2] Housing coverage.	02
6	*Atallea phalerata Mart. Ex Spreng.*	Motacuxh	*Motacú*	Acuri	No			
7	*Mauritiella armata (Mart.) Burret*		*Marfil*	Caranã ou Buritiana	No			
8	*Astrocaryum aculeatum G. Mey*	Chontaxh	*Chonta*	Tucum	No			
9	*Syagrus sancona (Kunth) H. karst.*		*Sumuqué*	Guariroba do Cerrado	No			

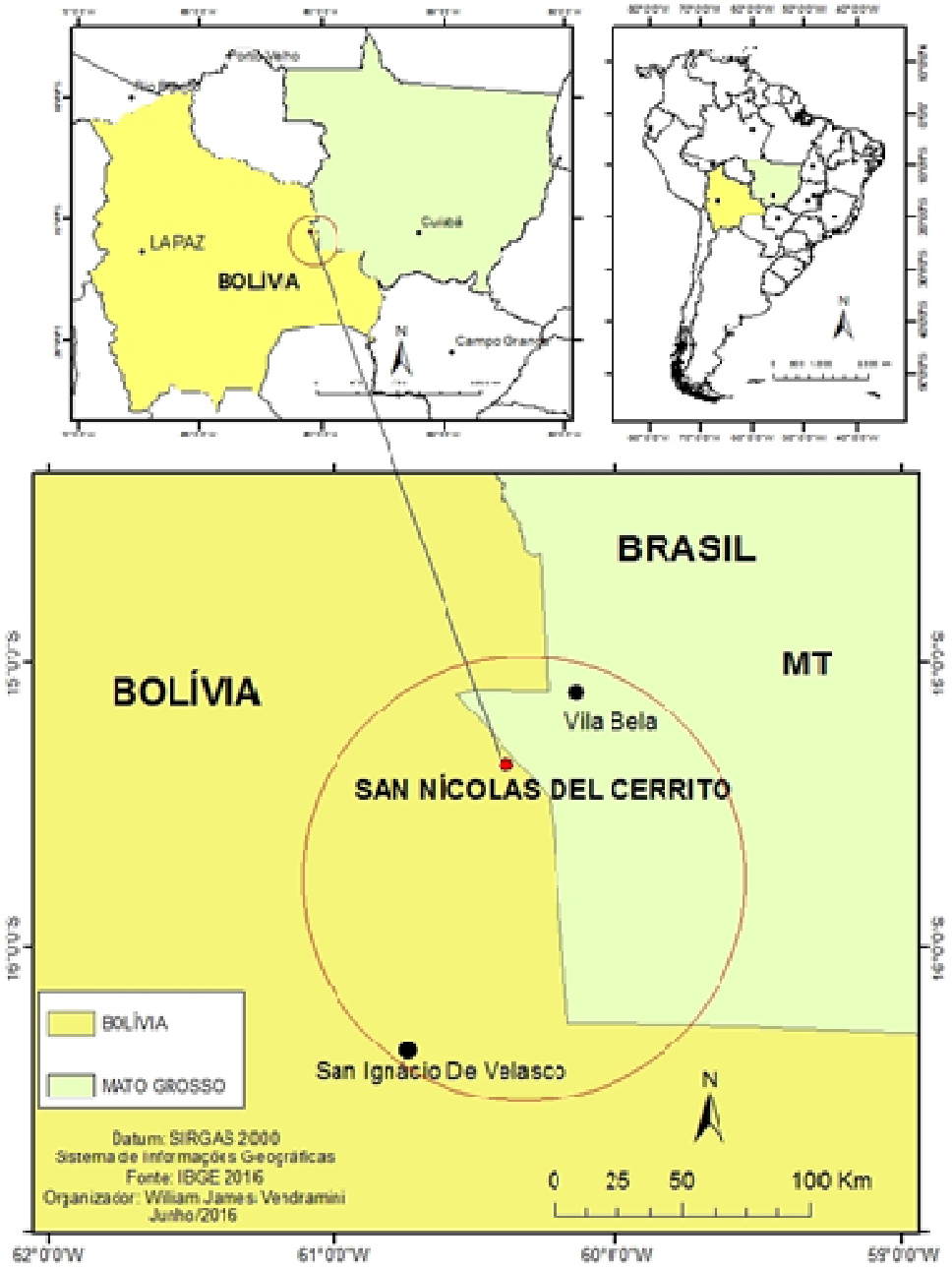

Figure 01. Location map of the researched community: San Nícolas Del Cerrito - Bolivia

For Urioste (1992) the Bolivian agrarian reform only compelled the Indians to recognize spaces under an agrarian logic and never considering their other forms of use of space, much less taking into account their cultural character with their own identity, different from the national identity. Some works involve rituals of collectivity as a social group, for example, building houses. The first step is to build the entire support structure and then cover it with straws, which are harvested in the forest in alternate periods (avoiding strong heat), so the best time to work on the collection is during the morning and / or late afternoon. Once harvested, they are piled up in volumes so that they can be transported in some way: human strength, animal or motorized traction, for collective work in the construction of housing covers.

CHALLENGES OF EXTRACTIVISM

Through research we understand that extraction is something intrinsic to the Chiquitan ethnicity and an important source of survival for the region; however, these practices face challenges for their maintenance. Some customs have been abdicated, replaced and others are undergoing profound changes. There is strong pressure bound to economic interests in the region where livestock sets the rules, changing the environment and the relationship between man and space. This relationship interferes not only in the practices of extractivism but also in the entire ecological chain. Even with enormous potential for products and plant derivatives offered by palm trees (BROKAMP et al., 2011). A very common practice for farmers is to try to keep the space free from native plants (preventing the establishment of palm groves and other vegetables). Pressure in the region is increasing for the advancement of new areas for the cultivation of grasses and grain agriculture - especially soybeans - both in the department of Santa Cruz (Bolivia) and in the state of Mato Grosso (Brazil). Family and school education are the determining factors, as empirical teachings and management techniques are not linked to new generations. The break with local knowledge aborts the continuity of traditional and cultural values of

knowledge about extractive management. Due to globalization, many products are incorporated or even replaced, so much so that in the community we hear the following report:

"Baskets of palm trees are no longer made, you can buy a ready bag" (J. C. O, 52 years old). With regard to education, extractivists mention that the practice they dominate reflects on the role of the family, the values and knowledge that have been passed down for generations.Youth is the moment of breaking the bonds between father and children, which Martins (1997) defines as the beginning of a new family unit or the search for new life alternatives, a powerful interference of the need for money for the new generations. Migrations occur with the belief that they are earning additional money temporarily.There is an enticement of the dominant economy to work on livestock farms, so the pace is broken by economic practices, the school contributes by denying this traditional knowledge of the community, an instrument alien to the transformation of realities. In the words of Ives, Barros and Nakayama (2015), the knowledge and history of the elderly is not just running after the memories and experiences of a lifetime, but a cultural heritage that, if not recognized and valued, will be irretrievably lost in time and space. Let's see an extractivist's testimony about the new generations:

"I learned from my parents, they taught how to make, collect in the woods, work in the fields, everything! Today parents do not teach, they work on farms with a boss, they do not have time to teach their children, who do not know, do not learn and have nothing to teach ahead "(A. O, 65 years old). In all interviews with extractivists, the memory of learning while they were young was passed on, passed on by parents or close family members, sustaining the importance of traditional education and cultural values passed on from generation to generation. From the research, it was understood that the economic pressure along with the new educational forms foster the breaking of the rhythm of traditional education in the teaching of generations, grounded by globalization and government oppression. Despite all these challenges, the school and the community must value the protection of natural and cultural resources. An alternative for the region is the rationality for Ecodevelopment, proposed by Sanchs (1986), an alternative development strategy that takes advantage of the primary productivity of ecosystems. Ecological techniques adapted to the ecological and cultural conditions of each community, technological self-management of its resources, based on three pillars: social justice, economic efficiency and ecological precaution. In San Nícolas Del Cerrito fewer and fewer people practice extractivism, an activity restricted to the elderly, and there is no concern for the transmission of this knowledge to new generations. Today the community is within an area of protection and integrated management, with environmental control over public management with prohibition and restriction actions by the government.

FINAL CONSIDERATIONS

The proximity between man and vegetables is intrinsic to cultures. Extractive practices are ecologically structured with the environment and traditional knowledge of the region. They are inseparable from the cosmological and environmental cycles, respecting the biological and plant cycles. In the studied region, the Chiquitana ethnic group has an intimate relationship with the Arecaceae, an important source of resources for the entire San Nícolas Del Cerrito community, which maintains extraction as a daily practice. We can define extractivism, in this community, as a plural activity due to multiple uses depending on needs. Regarding the uses of the species, the Attalea genus deserves special mention, with a greater number of species and uses, Attalea speciosa and Attalea eichleri are more accessible in all seasons, with greater dispersion over the community area, more product offer and representing more than half of the uses. We consider external factors to be the regional economy being raised by livestock that alters the human relationship with environmental resources and national policies of cultural standardization, supporting the extractive consumption of the enjoyment of resources, protecting strict rules of control and prohibition. The internal factors are the replacement of many extractive products by industrialized ones and, at the same time, traditional education suffers ruptures, because the extraction techniques that are not taught to the new generations, even with all these challenges, extraction is resilient, we just don't know until when.

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