

# Formoso Stilt Village: An Incised-Punctate/Arauquinoid Tradition Phase in Maranhão, Brazilian Amazon

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## Abstract

Dwellings on stilts were a common type of construction in the lowlands of South America from the pre-colonial period to the present day. The main function of these houses on stilts is to protect their inhabitants from the constant Amazon floods during the rainy season. This article examines the Formoso stilt village, located in the Baixada Maranhense, in the easternmost portion of the Brazilian Amazon. The analysis of the pottery material revealed technological characteristics of the Incised-Punctate/Arauquinoid Tradition Phase of the Northeast of South America lowlands. Radiocarbon dating between 1566-1469 BP indicates that this stilt village is as old as those located in the Venezuela and Guianas, if not even older. Furthermore, the spatial distribution of stilts of the settlement corroborated to pottery analysis showed alien/rectangular ceremonial space connected by stilts to the circular/residential area. Formoso stilt village presents an unprecedented form of indigenous habitation never before described in Anthropology and Archaeology of the Lowlands of South America.

## Keywords

Stilt Villages, Brazilian Amazon, Incised-Punctate/Arauquinoid Tradition, Spatial Analysis, Pottery Analysis

The description of a village is the history of the world.

Tolstoy

## 1. Introduction

As well as the famous stilt villages of the Circum-Alpine region (Bleicher, 2018), these settlements also existed in the lowlands of South America. Those are lo-

cated in the Brazilian state of Maranhão, in the easternmost portion of the Amazon. The stilt villages (*estearias* in Portuguese) are archaeological sites formed by stilts or posts erected within rivers and lakes and which served as support for the indigenous villages, with the purpose of protection against floods. This is a peculiar type of pre-colonial occupation in the region known as Baixada Maranhense, approximately 200 km from the state capital, São Luís. Built from the beginning of the Christian era or the 12th century, these archaeological sites have been gaining repercussions in Brazilian Archeology due to the good preservation of material found in the middle of the peat of the aquatic bed where they were discarded.

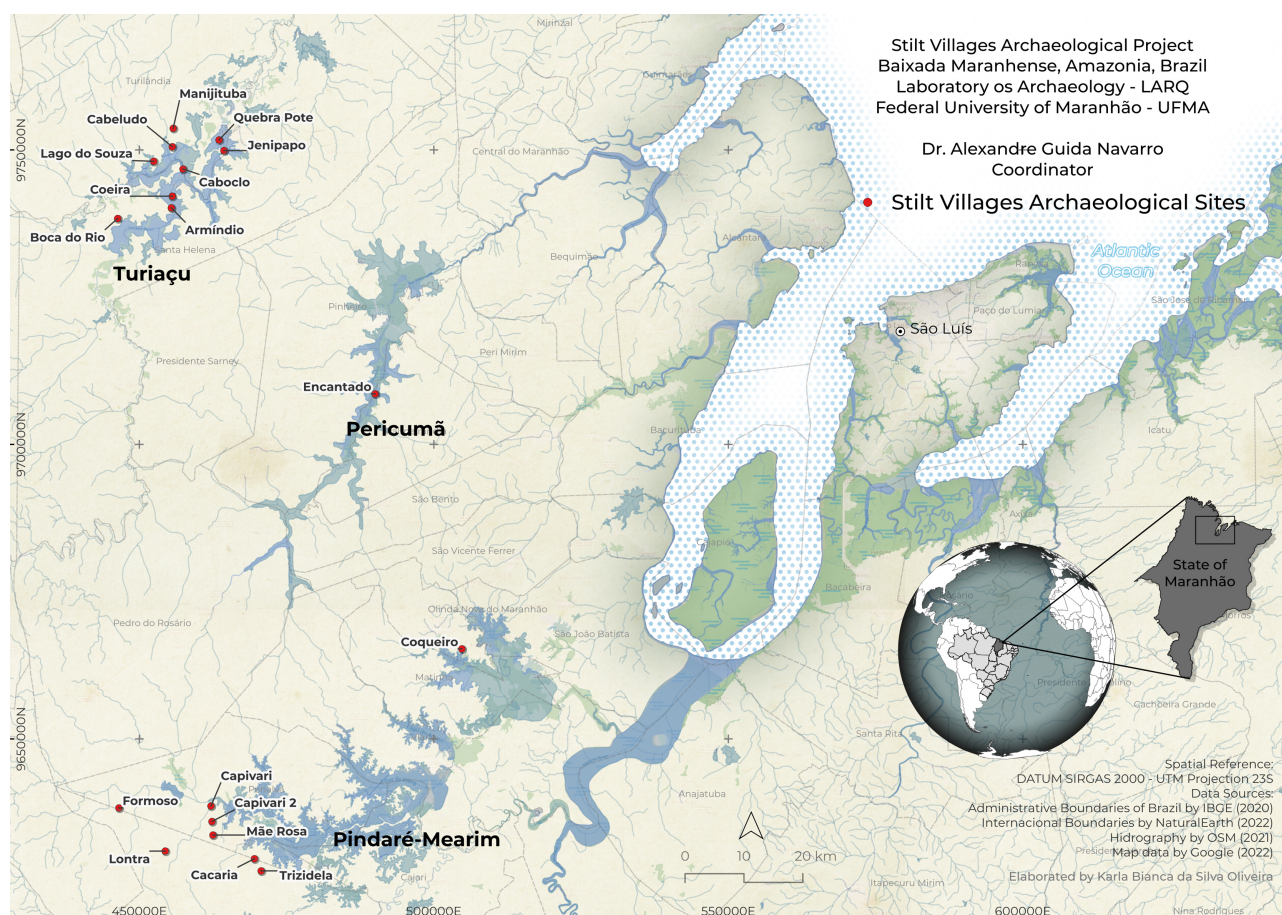
Archaeological studies carried out by Navarro since 2014 demonstrate that these settlements are not simple campsites or encampments, as previously thought. A large number of artefacts with soot and cooking marks evidence a long-term occupation of these villages (Navarro, 2018a). The existence of green pendants (*muiraquitãs* in Portuguese) in these sites such as the specimen collected by Navarro et al. (2017) in the Boca do Rio site in 2014 corroborates the existence of connection of spheres of interaction of these groups, since it indicates stylistic flows of long-distance networks between travelers from the lower Amazon and, possibly, from the Antilles and the Caribbean.

The Baixada Maranhense is an area equivalent to almost 20 thousand km<sup>2</sup> (Farias Filho, 2019). It is characterized by a rigid rainfall regime marked by rains in the first half of the year, and by drought in the second; a clear Amazonian floodplain environment (Franco, 2012). Due to its recent Quaternary geological formation, constituted by a paleo regional coastal system with fluviomarine deposits, the Baixada Maranhense configures a rosary of waters formed by hydrographic basins and lakes that are formed during the cessation of rains (Ab'Saber, 2006).

The stilt villages are located in three hydrographic basins in Baixada Maranhense: at Turiaçu, in the north of the Baixada, where the Boca do Rio, Cabeludo, Armindio and Caboclo sites are placed; at Pericumã, in the central portion of Baixada, where the Encantado stilt villages are situated; and at Pindaré-Mearim, further south, where the Cacaria, Trizidela, Capivari and Formoso are found (Figure 1).

Houses on stilts are still built today in the Amazon floodplain. Oral reports with the region's inhabitants and the literature of travelers and chroniclers from the 17th and 18th century confirm the importance of these residences as a long-term history, whose strategy is to facilitate the capture of fish, the main source of riverine populations (D'Abbeville, 2008; D'Évreux, 2008; Daniel, 2004) (Figure 2).

Regarding chronology, radiocarbon dating indicates that most villages were built between AD 800 and 1100, thus corresponding to the late period of pre-colonial Amazonian occupation (Navarro, 2018a, 2018b). However, at least one stilt village belongs to the Formative, being dated between the year AD 1 and 200 (Navarro & Roosevelt, 2021).



**Figure 1.** Map of stilt villages archaeological sites in Baixada Maranhense. Photography collection LARQ-UFMA.



**Figure 2.** Houses on the stilts today and in prehistory. Photography collection LARQ-UFMA.

The advance in the study of stilt villages in Brazil focuses mainly on the mapping of villages (Navarro, 2018a, 2018b). These, in general, were formed by residential *malocas* connected by bridges to a larger main space, i.e. a square, constituting a large linear village. The archaeological material is hierarchically distributed within the site, and the concentration of artifacts with polychrome



painting, figurines and greenstones ornaments (*muiraquitãs*) occurs prominently in the collective space. Within an ethnological and archaeological context, these villages resemble both those large linear settlements found along the Amazon River by travelers such as Carvajal and which so impressed the Spaniards (Porro, 1993, 2017) and those excavated by Roosevelt (1991) on the island of Marajó.

## 2. Formoso Stilt Village Mapping

Formoso stilt village is located 30 kilometers from the city of Penalva. The site is located under coordinates 23M 0457079 UTM 9640305 and is situated in the homonymous lake (Figure 3). Its waters are fed by the Pindaré River, whose hydrographic basin covers an area of 40,000 km<sup>2</sup>. This river is 720 km long; starts in the Serra do Gurupi and flows into the Golfão Maranhense (Costa et al., 2011). The mapping of Formoso stilt village was based on the same methodology already used in the settlements of the Turiaçu basin, consisting of delimitation of the stilts through canoes with the manual marking of them (Navarro, 2018a). After placing the markers, in general paddocks of palm trees, they are exposed over the water depth, making it possible to map the site from the total station by the topographer. The advantage of this methodology was the collection of surface archaeological material (Figure 4).

Formoso stilt village has 3218 posts oriented in an east-west direction and distributed in an area of 2 hectares. The village is about 300 meters long, and in the circular part, its diameter reaches 100 meters, while in the linear/rectangular part it reaches 140 meters. The settlement is formed by 14 sets of stilts. The western portion of the village has 8 sets of posts ranging from 10 to 17 meters, in addition to the core. These sets form a circular space with emphasis on the core, *i.e.* a square, clearly the largest set, measuring 40 meters in length. The distance between sets varies from 13 to 28 meters. This circular portion of the village also has a horseshoe-shaped opening to the north, approximately 44 meters long.



**Figure 3.** Formoso stilt village. Photography collection LARQ-UFMA.





**Figure 4.** Mapping of formoso stilt village. See the boat in the middle of stilts. Photography collection LARQ-UFMA.

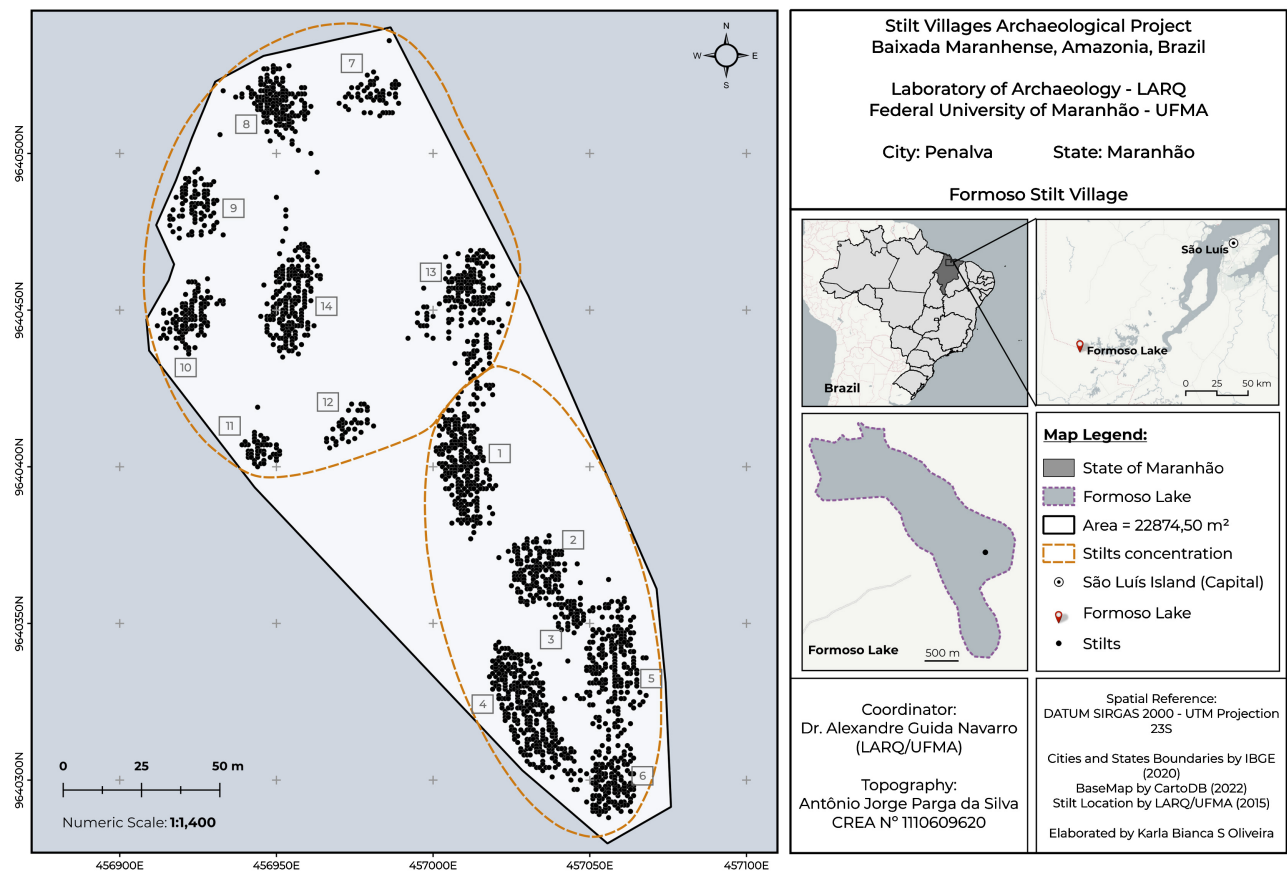
These sets of stilts are not connected to each other; however, some of them, such as sets 5 and 7, seem to connect to the core set of this portion of the village. Set 13, in turn, is connected to set 1, where the linear village begins through stilts that apparently form a bridge with 3 parallel lines. The eastern sector of the village, on the other hand, has 7 linear sets of posts that vary from 4 to 50 meters, therefore, less spatially standardized in relation to its opposite, circular part. Regarding the width of these spaces, they are also more unequal than in the circular portion, ranging from 4 to 28 meters. As in the circular sector, the eastern set also tends to close, forming a rectangular square, with an opening in the opposite direction to the central part, that is, towards the south (**Figure 5** and **Table 1**).

### 3. Analysis of Archaeological Pottery

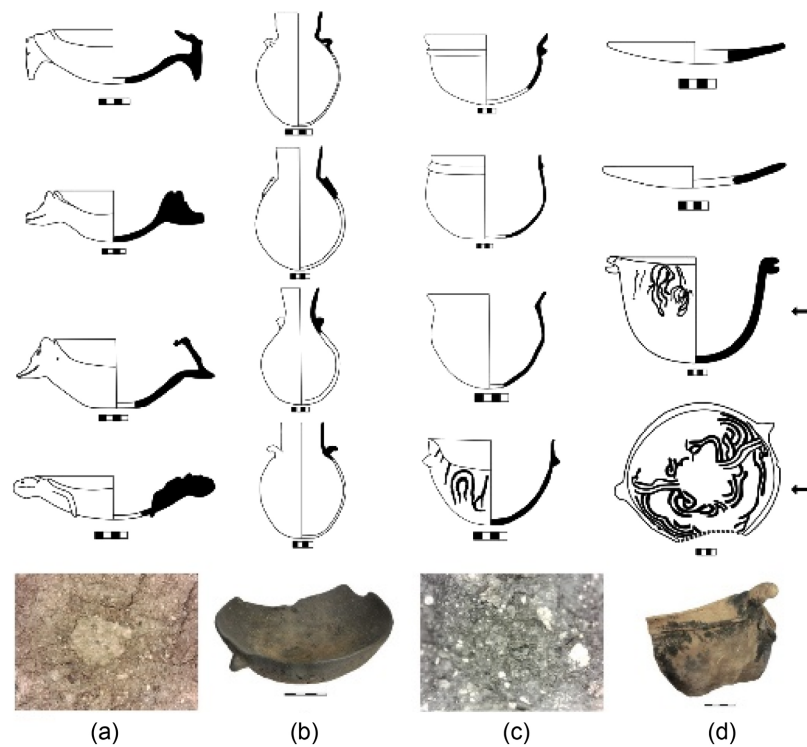
Pottery analysis of Formoso stilt village was based on the classification of technological attributes, such as rims and lips, in **Shepard (1956)**, **Arnold (1985)** and **Roosevelt (1997)**. For the reconstitution of the vessels, as well as the variability of the forms that indicate its different functions, such as storage, transfer of liquids and cooking, was applied the modal analyzes of **Rice (1992)** and **Raymond (1995)** (**Figure 6**).

The tempers used in the vessels of the Formoso stilt village are freshwater sponges (*cauixi*), mineral and grog. The pottery in set 3 shows an abundant use of mica, which is absent in the other sets (**Figure 6(a)** and **Figure 6(c)**). The typical mammalian appliqué of others stilt villages are amply represented in the collection (**Figure 6(b)**). The predominant rims are direct and everted, with rounded and flat lips being the most common. The expressive amount of cambered rims is noteworthy (**Figure 6(a)**). The pottery incisions are deep, some of them elaborated (**Figure 8(d)** and **Figure 8(e)**).

Formoso stilt village painted decoration is made up of abstract lines, with



**Figure 5.** Formoso stilt village map with 3218 stilts. Photography collection LARQ-UFMA.



**Figure 6.** Pottery variability of formoso stilt village. Photography collection LARQ-UFMA.

**Table 1.** The dating carried out in almost all sets, shows a contemporaneity of them.

Set	Sample	Conventional Radiocarbon	Calibrated Radiocarbon	Laboratory Code
1	Wood	1300 ± 30 BP	680 - 862 cal AD/1270 - 1088 cal BP at 95.4%	Beta Analytic 576,496
	Charcoal	1555 ± 30 BP	481 - 556 cal AD/1566 - 1469 BP at 95.4%	Poz-111,300
2	Wood	1190 ± 30 BP	857 - 991 cal AD/1093 - 959 cal BP at 95.4%	Beta Analytic 512,410
3	Pottery Soot	1130 ± 30 BP	892 - 1018 cal AD/1058 - 932 cal BP at 95.4%	Beta Analytic 512,408
4	Wood	1330 ± 30 BP	658 - 778 cal AD/1292 - 1172 cal BP at 89.8%	Beta Analytic 576,497
5	Wood	1190 ± 30 BP	856 - 988 cal AD/1094 - 962 cal BP at 95.4%	Beta Analytic 576,499
6	Wood	1140 ± 30 BP	890 - 1014 cal AD/1060 - 936 cal BP at 95.4%	Beta Analytic 512,412
7	Wood	1300 ± 30 BP	680 - 862 cal AD/1270 - 1088 cal BP at 95.4%	Beta Analytic 576,498
8	Wood	1150 ± 30 BP	885 - 996 cal AD/1065 - 954 cal BP	Beta Analytic 512,411
9	Charcoal	1160 ± 30BP	830 - 978 cal AD/ 1130 - 972 cal BP at 95.4%	Poz-111,300
10	Charcoal	1130 ± 30 BP	892 - 1018 cal AD/1058 - 932 cal BP at 95.4%	Beta Analytic 515,391
11	Wood	1190 ± 30 BP	856 - 988 cal AD/1094 - 962 cal BP at 89.8%	Beta Analytic 512,409
12	Wood	1080 ± 30 BP	966 - 1045 cal AD/984 - 905 cal BP at 95.4%	Beta Analytic 522,023
13	Charcoal	1160 ± 30BP	959 - 1065 cal AD/972 - 1014 cal BP at 95%	Poz-132,086
14	Wood	1210 ± 30 BP	832 - 972 cal AD/1118 - 978 cal BP at 75.5%	Beta Analytic 576,500

geometric figures that resemble crisscrossed hooks similar to those of the Turiacu region. Navarro (2021) interpreted the use of these colors and the hook motif as an allusion to the anaconda or sucuri, an animal present in Amazonian cosmologies (Figure 7).

Two groups stand out in terms of material culture. Group 1 is a large set of stilts from the site and from which the largest number of artifacts were collected, 225, being also the richest in artefactual variability. The predominant shape is the open rounded vessels, followed by the half-hemispherical vessels, these with



soot and globular vessels. Several spindles were collected (**Figure 8(a)** and **Figure 8(b)**). This is also the largest set of painted artifacts, usually bichrome (black on white) and sometimes polychrome (black and red on white). Some vessels have the typical classic hooks stilt village iconographic composition (**Figure 8(c)**). One type of anthropozoomorphic appliqué is unprecedented in the set of stilt villages studied to date. These are heads that resemble those of jaguars with large ears and with the eyes and mouth formed by an incision (**Figure 8(d)**). The



**Figure 7.** Anaconda pottery painted decoration of formoso stilt village. Photography collection LARQ-UFMA.



**Figure 8.** Artifacts variability of formoso stilt village. Photography collection LARQ-UFMA.

mouth of this character is thought-provoking. It looks like a smiling being or a sly laugh. At other times, human beings have prominent nostrils, which made using the incision and punctate technique; may be an allusion to the use of hallucinogens as Navarro (2018b) has pointed out for other artifacts at Turiaçu region (Figure 8(e)). The open rounded vessels of this set are also a highlight: they are very large artifacts, probably used to serve and that have an appliqué in the shape of a fish's tail, so far never found before in the stilt villages already researched (Figure 8(f)). Still with a possible association with the hallucinogen, a figurine found in this set represented an anthropomorphic being with a depression in the ventral region, resembling the monkey figurine from the Armindio stilt village on the Turiaçu River (Figure 8(g)). Some of these vessels are also stingray-shaped, others with mammalian appliques; there is also an alligator tail, a frog, wild pigs (Figure 8(h)), manatee tails (Figure 8(i)), dolphins, hawks, turtles and king vultures with their typical crest covering the beak (Figure 8(j)) and curled tails of possible mammals. There are shallow forms that represent roasters and with basketry marks (Figure 8(k)), some examples with mesial flanges (Figure 8(l)) and artifacts with anthropomorphic appliques, whose arms of the character surround the artifact forming their wings or who have their hands resting on their lips (Figure 8(m)). This set showed a large number of fragments and complete globular vessels (Figure 8(n)). There are miniature artifacts and 4 pipes were also collected (Figure 8(o)). A peculiar artifact featuring a half-bird and half-reptile animal head was collected (Figure 8(p1) and Figure 8(p2)). Two wooden ax handles were also recovered, one of them with the blade still angled and beaters (Figure 8(q)).

In Group 14, the nucleus of the western sector of the site, 26 pottery fragments were collected. Tempers remain the same. The types of vessels that predominate are open rounded ones with cambered rims. There are also examples of spindles, semi-hemispherical and globular vessels with soot and modelled with less expressive zoomorphic appliques than in the linear sector. Five pottery fragments were collected with black paint on a cream slip; some of them with resin remain. This group is characterized by the large amount of lithic material, especially the polished ax blades. Twelve of them were collected as a large number of beaters and 2 wooden axes handle (Figure 8(r)).

#### 4. Discussion and Interpretation

Formoso stilt village seems to be a Phase of the Incised-Punctate/Araucinoïd Tradition. Araucinoïd is a region of the middle Orinoco, Venezuela, which gave the name to the Horizon, Tradition or to the Araucinoïd series defined by Cruxent and Rouse (1958-1959). The archaeological characteristics to define this Tradition are based on the following pottery technologies: 1) the use of freshwater sponges (*cauixi*) as clay paste temper; 2) the use of tools to produce the incision and punctates that form the plastic decoration of the artifact; 3) the predilection for modelled ones, especially anthropomorphic appliques, which ap-

pear both on the lip and on the bulge of the vessel; 4) Polychrome pottery can appear, although it is not a rule.

The Incised-Punctate/Araquinoid Tradition extends from the northeast of the lowlands of South America, including the Orinoco and the Guianas, through northern Colombia and the Caribbean, the Central Amazon, the lower Amazon (Santarém, Konduri, Aruã and Maracá) and the Antilles, between approximately AD 1000 to 1500 (Cruxent & Rouse, 1958-1959; Meggers & Evans, 1957, 1961; Lathrap, 1970; Roosevelt, 1997; Gomes, 2002; Guapindaia, 2008; Rostain, 2010; Neves & Heckenberger, 2019).

In Parmana, Roosevelt (1997) identified the Camoruco phase (AD 800-1000) as being Araquinoid. To the archaeologist, Comoruco sculpture pottery have sloppy, wet modeling and sharp, deep, and sloppy incision. The anthropomorphic appliques of the Camoruco phase are similar to those of the Formoso stilt village, such as abundance of anthropomorphic appliques, some of them characterized by human beings with their lateral arms towards the belly, sometimes forming the wing of the recipient (Figure 9(a) and Figure 9(c) Comorucophase; Figure 9(e) from Guianas; Figure 9(b) and Figure 9(d) Formoso).



**Figure 9.** Incise-Punctate/Araquinoid tradition in Amazonia. Photography collection LARQ-UFMA, Rostain (2010) and Roosevelt (1997).



According to [Roosevelt \(1997\)](#), the animals depicted in the vases would be those used for food, thus reflecting social control over the faunal resources available for human consumption. The other explanation is based on a symbolic aspect whose animals represented in the pottery would be connected to shamanic rituals or the taboo. [Roosevelt \(1995, 1997\)](#) uses Amazonian ethnography ([Reichel-Dolmatoff, 1971](#); [Hugh-Jones, 1979](#); [Hugh-Jones, 1979](#)) to explain that current Indigenous societies use animals in communication with other planes through the use of hallucinogens, as are the case of the *Master of the Animals* who has punitive power over human health, fertility and the abundance of food. The combination of animal and humans would also reveal the power of shamanic transformation, whose shaman needs the help of animals to communicate with ancestral spirits. In this sense, the ceramic example of Group 1 of the Formoso stilt village would be a clear allusion to this body metamorphosis process ([Figure 8\(p\)](#)). [Figure 8\(p\)](#) is emblematic because you can see a bird in which its sharp beak, eyes applied with an incision and crest stand out. Viewed from the opposite profile, the figure seen is that of a reptile with prominent eyes and scales, which in the aviform version corresponds to the crest; the dual transformation is clear in this case.

The Master of Animals appears to have an alter ego, a human form, which in the Amazon is generally known as Kurupira, Curupira, Currupira or Boráro to the Tukano ([Reichel-Dolmatoff, 1996: 97](#)). Mentioned by travelers, missionaries and chroniclers as a forest demon, anthropologists have collected a lot of information and local variations on this entity, describing it as having a large penis, red or fiery eyes, large ears, no knees, and especially twisted feet facing backwards. Although they lived in the dense forest, especially in those where the *buriti* (*Mauritia flexuosa*) and the *babassu* (*Attalea speciosa*) predominate, the Curupira always walked through the flooded environment, swampy regions or with waterfalls, since their favorite food, the crab lives in these aquatic landscapes. [Figure 9\(d\)](#) found in Lake Formoso seems to refer to this entity. His left foot is clearly twisted backwards; your body seems flexible and your joints and knees do not seem to exist; he also has big ears. The possibility of changing perspective that the artifact offers makes your left eye, together with this large ear, transform into a bird, thus revealing its protective aspect of these animals that live in trees. Its different eyes, represented materially by an incision that leaves the right eyeball and goes to the mouth and by a button-shaped appliqué on the left eye, may be associated with some variety of facial aspects that may have regional manifestations. In the Formoso appliqué, some body protuberances that resemble bones, such as those located right in the region of the shoulder blade, or some type of body deformation or even some dermatological alteration draws attention.

The Arauquinoid Tradition is also present on the coast of Guyana in Suriname and has been associated with mounds with circular villages and raised-fields agricultural landscapes ([Rostain & Versteeg, 2004](#); [Rostain, 2016](#); [Coutet, 2016](#)).

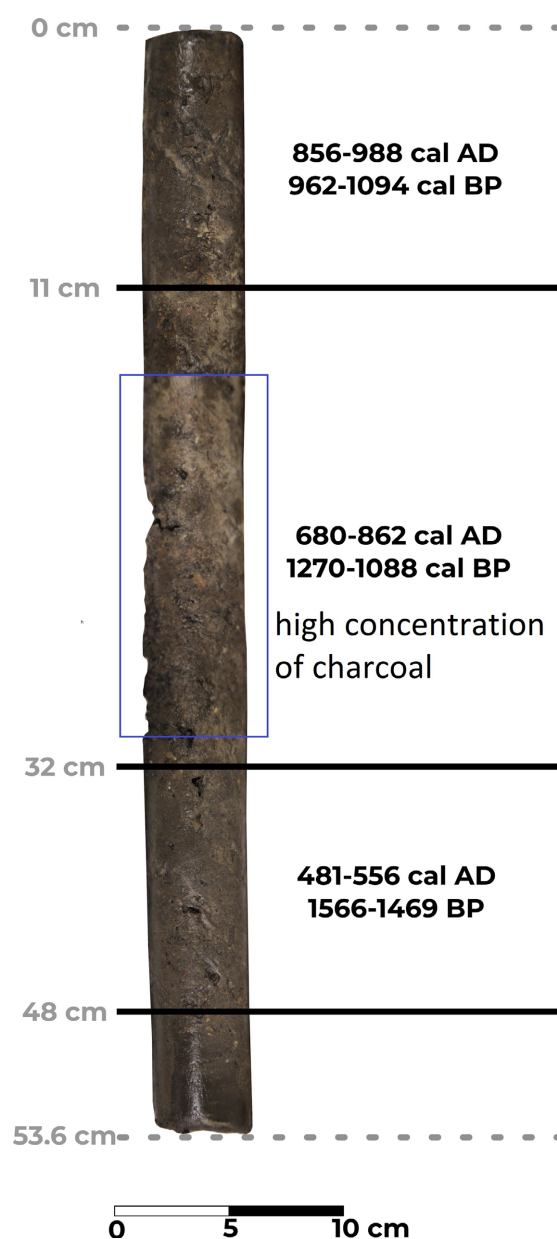
According to Rostain (2016) the Arauquinoid peoples made their pottery in a homogeneous way. For this archaeologist, this Tradition is characterized by a geographic, chronological and cultural continuity along the coast of the Guyana since AD 600 (Hertenrits phase), but the vast majority of the sites were built between AD 800 until the colonial period, with the main phases are Kwatta (AD 810-1055+-30), Barbakoeba (AD 960-1125+-30) and Thémire (AD 1440-1690+-30).

Coutet (2016: 71) think of the Arauquinoid tradition as “a supralocal and macro-regional entity; a broad sphere of interaction, where cultural groups have come together in a complex network of exchanges of goods, people, techniques and ideas”. Because of the recurring uniformity of material culture in the Arauquinoid Tradition, these societies could have had a common origin, which for Rostain (2016) is in the Guyana and for Roosevelt (1997) in the lower Amazon.

The best-known phase of the Incised-Punctate Tradition in Brazil corresponds to the Santarém phase, located in the homonymous city (Roosevelt, 2016; Gomes, 2016). For Gomes (2016), Santarém is dated between AD 1000 and AD 1600; Roosevelt (2016) thinks the beginning of the occupation was a little later, around AD 1200. Although the pottery forms are different from the stilts villages, such as the famous caryatid vessels, themes such as body transformation involving the metamorphosis of shamans are present in both cultures. Freshwater spicules and grog are also present in Santarém pottery. As for the form of the settlement, both archaeologists emphasize villages built on mounds characterized by black Indian earth with a circular square. On the other hand, incisions and punctates of Santarém are more elaborated than Comoruco, Formoso and Guyana phases.

The date obtained in AD 481-556 for Formoso's Group 1 seems to be one of the oldest ever recorded for this Tradition. The strategic position of this group, where it seems that the village was born, connects the two sectors of the site. It is in this set, too, that there is greater artefactual variability. In this set, a Russian peat corer was carried out in which 3 dates were performed (Figure 10). The archaeological package is 48 centimeters deep and is composed of sediments and sand-colored Greenish black 5 GY 2/1 (Alves et al., 2021). The first 11 centimeters of the stratigraphy have less organic material dating from 856 - 988 cal AD/1094 - 962 cal BP. There is a large concentration of charcoal from plants such as babassu (*Attalea speciosa*) between 20 and 26 centimeters dating from 680 - 862 cal AD/1270 - 1088 cal BP. This appears to have been the height of the settlement's occupation. From 33 centimeters to the end of the archaeological layer, the concentration of archaeological material decreases, remaining up to 48 centimeters, at whose base the date reached 481 - 556 cal AD/1566 - 1469 BP. The analysis of the pottery from the archaeological package shows artifacts with the same tempers. In this way, stratigraphy suggests a single, continuous occupation with uniform material culture.

Group 1 presents greater artefactual variability and elements of material culture associated with more ritualistic spaces, such as pipes, appliqués that refer to



**Figure 10.** Formoso stilt village stratigraphy. Photography collection LARQ-UFMA.

body transformation and vases with black paint simulating the skins of an anaconda, an animal known to be associated with shamanism in the Amazon. The chiefs may have inhabited this sector as well. The circular sector of the village has a large number of polished ax blades and may be associated with areas of activity for the manufacture of these artifacts and the residential space of the different clans/families of the village.

Therefore, the pattern of settlement of the Formoso site seems to have no precedent in the anthropological and archaeological literature of the South American lowlands reported so far. Nor does it show similarities with the other stilt villages mapped in the Turiaçu region (Navarro, 2018a, 2018b). Five stilt village



mapped in the Turiaçu basin show a different spatial arrangement than the Formoso. All those are formed by villages whose stilts are distributed in a linear way at the bottom of the lakes, such as the Cabeludo site. Circular sets do not exist in the villages of Turiaçu and they characterize Formoso stilt village (Figure 11).

According to Fénelon Costa and Malhano (1986), Brazilian Indigenous villages are of three types: circular, rectangular and linear. Examples of circular villages are those of Alto Xingu, which have a central square and malocas arranged around it (Fénelon Costa & Malhano, 1986; Wüst & Barreto, 1999). Circular villages have also been described among the Bororo, Macro-Jê people of Mato Grosso (Colbacchini & Albisetti, 1942); between the Timbira and Canela, in Maranhão (Nimuendajú, 1944); among the Tiriýó, a Karib group from Amapá (Frikel, 1973) and among the Tapirapé, a Tupi group from the Araguaia region (Baldus, 1970). Rectangular villages were found between the Asurini and Suruí, with the houses arranged in a central square, in addition to the classic Tupi-nambá villages described, for example, by Hans Staden (1974) and Laraia (1972). Linear villages can be found among the Karajá in the Araguaia (Meggers, 1971); between the Omágua of the Japurá to the Coari and Purus, tributaries of the

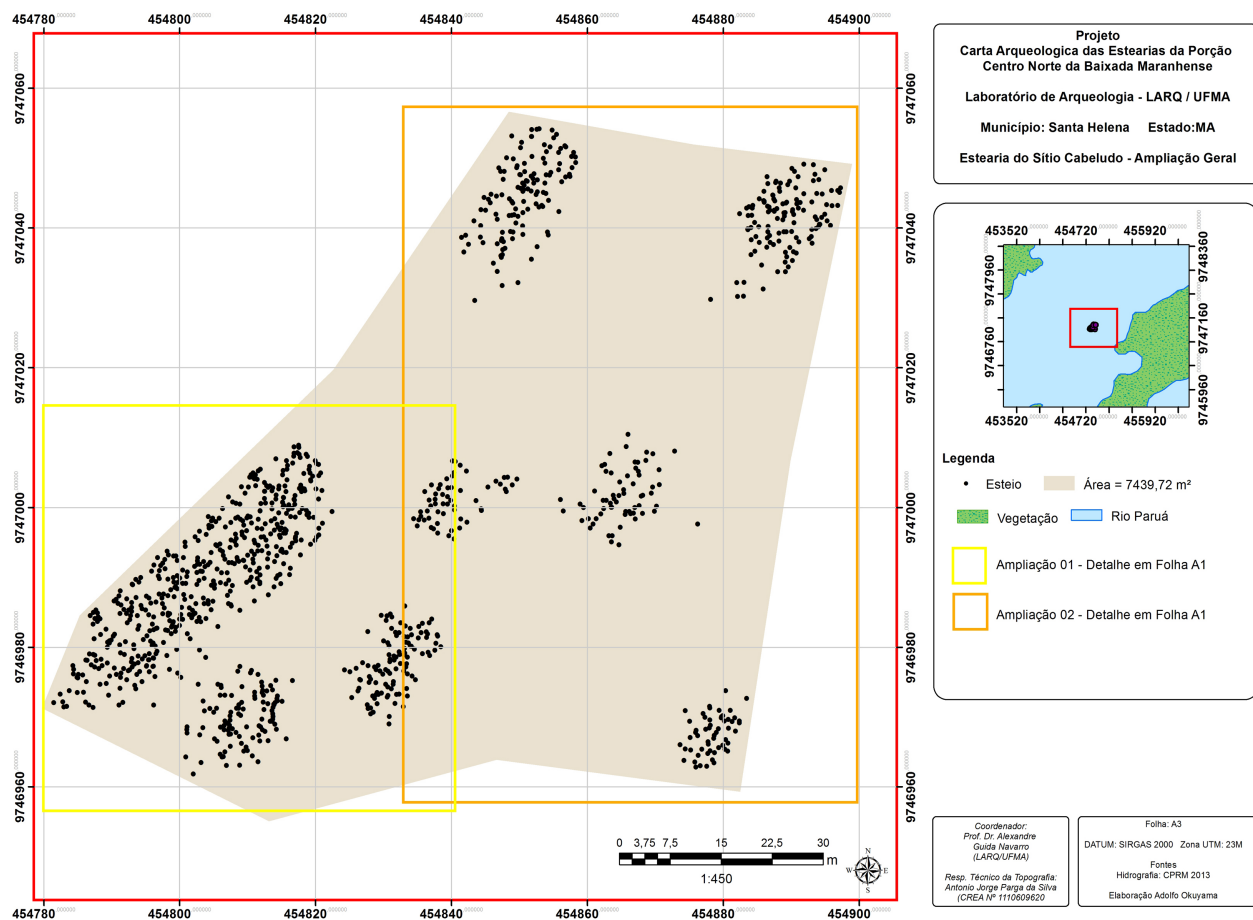


Figure 11. Cabeludo linear stilt village. Photography collection LARQ-UFMA.

Amazon (Porro, 1993, 2017) and among the Tukano of Colombia (Reichel-Dolmatoff, 1971).

Reports from the 17th and 18th centuries relates the existence of peoples from the Tupi and Jê groups in the region of the Pindaré and Mearim valleys, where the stilt villages are located, with the presence of Indigenous groups from the second group being more recurrent, such as the Gamela (Nimuendajú, 1937). These lived in circular villages and were exterminated at the beginning of the 20th century in the city of Penalva (Pereira de Alencastre, 1855). Nimuendajú (1937) reports that in 1796 there was a Gamela village on the shore of the Cajari River, where exist some stilt villages, as Trizidela and Cacaraia studied by Raimundo Lopes (1924). The Tupi groups were being acculturated by the Jesuits since the colonial period in the ancient city of Maracu (today Viana) and Monção, both in the lakes region. Nimuendajú (1937: 66) even mentions the works of Raimundo Lopes (1924), who would have found “traces of an old stilt house with traces of a culture remaining from the Amazon valley”, but he does not make any association with the Indigenous groups that lived on the shores of Lake Cajari, as Guajajara and Gamela. In addition, the material culture and ways of building the houses of the Jê and Tupi groups do not find similarities with those produced by the people of the stilt villages, or those lived on stilts.

Stilt villages are typical houses to the groups in the northeast of South America, where the Incised-Punctate/Arauquinoid Tradition predominated. It is important to point out that in the drainage of Lake Maracaibo and Orinoco delta to the islands of Aruba and Curaçao, the Spaniards found several groups of Arawak (Caquetío) and Karib (Quiriquire) languages that lived on stilts (Oramas, 1916; Kidder II, 1948; Roosevelt, 2019).

Friar Las Casas mentions, for example, villages built on “*horcones en el agua*”, suggesting groups that lived on stilts in the Bahamas and Cuba (Loven, 1935: 227). According to Ramcharan (2004), circular and quadrangular villages were the predominant type among the Arawak and Carib in the Greater and Lesser Antilles between AD 600 - 1520. For this researcher, more circular and smaller *malocas*, such as those in the western sector of Formoso, were associated with the areas of activity and housing of the different clans or families in the village. The more linear/rectangular spaces, such as the eastern sector of Formoso, were associated with more ritualistic and ceremonial places dedicated to the Zemistic religion. This ceremonial space can also be the residence of chiefs, elders and their wives. These similar village types among the Arawak and Karib owe to the intense friendly and warlike relationships between these groups over time in the Antilles (Wilson, 1997).

## 5. Conclusion

This article presented the results of the analysis of material culture and the mapping on the Formoso stilt village. The study of the pottery evidenced a technology shared by the human groups of the Formoso Phase of Incised-Punctate/Arau-

quinoid Tradition. The spatial distribution of the settlement identified 14 groups of stilts divided into two sectors, one more eastern, with a linear and rectangular arrangement, and another more western, circular one. Both sectors were connected by a possible bridge of stilt, thus evidencing the social cohesion of the village. The presence of pottery that evokes bodily transformation through shamanism in the eastern linear-rectangular sector suggests this as a more ritualistic space and the residence of the chiefs as well; while more utilitarian ceramics and the presence of a large amount of ax blades and lithic material in the circular space, indicate a space used in more residential activities of different clans of the village. Furthermore, Arawak and Karib stilt villages reported by chroniclers in the Antilles indicate the sharing of rectangular spaces associated with ritual areas as in Formoso stilt village.

The 3218 posts indicate a large stilt village built inside the Formoso Lake. Radiocarbon dates indicated that most sets of stilts are contemporary to AD 800 - 1000. The Russian peat corer ratifies a single occupation of the site and with a uniform material culture. The higher concentration of charcoal between 11 and 32 centimeters dated between AD 680 - 862 cal indicates this period as height of the settlement.

It should be noted that the presence of people on the site since the year AD 481 - 556 poses a theoretical and methodological question that is difficult to resolve as to the origin of the Incised-Punctate/Araquinoid Tradition. As highlighted by specialists, the Araquinoid Tradition seems to have been a complex of societies of a supralocal and macro-regional nature with broad spheres of social and political interaction, as revealed by the greenstones found in the stilt villages, in the lower Amazon, in the Guyana and the Caribbean. This article suggests that the peoples of this Tradition were already present in the Baixada Maranhense at the time of its supposed origin in Venezuela, or perhaps even before. Researchers already called attention to an external origin of the Araquinoid Comoruco phase in Corazal. Future studies will be able to better decant the data regarding the origin of this Tradition.

Scientists did not report Karib or Arawak groups in Maranhão, but recorded the Pimenteiras Indians, a Karib group, on the border between Maranhão and Piauí States. In this sense, Archaeology can reveal a more complex pre-colonial past in Maranhão, suggesting indigenous groups that were not recorded either by History or by Ethnology.

Finally, this article proposes two possibilities for academic discussion: 1) Maranhão as the easternmost geographical frontier of the north-south expansion of the Incised-Punctate/Araquinoid Tradition or 2) Maranhão as the place of origin of this Tradition, with the inversion of the route, in a south-north direction, along the Atlantic coast. In any case, this article questions the Venezuelan unilateral origin of the expansion of the Incised-Punctate/Araquinoid Tradition as it was elaborated and proposes a more complex process of social interaction between these groups of which Maranhão also was a protagonist of this history.



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## Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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