IS IT TRUE THAT THIS PLACE USED TO BE AN INDIAN VILLAGE? CERAMIC ANALYSIS AND PRELIMINARY CHRONOLOGY OF BOA ESPERANÇA ARCHEOLOGICAL SITE LOCATED IN AMANÃ SDR, MID-SOLIMÕES RIVER, STATE OF AMAZONAS, BRAZIL.

É VERDADE QUE AQUI JÁ FOI UMA ANTIGA ALDEIA DE ÍNDIO? ANÁLISE CERÂMICA E CRONOLOGIA PRELIMINAR DO SÍTIO ARQUEOLÓGICO BOA ESPERANÇA, RDS AMANÃ, MÉDIO SOLIMÕES, AM.

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KEY WORDS:
Archeology; Ceramics Analysis; Preliminary Chronology; SDR Amana.

ABSTRACT

This article presents the preliminary results of ceramics samples collected in site Boa Esperança, located in Amanã Sustainable Development Reserve, Amazonas. Archaeological research has been conducted since 2006 and has yielded a large amount of data that is being used to construct community management plans for local archaeological heritage. Twenty-nine archaeological sites were identified along the survey stage. These sites are composed of Amazonian dark earths (ADE), potsherds, urns and few lithic remains. The Boa Esperança site was chosen as the first site of investigation. Mapping and excavations revealed differences in shape and size among the occupation strata. In order to characterize the artifacts and infer the chronology of occupation, 24% of all ceramic sherds collected through excavation were analyzed, revealing several changes in vessel manufacturing processes in addition to formal and decorative differences. Near-surface deposits are correlated within the Amazonian Polychrome Traditions while the underlying ones show ceramics belonging to the Incised Rim Tradition ceramics. Along with radiocarbon dates, the data allow for an outlining of a preliminary cultural chronology that begins in mid-first millennium B. C. Moreover, these data relate the region to wider processes of cultural change that occurred in the first millennium A.D. in Central Amazonia.

PALAVRAS-CHAVE:
Arqueologia Amazônica; Análise Cerâmica; Cronologia Preliminar; RDS Amana.

RESUMO

Neste artigo são apresentados os resultados preliminares da análise cerâmica do Sítio Boa Esperança, situado na Reserva de Desenvolvimento Sustentável Amanã, Estado do Amazonas. Desde 2006 são desenvolvidas pesquisas que visam subsidiar o plano de manejo comunitário do patrimônio arqueológico existente na área. Através de levantamentos não-interventivos 29 sítios foram identificados e entre eles Boa Esperança foi o primeiro a sofrer intervenções. Foram escavadas 4 unidades teste de 1 m² e coletadas amostras de solos antrópicos, cerâmicas, líticos e urnas. Com o objetivo de caracterizar os artefatos e inferir sobre a cronologia de ocupação, cerca de 24% de todo material cerâmico foi encaminhado para análise que buscou evidenciar mudanças nos processos de manufatura dos vasos, além de diferenças formais e decorativas. A análise indica que Boa Esperança é formado por duas tradições cerâmicas apresentando nos estratos superficiais materiais típicos da Tradição Polícroma da Amazônia e nos estratos subjacentes cerâmicas relacionadas à Tradição Borda Incisa. Apoiados em datações radiocarbônicas os dados permitem esboçar uma cronologia cultural preliminar iniciada em meados do primeiro milênio a. C. e relacionar a região aos processos mais amplos de mudança cultural ocorridos no primeiro milênio d.C na Amazônia Central.
INTRODUCTION

The question posed in the title above is quite common in Boa Esperança, a community within the Amanã Sustainable Development Reserve - ASDR located near the confluence of the Amazon and Japurá Rivers in the state of Amazonas. The residents cultivate curiosity in relation to the “cacaria” (potsherds) found in front of their houses and offer good explanations for the ceramic vestiges.

Archeological research at Amanã began in 2006, with a view toward contributing towards the elaboration of the area management plan and offer the residents a sustainable use alternative for the archeological heritage. Considering the scarcity archeological information on the region, and based on residents’ knowledge of the presence of ceramic remains, two stages of non-invasive surveys were conducted, which resulted in the identification of 29 sites with different characteristics related to their compositions and dimensions. At the time, the relevance of sites was evaluated through different factors: dimensions, type of vestiges which formed the sites, and the natural and cultural impacts caused by current settlements (COSTA, 2008; 2009a).

Boa Esperança was the first site to receive interventions with systematic excavations, whereupon the vertical distribution of the materials was observed and the archeological layers recorded, based on stratigraphic profiles. This was followed by the collection of ceramic and lithic vestiges, soil samples, coal for dating, and finally, a removal of the funerary urns which had been suffering an intense process of destruction (COSTA, 2009a).

This study was initially developed under the hypothesis that Boa Esperança site had been settled around the 8th century A.D., when ceramic with attributes similar to those found in Incised Rim Tradition was being produced (COSTA, 2009b, 2011) and, followed by a new settlement related to the Amazonian Polychrome Tradition beginning in the 10th century A.D. (NEVES et al., 2006).

As a result, laboratory analysis of ceramic remains was initiated, in order to characterize the artifacts and identify similarities and differences between the sets of remains and their changes across the site stratigraphy. This survey presents characterization of ceramic assemblages, which based on radiocarbon dating, confirms the relationship between the local material culture and both Incised Rim and Polychrome Traditions, defining a preliminary occupation chronology of the Amanã SDR.

REGIONAL ARCHEOLOGY

There is a well-known chronology in Central Amazon beginning about 2,300 years ago. The patterns of pre-colonial occupation perceptible in the archeological records are characterized by sites of large dimensions and density of vestiges of material culture, especially after the 6th century A.D, with the increased presence of Amazonia dark earths (ADE), which are interpreted as evidence of demographic changes (NEVES; PETERSEN 2006; PETERSEN et al., 2001).

In consonance with this scenario, different occupations related to ceramicist groups are found across the Amazon. Studies of these vestiges and the mapping of their spatial and temporal distribution led to the definition of classificatory units called phases and traditions (MEGGERS; EVANS, 1961; HILBERT, 1968; SIMÕES, 1972).

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1The Amanã Sustainable Development Reserve – Amanã SDR is a 2.350.000 hectares Conservation Unit (CU) created in 1998 and managed by Mamirauá Sustainable Development Reserve – MSDR and the state of Amazonas. This CU category seeks to promote biodiversity conservation and better living conditions for the local population based on a model which includes human settlements as management of resources subsidized by traditional knowledge and a scientific base. For further information, see Queiroz, 2005.
2This survey consists in the identification and characterization of sites based on observations on the surface only, without any intervention in the land or collection of material (COSTA, 2008).
3Name adopted for unbroken pots or apparently unbroken which made it possible to visualize and identify the edge contour arising from land surface.
The Incised Rim Tradition is composed of ceramics that feature an elaborate decorative composition which combines plastic techniques such as incision, modeling, grooving and excision, usually applied over the vessel rims, (MEGGERS; EVANS, 1961). In its oldest variation, there is also a highly refined use of polychrome painting techniques (GUAPINDAIA, 2008; LIMA et al., 2006). The occurrence of this tradition has been pushed back recent studies in the Central Amazon, resulting in a cultural sequence of more than a thousand years, between 3rd century B.C. and 10th century A.D. (LIMA, 2008; 2010).

The Amazonian Polychrome Tradition ceramics are characterized by their use of red, burgundy and black colors painted over a white base. They are found throughout the Amazon River basin and have considerable formal variation which follows a basic chronology: the oldest artifacts were found at Marajó Island (4th century), in the Central Amazon (9th century), throughout the middle Solimões River (12th century) and in the Upper Amazon (13th century) (TAMANHAHA, 2010).

Available archeological data for the Mid-Solimões and lower Japurá Rivers are scarce, and the only reference to Lake Amanã is a study of collections made by Feriz (1963), where the author discusses the possibility of Andean origin or influence in the production of Amazon ceramics. This material used in this study was collected without any record of the archeological context, and comprises pieces from sites near Tefé and along the Japurá River, as well as from Lake Amanã.

The archeological excavations in the region were conducted by Peter Paul Hilbert (1962a; 1962b; 1968) in the city of Tefé, in Caiambé, and in the upper Japurá River during the late fifties. On that occasion, the author made a brief characterization of the sites with dark earths, and defined, based on ceramic analysis, the local archeological phases.

In the Caiambé region an homonymous ceramic phase was created that is clearly related to the Manacapuru phase, which had also been classified by the author in the region of confluence of Negro and Solimões Rivers. The presence of cauixi (filo Prorifera) as an antiplastic, along with decorative aspects which resort to incisions, led him to classify them as a local manifestation of Incised Rim Tradition. The second phase, called Tefé, is related to ceramics from the Amazonian Polychrome Tradition. The artifacts use caraipé (Licania octandra) as antiplastic added to the paste and also the use of red painting over the white slip and decorative techniques grooved into geometric motifs (HILBERT, 1962a).

Finally, the ceramics collected at the Mangueiras site in the upper Japurá River displayed caraipé as a ceramic antiplastic, as well as modelled, painted and incised decorations (HILBERT, 1962b). Despite recognizing the similarities between this ceramic set and the Incised Rim Tradition, the author classes it as a regional phase, without any relation to ceramics of other locations already studied by him, and disseminates the dates as 632 A.D. (HILBERT, 1968; SIMÕES, 1972). However, in a subsequent study, Meggers and Evans (1977) recognize reminiscences of the Barrancoid style in the Japurá River ceramics. Neves (2008) also argues that around the time of the emergence of large sites associated with Manacapurú phase ceramics and with anthropic soils in the Central Amazon (NEVES et al., 2003; PETERSEN et al., 2001), a similar pattern seems to occur at other sites along the Japurá-Caquetá River, associated with the Japurá phase in Brasil and Colômbia (BRAY; HERRERA; MCEWAN, 1980-1981 apud NEVES, 2008).

There is evidence of anthropization in ASDR 5 that, along with characteristics of sites around Lake Amanã, suggests that the area featured a sedentary way of life found throughout the Central Amazon during the first millennium A.D. (PETERSEN et al., 2001).

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4There is also Marcato’s (1975) study on the ceramics from private collection in the city of Tefé, where the author emphasizes the decorative aspects of the pieces and associates them with the Polychrome Tradition.

5Multi-disciplinary studies done on the anthropic dispersion of Brazil nuts (Bertholletia excelsa) in the Ancient Amazon, involves the Amanã Region in the fast and “recent” process of expansion of Brazil nut trees, which would have been facilitated by the emergence of intensive bitter manioc cultivation and networks of interethnic trade beginning in the first millennium A.D. (Shepard; Ramirez, 2011, p. 47).
MATERIAL AND METHODS

Boa Esperança (64° 44’ 47” W / -2° 29’ 14”S) is an open-air site located on the right bank of Lake Amanã, near the confluence of the Solimões and Japurá Rivers in the interfluvial area of the Negro River, state of Amazonas. So far, it has been the largest site identified composed of anthropic soils (ADE) and a high density of ceramic vestiges. (COSTA, 2009a).

After creating an area map (Figure 1), it became clear that the site covers about 150,000 m² (15 ha). The highest density of ceramic material is located at the central portion of the site, which is also where the dark earths are found (COSTA, 2011).

The 14,877 ceramic fragments collected came from four test units of 1m² each, opened at different points in the site and excavated at 10cm artificial levels, and as shown in figure 2, the depth of the units ranged from 90 to 180 cm. The processing of ceramic materials consisted of cleaning, triage, quantification, weighing and numbering of the artifacts. The criterion used for triage was the position of the fragments on the body of the vessel such that those pieces which offered morphological information or contained decorative styles were sent for analysis: 3,607 fragments consisting of rims, bases, appliqués, and decorated walls, or about 24% of the collected material.
The methodology adopted was developed by the Central Amazon Project (CAP) based on a revision of classification traditionally used in archeology (LIMA, 2008) which aims to gather quantitative and qualitative forms of material treatment (MACHADO, 2005-2006; 2006; 2007; MORAES, 2006).

During the quantitative approach 21 attributes associated to the preparation of raw material (clay and antiplastics), manufacturing techniques, surface treatments, decoration and marks of utilization were observed (CHMYZ et al., 1976; MEGGERS; EVANS, 1970; RYE, 1981; SHEPARD, 1956). Subsequently, a basic statistical treatment was used to relate variable frequencies in the assemblage by artificial level.

The qualitative treatment aimed at understanding the relationships among the several attributes, identifying similarities and differences in fragments in order to construct hypothetical sets of ceramic types. Simultaneously, the graphic motifs were reproduced and filling patterns of decorative fields observed, in order to make clearer the stylistic changes across the stratigraphy.

The morphological analysis method adapted by Lima (2008) from Shepard’s (1956) proposal consisted in the formal classification of vessels with a very simple distinction, those which retain the content (adequate for storage); and those which expose the content (more appropriate for deposition tasks or to serve food). Other formal aspects, such as form and rim finish, contributed to the recognition of choices and styles that characterized the ceramic assemblages; in such cases, this information was systematized to verify the variability between the stratigraphic levels.

The material considered diagnostic was drawn and photographed, and then the shapes of the ceramic vases were recreated. Only then was it possible to compare the artifactual variability of the Boa Esperança site with other ceramic complexes already known (GUAPINDAIA, 2008; HILBERT, 1962a; 1962b; 1968; MACHADO, 2005; LIMA et al., 2006b; LIMA, 2008; MORAES, 2006; TAMANAHA, 2010).

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*The Central Amazonia Project (CAP) was formed by Michael Heckenberger (Florida University), James Petersen (Vermont University) and Eduardo Neves (São Paulo University) during 1995 and 2010 identified more the 100 archaeological sites at confluence the area Negro and Solimões Rivers, Amazonas. The researches demonstrated scope and visibility of the landscapes changes produced by the ancient indigenous peoples of the region, as well as the emergence of complex societies in the Amazon pre-colonial.*
RESULTS AND DISCUSSION

The stratigraphic position of ceramic materials was plotted along with stratigraphic layers observed in the field, indicating three concentrations in the vertical distribution of remains in the deposits (Figure 3).

A pattern of distribution of antiplastics can be observed in three of the four test units analyzed (Figure 4). At the more superficial levels of the deposits, ceramics that feature caraipé as a principal antiplastic are more frequent, whereas in the middle levels there is a significant increase of cauixi, and finally, at the deepest levels there is a constant presence of cauixi, caraipé and charcoal, the latter two being more relevant.

The superficial levels formed by brown soils (10 YR 4/3 – brown; 10 YR 5/2 - grayish Brown; 10 YR 4/4 - dark yellowish brown), had low density of material to a depth of approximately 20 cm, whereas between 30 cm and 50 cm in depth the amount of material begins to increase. Middle levels range from 50 cm to approximately 80 cm and are comprise a black earth layer (10 YR 3/2 - dark brown; 10 YR 3/1 - very dark gray) and high density of ceramic vestiges. Finally, the deepest levels, starting with 80 cm, have lighter soils (10 YR 4/1 - brownish gray; 10 YR 4/3 – Brown) and a lower density of archeological vestiges. Such concentrations, associated with the technological, formal and decorative analysis of the artifacts, reflect the stratigraphic disposition related to at least three moments of archeological recording formation.

For the production of ceramics at the Boa Esperança site, clay was mixed with different antiplastics: caraipé, cauixi, minerals (grains of quartz and hematite), clay nodules and charcoal; these are never isolated, but always occur in association, forming 18 different mixtures.

An analysis of the occurrence of firing type, shows that reduced-fired artifacts are distributed throughout the entire stratigraphy, while oxidized–fired fragments are mostly concentrated at the superficial and middle levels.

Surface treatment techniques are actions which aim to produce an effect in the vessel that may be both functional and aesthetic. Smoothing and polishing occurs at all stratigraphic levels. At the upper levels, attention is directed to the presence of brushing. At the middle levels, although infrequent, the use of blackening and vestiges of resin occur. Between middle and deep levels, a greater variability of finishing and an increasing number of pieces with some polishing are observed.

There is great variety of decoration using painted and applied techniques. There is also a predominance of incision techniques at all levels of the deposits; however at the superficial levels the presence of grooving is very frequent. After a depth of 40 cm, a greater variation in the use of decorative technique is observed and in the
subsequent soil strata a significant increase of painting. The locations selected for decoration were the rims, labial flanges, and the external faces of walls, usually near the rims.

There are two predominant decorative styles. The first one is characterized by the frequent use of grooving in rectilinear and geometric motifs. The second one presents subtle variations and differences in the composition of the motifs, which are formed by thin lines, using incision technique, and which are sometimes associated with uneven streaks, here called “brushed decorative”. The delimitation of the decorative field through straight lines - grooved and incised - and the filling-in of these fields with curved or volute lines, as well as with designs that combine excision and punctuation, was also common. There is a wide repertoire of motifs beginning at the middle levels that are also marked by incisions made with dual point instruments, and that are structured by a mirroring of graphic patterns which confer upon artifacts a more delicate character of decoration.

In morphological aspects, data on rim diameters were obtained from 440 artifacts gathered under the following categories: small (5 to 14 cm), medium (15 to 29 cm), large (30 to 44 cm) and very large (> 45 cm). At all three levels, more than 50% of the rims range between 15 and 29 cm wide indicating a predominance of medium size vessels. The presence of small containers is greater at the upper and middle levels, while larger vessels are more frequent at the deeper and superficial levels.

The most predominant form at all levels is that of the unrestricted container of shallow depth and simple contour, with a straight or everted rim. From the middle levels on, the presence of unrestricted containers, with everted or flange-like everted rims, of varying depth are very common. At all levels, containers with simple contours and lip diameter similar or slighter greater than the maximum diameter of the vessel body are found. These are deep and large vessels which, at near-surface level may present straight rims with lip reinforcement consisting of medium-thickness roulettes (10 to 22 mm). Spherical vessels of simple contour are also found at all levels; the largest ones usually feature slightly expanded rims and wall thicknesses ranging from 8 to 16 mm. The smaller vessels have straight rims and round, straight, and tapered lips. Globular vessels with labial flanges are also found at middle and deep levels, as well as unrestricted containers with composite contour and pronounced inflection points, everted rims, and lips with round, flat, or painted finish.

Unrestricted, completely shallow containers of small proportions (20 cm in diameter) with reinforced rims were found only at deep levels. Vessels with necks, whose complete profiles could not be obtained, are found at the middle and deep levels.

At near-surface levels, there is a concentration of pots with externally reinforced lips that form flanges, which are decorated with rectilinear grooves and contoured cut-outs. Meanwhile, at deep levels, vessels with flanges below the rim can be subdivided into at least two forms; those of large proportions and restrictive openings, and those of smaller proportions with small flanges near the rim that receive painted decoration.

Thus, rim and lip forms, as well as the size of the vessels, show variations according to the depth of the deposits. Based on the absence or predominance of some attributes it was possible to establish in a preliminary manner, the shape of the vessels, many of which are shared among the different ceramic assemblages, while others serve as a distinctive trait.

Until now, Boa Esperança has three radiocarbon dates obtained from samples taken from two deposits. Dating from ceramic concentrations outside the black earth context pushed back expectations for the beginning of occupation at Lake Amanã to 2.500±40 BP and 2.410±40 BP. A third context in the stratigraphic layer formed by black earth was dated to 1520 ± 30 BP, confirming a pre-colonial pattern of occupation similar to that of the Negro and Solimões Rivers confluence. Contexts of near-surface layers have not been dated yet, such that a relative date known for the Tefé Region was established between 600 to 1300 AD (HILBERT, 1962a; 1968).

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Table 1: Radiocarbon dating obtained for the Boa Esperança contexts.

<table>
<thead>
<tr>
<th>Nº Beta</th>
<th>Depth and Context</th>
<th>Conventional Radiocarbon age</th>
<th>2 Sigma Calibrated (95%)</th>
<th>1 Sigma Calibrated (68%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta-294194</td>
<td>170 cm. F2 Base</td>
<td>2.500 (+/-40) BP</td>
<td>2.410-2.370 BP</td>
<td>2.370-2.340 BP</td>
</tr>
<tr>
<td></td>
<td>Anthropic soil. NP 309. Ceramics.</td>
<td></td>
<td>2.740-2.440 BP</td>
<td>2.650-2.490 BP</td>
</tr>
<tr>
<td>Beta-294195</td>
<td>100 cm. F3 Top.</td>
<td>2.410 (+/-40) BP</td>
<td>2.700-2.590 BP</td>
<td>2.610-2.490 BP</td>
</tr>
<tr>
<td></td>
<td>anthropic soil. NP 311. Ceramics.</td>
<td></td>
<td>2.540-2.340 BP</td>
<td>2.480-2.350 BP</td>
</tr>
<tr>
<td>Beta-294193</td>
<td>60 cm. Black Earth Leyer. NP 235.</td>
<td>1.520 (+/-30) BP</td>
<td>1.430-1.340 BP</td>
<td>1.340-1.370 BP</td>
</tr>
<tr>
<td></td>
<td>Ceramics.</td>
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</tbody>
</table>

These data, along with technological, formal and decorative changes identified by the analysis indicate that the archaeological record of Boa Esperança is composed of a ceramic assemblage belonging to the Polychrome and Incisive Rim Traditions (GOMES, 2011; GOMES; COSTA, 2010).

The Amazonian Polychrome tradition at Boa Esperança site

The most recent tradition is associated with superficial strata and has varied depth in the stratigraphic profiles; their ceramics share similarities with Polychrome Tradition in the Mid-Solimões. The ceramics use caraipé as their main additive although cauixi is often found in the ceramic paste. They present a slight tendency to reduced firing or reducing firing core, however oxidized fired is common, suggesting a variable firing atmosphere. Coloration of the paste varies between different tones of brown and orange.

The vessels are smoothed and polished, the latter, rarely observed due to the poor preservation of the potsherds. Part of the vessels received brushed treatment, always on the entire external face of the walls; in some cases; this technique was also observed on the external faces of expanded- tapered or reinforced rims, which in some cases present vestiges of red-slip.

In their formal aspects, vessels with reinforced rims which receive grooved decoration along the end of the lips, as well as those with a single groove on the external face immediately below the rim are considered diagnostic. There are vessels with simple contours, thick walls with white – slip, and straight rims with a flat finish. Plastic grooved decoration is very common on the vessels walls, usually forming motifs in rectilinear geometric patterns with rounded corners, giving a softer edge to the motifs. Painting techniques are frequently monochrome (white our red - slip). The painting itself is very subdued and in two colors (a combination of red color over white - slip) (Figure 5).

Figure 5 - Potsherds associated with the Amazonian Polychrome Tradition. In the upper are examples of reinforced, expanded and tapered rims with decorated lips; next, examples of sherds with decorated walls using grooving technique, brushed, red and white slip, painting vestiges over white slip. Finally displays examples of diagnostic sherds of the tradition, known as mesial flanges with grooved decoration in geometric motifs.
Of great importance is the presence of labial and mesial flanges, diagnostic artifacts from collections related to the Polychrome Tradition in the Guarita and Tefé phases. If one of the predominant characteristics of this tradition is the use of painting, in Boa Esperança plastic decoration are the most significant.

**Incised Rim Tradition at Boa Esperança Site**

Ceramics collected from intermediary and deep strata of the deposits relate to the Incised Rim Tradition. The diversity in the treatment and finishing techniques of the vessels, as well as their formal aspects permit, an initial division of the assemblage into two subsets with distinct density distributions of fragments across excavated units.

The largest artifact sets are concentrated within the intermediary strata composed of black earth, where a greater formal variation and greater repertoire of graphic motifs is observed. The ceramics display cauixi as their main antiplastic, with high frequency rates associated with minerals. The predominant firing type is oxidized, which confers upon the artifacts light pastes and orange colors. In this set, however, the presence of caraipé is widely associated with cauixi, and often with reduced firing.

The vessels are always smoothed and there is a strong presence of polishing, while techniques such as brushing, blackening (always on the internal faces) and vestiges of resins are also seen.

The plastic decorative techniques are more numerous: thin and wide incisions, incisions made with dual point instruments, excisions, punctate, modeling, spherical and rouletted appliqués, grooving, printings with circular stamps, cord marking, digital or ungulate impression, and areas with uneven streaks (better known as brushed decorative) or thin parallel incisions. Curved motifs are common on rims and walls with great variety of graphic patterns: zig-zag, diamonds, flattened ellipses, and volutes. The unrestricted vases usually receive plastic decoration. The irregular rims, modeled and decorated in wide volute motifs are diagnostic, as are the combined use of brushing, grooving and incision – this decorative combination seems to be the major particularity of the subset.

The most representative forms are those of vessels with - everted rims and labial flanges that vary significantly in relation to depth. The presence of spherical vessels with everted and inverted rims is very common, round vessels with inverted rims which receive abstract and zoomorphous modeling. Handles and anthropomorphous modeling are also present in the collection and may be considered diagnostic (figure 6).

Potsherds with vestiges of white or red slip are common. In this context, the use of painting technique is relevant, because many wall sherds with red painting over white slip are found in the deposits, in addition to fragments with zoomorphous designs which present bichromy and incisions. Such characteristics refer this set to the Japurá (HILBERT, 1962b; 1968) and Manacapuru phases (CHIRINOS, 2006; HILBERT, 1968; LIMA, 2008).
At the deeper levels, the artifacts share several characteristics with the previous subset; however the presence of painting is stronger, either in monochromatic (red, white, orange/beige slip) or bichromatic forms when stripes, lines and dots are used in the red color. Even though painting had been used in concomitance with plastic techniques in the previous set, the former becomes more common at the deeper levels of the deposits when other colors start being used, among them orange, and rarely, burgundy and black. This combination of different colors characterizes an old polychromy, diagnostic of the oldest manifestations of the Incised Rim Tradition in both the Central and Lower Amazon (Figure 7).

Ceramics from a deeper context dated between 2.500±40 BP and 2.410±40 BP share technological similarities with the latter ceramic subset, although painting, its main characteristic, is more subdued. Internal and/or external slip was the most frequently used decorative technique, while painting itself was observed in only two fragments. Plastic decorations were applied using six different techniques: grooving, punctating, digital impression, crenelation, and more frequently, incision. Material from this context presents vessels with flanges below the rim as well as protuberant labial flanges and the vessels are small. The main change relateds to the decorative patterns formed by curved and volute motifs, serpentine lines, and diamond chains filled with dots, always applied with very thin incisions. These motifs were not seen before and confer sophistication to the graphic pattern of the pieces (Figure 8).

This change in decorative choice is seen in the formal aspects. Despite the continuous presence of everted rims and labial flanges, additional flanges with different shapes are seen applied a few centimeters below the rims of restricted vessels. Another change concerns appliqués, which become rarer. The major technological change is a diversification in the use of antiplastics, when caraipé becomes the main additive used in the artifacts, often associated with charcoal, even though the use of cauixi remains common. These characteristics, combined with its localization in the deposits composed of lighter soils refer this subset to the Pocó (GUAPIÑDAIA, 2008) and Açutuba phases (LIMA et al., 2006b; LIMA 2008; 2010).
CONCLUSION

Neves et al. (2006), based on preliminary observations suggested that the Boa Esperança site would have been settled over at least two distinct periods: the earlier between the 6th and 9th centuries A.D., with ceramics from the Incised Rim Tradition, and the most recent between the 10th and 16th centuries, with ceramics from the Polychrome Tradition. Supporting this hypothesis is the generalized settlement pattern that occurred during the first millennium A.D., which is associated with a sedentary lifestyle, population increase, wide exploration of natural resources with an intensification of management techniques and agricultural practices (PETERSEN et al., 2001; NEVES, 2006), a pattern also observed in Japurá-Caquetá River sites (BRAY; HERRERA; MCEWAN 1980-1981 apud NEVES, 2008).

In the Central Amazon these ceramic traditions are found at complex sites that feature large extents of black earth, landscape modifications, and which indicate three important moments in the pre-colonial history of the region.

The first sites with ceramic production suddenly emerged in the area of confluence of the Negro and Solimões Rivers. Lima, Neves and Petersen (2006) created the Açutuba phase for the region and indicate very strong formal, stylistic and chronological relations with ceramics identified along the Nhamundá and Trombetas River basin in the Lower Amazon. These belong to the Pocó phase, first identified by Hilbert and Hilbert (1980) and recently by Guapindaia (2008). This is a period which Central Amazon takes place between the 3rd and 4th century A.D. and between the 2nd and 4th century A.D. in the Lower Amazon, occurred before the emergence of black earth and associated large villages, (NEVES, 2006).

The second phase goes from the 5th century until the 13th century A.D. and is related to the intensification of occurrences of black earth, as well as to the ceramics that show changes in their technological and formal aspects. In the Central Amazon, contexts of smaller sites with black earth are found between the 5th and 6th century, which are interpreted under processual terms as indices of continuous cultural change (LIMA, 2008, p. 365;). Starting in the 7th and 8th centuries, large sites begin to emerge, presenting evidence of occupations lasting hundreds of years, including settlements with circular and ellipsoidal shapes (CHIRINOS, 2006; MORAES, 2006; REBELLATO, 2007).

That cultural continuity associated with Incised Rim Tradition (LIMA, 2008) would have been interrupted late, with the emergence of ceramics very different in technology and decoration. Heckenberger et al., (1998) indicate that the wide distribution of sites of the Amazon Polychrome Tradition, already in a later period, would represent an innovation within local ceramic industries. Starting around 900 A.D., this would be a moment of rupture that extends throughout the Amazon River basin (TAMANHA, 2010).

Costa (2011) also interprets the diversity of site localization, the presence of dark earths, and the high density of ceramics in the archeological contexts of Amanã as correlates of this pattern. His hypothesis combines the ellipsoidal format of dispersion of black earth and Incised Rim Tradition ceramics as characteristics of the densest occupation of Boa Esperança, which would have occurred around the 8th century A.D.

The ceramic analysis permitted to confirm the expectations for the area. In fact, two ceramic traditions are present in the area with their distinctive technological and stylistic characteristics, as in the area of the confluence of the Negro and Solimões Rivers (LIMA, 2008; MORAES, 2006; NEVES, 2008). However, radiocarbon date and a refined understanding of the artifacts attest to greater antiquity of the Incised Rim Tradition in the Amanã area.

At the Boa Esperança site the deeper levels of the deposits show that the beginning of the occupation dates approximately to the 5th century B.C. (2.500 ± 40 BP e 2.410 ± 40 BP), and their similarities with early
contexts in other areas contribute toward a recognition of a pattern in the archaeological record that suggests a horizon of occupation in the Amazon basin that predates the formation of black earth. Moreover, the date obtained within the black earth context around the 5th century A.D. (1520 ± 30 BP) indicates that during this period, a sedentary occupation would already be established in the Lake Amanã region.

These data legitimize a chronological continuum of one millennium for the Incised Rim Tradition, which may be characterized for its diversity in decorative aspects with a wide repertoire of graphic motifs, concomitant use of plastic and painted techniques, and great formal variety that initially highlights two distinctive subsets.

Ceramics associated with near-surface contexts, despite their lack of an absolute date, belong to Polychrome Tradition because they present diagnostic artifacts with mesial flanges, grooved decoration, and the predominant use of caraipé. These may offer relevant information for an understanding of an important period of the pre-colonial history of the region, pending an examination and understanding of some particularities such as the rare use of bichrome painting in contrast with plastic decorations, the latter being more significant.

To conclude, the task of constructing a preliminary chronology for the Boa Esperança site resulted in the information presented here, which expresses important questions about the past of the region. These still need refinement, in order to understand the tenuous technological and formal changes of the Incised Rim Tradition ceramics across the stratigraphy, as well as their relationship with those of the Amazon Polychrome Tradition.

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