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Bruna Cigaran da Rocha & Vinícius Honorato de Oliveira

Virgin Forest? The long human past of the Tapajós Valley

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BRUNA CIGARAN DA ROCHA & VINÍCIUS HONORATO DE OLIVEIRA[1]

Virgin Forest? The long human past of the Tapajós Valley[2]

Archaeology is by its nature one of the most productive research fields for studying the past, especially of societies without writing systems. In Brazil, archaeology also allows us both to observe a number of forms of interactions amongst Amerindian societies and to contemplate how these peoples have altered the landscape, embedding it with meaning and rending the environment more productive. The idea that Amazonia has been modified by human action for millennia –and that the notion of a virgin forest is nothing but a myth –has prevailed in debates on the matter, to such a degree that experts have already accepted this assumption as a starting point (e.g. Balée, 1989; Denevan, 1992a; Heckenberger et al., 1999, 2003).

This article looks at the archaeological heritage along the rapids of the Tapajós River and its tributaries, such as the Juruena and Teles Pires Rivers, based on the existing

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[1] BRUNA CIGARAN DA ROCHA is Professor of Archeology at the Universidade Federal do Oeste do Pará (UFOPA), and VINÍCIUS HONORATO DE OLIVEIRA is graduated in History from the Universidade Federal de Minas Gerais, Brazil.

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[2] This article was translated by Louise Cardoso de Mello and originally published in http://www.alternautas.net/blog/2016/10/19/virgin-forest-the-long-human-past-of-the-tapajs-valley on October 19th, 2016.

record.[3] Apart from archaeology, historical sources as well as oral history may also shed some light on the (often turbulent) past of the Tapajós Valley after the Portuguese conquest (Menéndez, 1981/1982, 2006 [1992]). They also point at the possible location of archaeological sites; stemming from the review of historical and archaeological sources, Alexandre Robazzini (2013) has compiled a comprehensive table containing 423 archaeological sites in the Tapajós Valley. Notwithstanding the limited amount of archaeological fieldwork carried out in the region where the government intends to build the Tapajós Hydroelectric Complex (CHT) –and in contrast to the idea promoted by the official discourse that the area in question is empty and has no history[4]- we present some evidence here that points to the richness and singularity of the existing archaeological heritage. Far from being located in a virgin forest, the Tapajós and its tributaries irrigate an area that has been anthropized, or in other words, altered by humans for thousands of years.

Archaeological surveys in the Tapajós River have been concentrated in its lower course (e.g. Gomes, 2001; Guapindaia, 1993; Kroeber, 1942; MacDonald, 1972; Palmatary, 1960; Roosevelt et al., 1991); today typical ceramic artefacts from the area may be found scattered across museums both in Brazil and around the world.[5] This is due, in part, to the greater accessibility to the lower Tapajós, which is easily navigable. However, it is important to recall Almeida's note, according to which:

'The rapids are key areas for understanding the pre-colonial period in Amazonia. These spaces have been persistently inhabited by indigenous groups, who have

[3] E.N.: See also in this volume 'Sobre sítios arqueológicos e lugares significativos: impactos socioambientais e violações dos direitos culturais dos povos indígenas e tradicionais pelos projetos de usinas hidrelétricas (UHEs) na bacia do rio Tapajós', by Francisco Antonio Pugliese Jr. and Raoni Bernardo Maranhão Valle.

[4] See also Abdala (2012), where Maurício Tolmasquin, CEO of the Company for Energetic Research (EPE), supports the concept of platform-plants for the Tapajós River as a green alternative for the area, 'where there is no human occupation. There is practically no environmental impact because all of it will be reforested and the hydroelectric power plant will sit in the middle of the forest. The idea is not to have any cities in the surroundings. We shall develop these innovations so as to be able to use our resources,' he says.

[5] The ethnologist, linguist, and archaeologist, Curt Nimuendajú (1953, 2004) was the first to understand the magnitude of the archaeological sites locally and adjacently deposited, and to relate them to the Tapajó, who used to dominate a large part of the region.

transformed them (and elsewhere) into intersections of contact networks' (2013: 354).

In this line of reasoning, there are further data that indicate the antiquity of the Amerindian populating of the interfluvial areas of the valley. Previous ceramist occupations have been identified in Parauá, a dryland area west of the left margin of the lower course of the river (Gomes, 2008). This calls attention to the fact that, in addition to the occupations' vestiges along the rivers' lengths, there are hundreds of archaeological sites in dryland areas, which has also been confirmed east of the Tapajós River (Martins, 2012; Stenborg et al. 2012; Perota, 1979, 1982).

First inhabitants

The first human groups in the region dwelled in an environment that was more similar to the current savanna-like *cerrado* vegetation than to the Amazon forest (Rossetti et al., 2004). These small-sized nomad groups initiated processes of environmental modification with the use of fire and created 'resource islands', which consist of phytogeographical traits resulting from vegetal remains and concentrations of seeds in their camps and trails, as identified amongst the Nukak hunter-gatherers in Colombian Amazonia (Politis, 1996).

It is possible that the rock art heritage found in the Tapajós River, its tributaries, and interfluvial areas might be attributed to these first inhabitants. Originating in the Brazilian Central Plateau, the Tapajós River is geologically old, with crystal-clear water and sandy soil created by erosive processes (Morais, 2008). Said geological features result in an abundance of sites and media for rock art. In addition to its scientific and artistic value to Brazilian society in general, this heritage has symbolic meanings that are highly relevant to the Amerindian peoples that currently live in the region, thus being inseparably related to the landscape in which they are found. This is the case of the rock art at the Cantagalo cliffs, located on the left margin of the upper Tapajós River, eight meters over the maximum river level during the flood season (Tocantins, 1877), where anthropomorphic and zoomorphic figures as well as

other forms are depicted in shades of ochre red.[6] The Cantagalo rock art is referred to as 'Muraycoko writing' by the Munduruku.[7] On the Juruena River, other examples of rock art with apparently abstract figures also painted in ochre red have been recently photographed.[8]

Furthermore, rock art engravings are also known to be found in the region: in the Caldeirão Island on the Teles Pires River, approximately 30 rock walls present two different techniques of manufacturing (long-trace pecking and thin-channel scratching), with depictions of geometric, anthropometric, and zoometric figures (Pardi, 1995-1996: 3). In the São Luiz do Tapajós community, threatened by the hydroelectric power plant (UHE) of the same name, both anthropomorphic and zoomorphic figures have been registered on rocky boulders (Camargo Corrêa et al., 2008, v. 19-22: 354, 355). Despite that, much is yet to be known about the set of rock art representations along the upper Tapajós and its tributaries.

Another problem to be faced is that the area the Federal Government intends to reach with the construction of the CHT is among the most promising ones for the study of the first millennia of occupation in Amazonia.[9] The geological features mentioned above result in an abundance of raw materials for the manufacture of lithic artefacts; sophisticated and beautiful, these artefacts are amongst the most ancient non-perishable tools made by humans on the American continent. Several projectile points and other lithic flake artefacts have been found at different points of the Tapajós River. These instruments are not so common in Amazonia; therefore, they

[6] In 2009, Fábio Mozzer passed by the Cantagalo rock art, registered it and made it available online at the following URL: <http://www.panoramio.com/photo/25481247> (Accessed on Feb, 4th 2014). Edithe Pereira noticed that the photo depicts the same registry made by Tocantins (personal communication, Jan 22nd 2013).

[7] See letter written by the Munduruku addressed to the Government in June 2013. Considered the 'father of writing', Muraycoko is believed to have left his history registered for future Munduruku generations.

[8] The paintings may be seen online in the following URL: (see photos No 29 and 31): <http://www.forestcom.com.br/blog/juruenalivre/?fb_action_ids=430743910387797&fb_action_types=og.likes> (Accessed on Feb 4th 2014).

[9] It is interesting to highlight that from the 13 projectile points cited as being from the Brazilian Amazonia by Klaus Hilbert at the II International Symposium about the Peopling of the Americas, eight were originally found in the Tapajós valley (Hilbert, 2008).

are essential for the study of the most ancient processes of occupation in the region. In the 19th century, an agate projectile point was found in front of the headquarters of the municipality of Itaituba (Rodrigues, 1876). Another projectile point made out of rock crystal was found near the Chacorão rapids (Simões, 1976), where the construction of the third dike in the Tapajós River, the Chacorão hydroelectric power plant, took place. In the interfluvial and headwater areas of the Curuá and Jamanxim Rivers, eight projectile points are known to have been located, one of which is under custody of the Aracy-Paraguaçu Museum in Itaituba (Roosevelt et al., 2009; Honorato de Oliveira & Rocha, 2013). Artisanal mining often leads to fortunate findings. A flint projectile point, which currently is held at the Emilio Goeldi Museum of Pará, was recovered from a cassiterite mine called Grota do Caçaba, in the headwaters of the Tucano stream (*igarapé*), a tributary of the Mutum stream, which flows into the Tapajós River on its right margin (Simões, 1976). Recently, a lithic spear point splintered out of silicate argillite was discovered by the son of Geizy Ribeiro do Azevedo while playing with pebbles at the harbour of the community of Pimental, which is also threatened by the construction of the São Luiz do Tapajós dam. At that site, we further managed to identify other lithic artefacts (Rocha, 2012).

Although the dates of this occupation are not available yet, it is fairly reasonable to assume that they occurred between the end of the Pleistocene and the beginning of the Holocene, especially if we take into account the cave sites of Gruta do Gavião at the Serra dos Carajás (Carajás Mountain Range), or the Abrigo do Sol, at the Parecis Mountain Range – both located in southern Amazonia. At the Abrigo do Sol site, the earliest human occupation was dated to 14,700 ± 195 BP (Miller, 1987: 61), while the earliest date for the Gruta do Gavião site goes back 8,140 BP ± 130 BP (Silveira, 1995). The occupation of yet another cave site, the Caverna da Pedra Pintada in Monte Alegre, located north of the Amazon River, was traced back to between 11,200 BP and 10,000 BP (Roosevelt et al., 1996, 380). These early dates in the surroundings of the Tapajós River, combined with the technologic features of the artefacts that were found in the upper Tapajós area, strengthen the likelihood of the region having already been occupied in the late Pleistocene. The earliest pottery sherds known in the Americas are dated in approximately 8,000 BP and they come

from the Taperinha shell midden (*sambaqui*), located east of Santarém in the lower Amazon River (Roosevelt et al., 1991).

Intensification indicators

Around 4,600 BP, the region's humidity was higher and the vegetation much more similar to what it looks like nowadays (Rossetti et al., 2004). In the following, we have selected some of the registered archaeological evidence that indicates processes of population growth and environmental domestication. Testaments to said processes may include Indian black earth (*terra preta de índio*), polished stone axes, and pottery sherds.

Archaeological sites that contain Indian black earth are well known throughout Amazonia (Neves et al., 2003); the Tapajós Valley is not an exception (e.g. Kern et al., 2003; Smith, 1879; Woods & McCann, 1999). By definition, black earth areas consist of archaeological sites *per se*. Nowadays, archaeologists and pedologists have agreed that black earth are derived from processes of intensive occupation, showcasing a higher degree of sedentarization, in addition to indicating substantial alteration of the environment by humans (e.g. Arroyo-Kalin, 2010; Petersen et al., 2001). To this day, black earth remains an important agricultural resource and constitutes a valuable legacy left behind by the Amerindian peoples of the past (*Idem*). There are several places near Itaituba that display stretches of black earth on the western margin of the Tapajós River, both downstream (e.g. Hartt, 1885: 14; Perota, 1979: 5; Simões, 1983) and upstream, such as in the Amazonia National Park (Parna) (Oliveira et al., 2010) and the localities of Montanha and Mangabal – where amongst the 24 registered archaeological sites, six that are located in more extensive plains and flood-free areas have revealed the existence of black earth (Rocha & Honorato de Oliveira, 2011). Although not much archaeological prospection has been carried out, the eastern part of the river is known for having other sites: the Pajaú in the vicinity of the Pimental community (Rocha, 2012); the archaeological site of Sawre Muybu situated below the Munduruku village of the same name, near the mouth of the Jamanxim river; and the Piririma site (PA-IT-28) – whose 'stretch of black earth

spreads across several acres' (Lisboa & Coirolo, 1995: 9)-[10] located two kilometres from the confluence of the Rato stream and the Tapajós River. It is also important to recall the archaeological sites with black earth in the interfluvial area (e.g. Gomes, 2008; Martins, 2012; Stenborg et al., 2012),[11] and in the Mission of São Francisco do Cururu (Hilbert, 1957). By heading up towards the rivers that form the Tapajós, we come across the same picture, both on the Teles Pires and the Juruena Rivers (Pardi, 1995-1996; Perota, 1982; Stuchi, 2010).

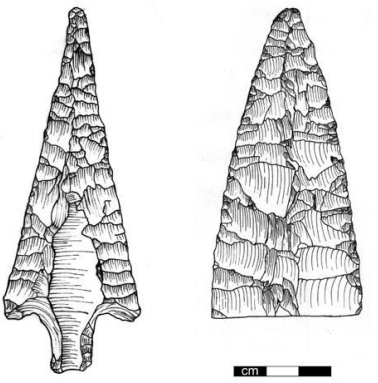


Image 1: On the left, a channelled flint projectile point found by mining prospectors and currently held at the Aracy Paraguaçu Museum in Itaituba. Drawing by Vinícius Honorato de Oliveira. On the right, a lithic spear point (its proximal extremity is broken) found by Geizy Ribeiro Azevedo's sun in the Pimental community's harbour, on the right margin of the Tapajós River, next to the São Luiz do Tapajós rapids. The point was donated to the authors, who have forwarded it to the Curt Nimuendajú Archaeology Laboratory at the Federal University of the West of Pará (UFOPA). Drawing by Claide de Paula Moraes.

Stone axes were used before the introduction of metal tools, for instance to clear areas designated for cultivation or to manage areas reserved for horticulture. Even today, stone axes may be found throughout the Tapajós Valley. They were manufactured by means of a polishing process that took place in the gravel pits on the margins of the river, as may be observed in the proximities of the Buburé harbour (Oliveira et

[10] In addition to the pottery and lithic material, the authors have found wooden artefacts at the site: a propeller, a club, a spear and an anthropomorphic piece.

[11] Dating from 3,800-3,600 BP, the Parauá pottery may be correlated to the period of adoption of agriculture in Amazonia (Gomes, 2008).

al., 2010; Rodrigues, 1875).

Image 2: Example of a lozenge motif found on the pottery of the Terra Preta do Mangabal site. Artistic edition by Marcos Brito de Castro.

Finally, the practice of burials in pottery urns is also associated to this moment of intensification of environmental usage. These burials are common in the region, and they are found in different locations by both laypeople and experts. In the 1920s, in the city of Itaituba itself -which much like Santarém is located above an archaeological site-, urns were found in front of the city's quartermaster (Nimuendajú, 2004).[12] As a matter of fact, urns have already been identified and excavated both downstream (Hartt, 1885) and upstream of Itaituba (Hilbert, 1957; Martins et al., 2010).

So, what happened to these Amerindian occupations, which used to densely populate the region?

The Portuguese colonisation and its impacts

The first Europeans to navigate past the mouth of the Tapajós in 1542 saw 'three leagues inland from the river… large populations that stood out' (Carvajal [1546] in Porro, 2007: 92). The contemporary city of Santarém was a large Amerindian centre,

[12] Nevertheless, a great number of these artefacts have been destroyed, especially with the opening of the local landing strip (Perota, 1979: 8).

connected with distant areas by exchange networks. The existence of these routes in the region may be corroborated by the similarity of some decorative patterns observed in the pottery found at several points along the Tapajós River (Gomes, 2008; Martins, 2012; Rocha, 2012; Stenborg et al., 2012) and in the Nhamundá-Trombetas Valley (Guapindaia, 2008; Hilbert, 1955; Hilbert & Hilbert, 1980), which further allows us to infer the existence of interaction networks between the groups that had produced them.[13] On the Orinoco River, in modern-day Venezuela, ceramics of this same tradition, known in Brazil as Incised-Punctuated pottery (Meggers & Evans, 1961), have been associated with speakers of the Cariban linguistic branch (Cruxent & Rouse, 1958; Lathrap, 1970; Zucchi, 1985). However, we believe that, in contrast to what Eriksen's (2011: 72) map portrays, in the 16th century there was a great deal of linguistic and cultural diversity along the Tapajós River valley. The different Amerindian groups encountered by travellers in the 19th century were speakers of the Aruakan, Cariban, Tupian and Jean languages, which points to a quite varied linguistic mosaic.[14]

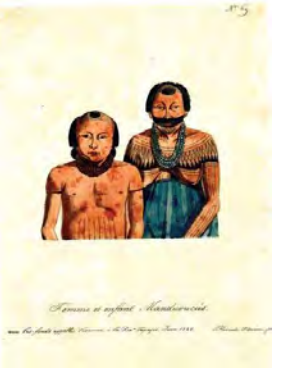
Although the Tapajó fiercely resisted Europeans in their initial encounters, the effect of European presence and colonization proved disastrous for the indigenous peoples of Amazonia. It is estimated that 90% of Amazonia's indigenous population were decimated following the contact (Denevan, 1992b: xxix). Such a massacre, which is unprecedented in human history, would have been caused primarily by contagious diseases (Crosby, 1976; Denevan, 1992a). Missionary chronicles repeatedly mention the desolation brought on by smallpox, influenza, measles, and tuberculosis.[15] The

[13] The discovery of *muiraquitãs* in Guarantã do Norte led Méndes (2003) to suggest that these interaction networks would have extended much more towards the south.

[14] The predominance of Tupi-Guaranian and the Munduruku languages along the Tapajós River seems to have taken root after the conquest, between the 16th and 18th centuries. Similarly, the arrival of Jê groups is associated to territorial changes resulting directly or indirectly from the arrival of the Portuguese from the 17th century on (Francisco Noelli, personal communication, April 16th 2014).

[15] See Betendorff (1910 [1693-1699]). In the past, the Portuguese referred to the different types of smallpox as 'pockmarks' (*bexigas*), because of the pocks that erupted on the skin. Those who survived the less severe types of this condition would have a 'pockmarked face' due to the scars; however, more often than not it was a lethal disease.

lack of immunity against infectious diseases was further aggravated by a series of factors, such as the unawareness of forms of treatment and the death of the productive members of their societies, leading to starvation (Crosby, 1976). The spread of diseases did not even require interpersonal contact, for artefacts (such as feathers left behind in rods that were sealed with bee wax in pre-arranged spots, for instance) could easily host disease vectors, such as lice, bacteria or viruses, as is thought to have happened with the Amazonian Gorotire Kayapó in the post-conquest period (Posey, 1987). Diseases were easily propagated through the ancient indigenous commercial routes (Myers, 1988).



Images 3 and 4: Watercolours by French painter Hércules Florence, portraying Munduruku Indians in 1828. Source: Centro Cultural Banco do Brasil (2010).

Located close to the right margin of the Amazon River, between the Madeira and Tapajós Rivers, the Tupinambá –who until then had been in the process of expansion –stopped being referred to as an ethnic group as soon as in 1690 (Menéndez, 1981/1982). The Tapajó were to face a similar destiny in the following decades. In the 17th century, Santarém became the centre of Jesuit operations in Amazonia. Other missions were established in the lower Tapajós and in the region between the Madeira and Tapajós Rivers (Leite, 1943). The displacement of Amerindians into the missions, which was carried out by the Jesuits, brought about new processes of deterritorialisation, which resulted in the demographic shrinking and the political weakening of the Amerindian societies that lived in the region. This process is reflected in the rapid modification of ethnonyms registered by clerics from that

period (Menéndez, 1981/1982; Robazzini, 2013).

Historical sources

Due to the navigation embargo of the Tapajós River by the Portuguese Crown up until the middle of the 18th century (according to the Treaty of Tordesilhas, a large part of the river's course still belonged to Spain), there is little written registry for the region prior to the Treaty of Madrid, which was signed in 1750, moving the Spanish-Portuguese frontier towards the west. This resulted in an almost complete ignorance about the indigenous peoples that until then had lived in the region.[16] With the implementation of Pombal's Directory of Indians, the administration and military personnel started producing textual sources (Porro, 2006); even the secular and regular clerics found themselves subordinated to the colonial administration. This period saw increased – yet intermittent – river traffic propelled by members of colonial society in search of gold as well as the opening of a commercial route between Belém and Cuiabá (Menéndez, 1981/1982).

[16] A noticeable exception is the 'Relação' by Jacinto de Carvalho, from 1719 (in Porro, 2012).

In 1768, José Monteiro de Noronha (2006 [1768]), the general vicar of the province of Rio Negro, registered that in the rapids' stretch of the Tapajós River:

> 'Its lands are still peopled with many nations of unfaithful Indians, of which the most well-known are: the Tapakurá, Cararí, Maué, Jacaretapiya, Sapupé, Hiauahim, Urupá, Suarirana, Piriquita, Uarapiranga.'

Noronha further refers to the 'Maturucu', in the vicinities of the Maués river (*Ibid.*: 40); Horton (1948: 272) interprets this as the first written reference of the Munduruku.

Upon the decree by John VI to open the harbours in 1808, accounts became more numerous because of the advent of organized naturalist expeditions. Nevertheless, these scientists did not recognize that the Amerindian societies they encountered had

survived profound transformations – deriving from processes of conquest and colonization – and had ventured deeper inland in face of the pressures exerted by expansionary fronts that were approaching with the discovery of gold mines in Mato Grosso in the 1740s (Menéndez, 1981/1982) and by means of 'rescue operations', a euphemism to describe the raiding expeditions led by backland dwellers, known as *bandeirantes* in search of Indians to enslave. Influenced by evolutionist ideas (Noelli & Ferreira, 2007), the recently arrived nineteenth-century observers would often depict the Amerindian societies with which they came into contact in a pejorative way, as if they were frozen in time, creating stereotypes that persist to this day.[17] At the same time, they sentenced the inevitable disappearance of these societies (e.g. Coudreau, 1977 [1897]), thus providing an academic excuse for their extermination (Cunha, 2006 [1992]: 134).

Despite these reservations, these sources provide us with numerous accounts of indigenous villages from the post-conquest period that still require investigation in order to study the indigenous history of the region, which is directly linked to its contemporary occupants. For instance, Barbosa Rodrigues observed that:

> 'Within the [Munduruku]… the following malocas18 may be counted by alphabetic order: Cury, Santa Cruz, Uxituba (in this one the Indians are semi-civilized), Boburé, two in the Montanha rapid, Igapó, in the head of the Mangabal rapid, Bacabal, Boa-Vista (below Pacú), Chacorão, Capoeiras and the Iri ones. The most populated one is that of Baccabal, although some are extinct, such as the one on the mouth of the Juanxim and the one in the middle of the Magabal rapid. There, few malocas may be attributed to the Maués, who have taken refuge deep inland for being persecuted by the Munduruku, however, apart from a few disperse families, the following malocas may be found: Boia-açú, Urubutu and Acará. The population in the former may be calculated in 1,200 souls and the second in 500 [sic].'19 (1875: 124)

Archaeological excavations in Mangabal brought to light some pottery that we have

[17] See also Agassiz & Agassiz (1869); Bates (2005 [1864]); Martius (1907 [1832]); Spix & Martius (1981 [1831]).

[18] T.N.: *Maloca* is a type of indigenous communal housing.

[19] There are accounts of non-contacted Maués in the vicinities of Mangabal in the present day.

associated to the Munduruku (Rocha, 2012: 49-50), due to its decorative lozenge, or diamond pattern, which is very similar to the body paintings they use. This interpretation is further sustained by the observation made by Hércules Florence, watercolour painter at the Langsdorff expedition, on their way through the Tapajós River in 1828:

> 'In this journey an inquisitive or scientific mind may observe notable changes in the ceramic ornaments used by the Indians. Those of the Apiacás are constantly made in a right angle; those of the Mundurucus in lozenges, whereas elsewhere their design is irregular, although always of better or worse taste. They are displayed on bowls, vessels and smoking pipes'. (Florence, 2007 [1876]: 272)

As for the Jamanxim River, referred to by Barbosa Rodrigues as 'Juanxim', Father João Daniel (2004 [1722-1766]: 364) mentioned an attack perpetrated by the Jaguaim Indians against the Gurupá, after the latter had fled from the mission of São José dos Maitapus. According to Porro (2007: 54), the Jaguaim have also been referred to as Iaguain and Yauain. Bishop João de São José once mentioned the 'Javains River' (1847 [1763]: 97). We believe that the name 'Jamanxim' may be a corrupted version of this ethnonym. Therefore, although there are no archaeological sites registered in the National Institute of Historic and Artistic Heritage (IPHAN) in the region of the Jamanxim River, any allegations that the area is devoid of archaeological relevance is highly questionable, considering the abovementioned remarks and the name of the river itself.

Further references to past Amerindian occupations on the Jamanxim river may be found in Coudreau (1977 [1897]). The traveller noted the process of territorial expropriation triggered by the rubber economy expansion, which resulted in new displacements of indigenous groups, who were increasingly forced to seek refuge in the headwaters of the rivers:

> 'The Parintintins currently do not descend beyond the Caí [rapid in the Jamanxim River, where another dike is planned for]. There, they were attacked three or four years ago; the civilized men held a veritable massacre, but the Indians fought bravely./ In the past, they used to descend further below, as far as the mouth of the river. /[…]/ The

> Mundurucus from the Crepori often ventured in the forest up until the Tocantins [a tributary of the Jamanxim], close to where their malocas are nowadays. They go there to hunt and they might have settled there already./ It seems that it is in the headwaters of the Jamanxim, the Crepori, the Rio das Tropas and the Cadariri where the Indians live. During the summer, they travel in search of game and adventures; when winter comes, they go back to their forest between the Tapajós and Xingu –it is thought, however, that they come from the former's valley'. (Ibid.: 30-31)

Palimpsests

Although these are just a few of the many examples available, they demonstrate that we are dealing with palimpsests in terms of spatial occupation – something that has already been acknowledged by Stuchi (2010) in his collaborative research among the Kayabi in the lower Teles Pires river, where a further 34 archaeological sites have been registered by the author. The humanized landscapes of the Tapajós Valley represent layers of occupation and memory.

We confirmed this recently when we visited the Munduruku of Sawre Muybu, who live above an archaeological site with Indian black earth. This strategy follows a historical occupational pattern, already referred to in the 19th century (Hartt, 1885). There are several direct and indirect accounts of the Munduruku preference for black earth areas (Frikel, 1959; Hilbert, 1957 and Melo & Villanueva, 2008). In fact, the Munduruku have a word for black earth: *katomb*. In Sawre Muybu, chieftain Juarez Saw Munduruku explained to us that the choice of that place was motivated by the presence of *katomb*, because *katomb* areas are fruitful – that is a criterion that takes into account the well-being of the next generations that will live there.[20] Therefore, the choice of location was not random; it was based on the environmental knowledge that was inherited from previous generations. Additionally, in Sawre Muybu, archaeological pottery sherds containing lozenge patterns, which were spread throughout the village extent, were shown to us, suggesting that the Munduruku had already chosen to inhabit this territory in the past; possibly, their land had been

[20] Juarez Saw Munduruku, personal communication, March 12 2014.

expropriated with the advance of the rubber economy in the region. It seems likely to us that the aforementioned citation by Barbosa Rodrigues of an abandoned Munduruku village in the proximity of the Jamanxim River may refer to this exact location, which has not yet been recognised by the State. The Munduruku of Sawre Muybu have been awaiting demarcation of this land for years, a delay that in many ways hinders the exercise of their citizenship.

Final considerations

With this brief synthesis, we hope to have demonstrated that the limited number of archaeological sites registered in the Tapajós Valley should not be interpreted as having little patrimonial relevance, but rather as lacking information.[21] It is important to highlight that it will take many years before we have an in-depth knowledge of the archaeological heritage in this vast region. In view of this, proposals that lead to the weakening of archaeological heritage protections in the environmental licensing processes are worrying, for areas of large historical value – which have not been previously registered – would be even more exposed to degradation by the dereliction of public power.

The traditional communities and indigenous peoples – among them, the Munduruku, the riverine and backland dwellers – who currently live above archaeological sites in the Tapajós Valley or next to them compose the vast palimpsest of human occupation in the valley. A reflection on the significance of the archaeological heritage for the forest peoples that inhabit the valley becomes necessary in this search for the adequate conservation of the cultural and environmental heritage of the region. If it were not for them, the value of the knowledge produced through the aforementioned archaeological registries would be significantly reduced, and the likelihood of acquiring a better archaeological knowledge of the region would be lost.

[21] The archaeological sites that are registered at IPHAN's National Registry of Archaeological Sites are still scarce in the region threatened by the CHT and the dams in the formative rivers, such as the Teles Pires and Juruena (search the URL: <http://portal.iphan.gov.br/portal/montaPaginaSGPA.do>).

The 'retrieval' of archaeological materials in 'rescue' excavations, associated with environmental licensing processes, will not solve the preservation issues of the sites. Considering that many of these vestiges are either directly related to the peoples that currently live in the region or have important meaning to them, 'rescue' archaeological surveys run the risk of becoming new forms of expropriation and looting, this time, against the cultural heritage of the forest peoples, whose rights as citizens have been historically disrespected by the State.

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