

WHAT DID THE TUPINAMBÁ COOK IN THEIR VESSELS? AN HUMBLE CONTRIBUTION TO ETHNOGRAPHIC ANALOGY

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RESUMO: A partir das informações etnográficas das gravuras dos cronistas europeus dos séculos XVI e XVII, é possível demonstrar, por meio da analogia etnográfica, que a cerâmica arqueológica da denominada *Tradição Tupiguarani*, encontrada no litoral leste e nordeste do Brasil, foi produzida pelos Tupinambá. Usando os textos dos cronistas que descrevem a alimentação destes Tupinambá, foi possível também reconstituir a funcionalidade das vasilhas encontradas.

INTRODUCTION

The morphology of the vessels used by one particular group *can* be correlated with the kinds of foods prepared by them in these vessels, with the corollary that this group diet *can* be also reconstructed by means of the morphology of their vessels, even in the absence of any direct information.

That is to say that in the absence of the possibility of directly observing the diet of one ethnic group, or of direct accounts of it, instances of this kind of correlation can be applied and their diet tentatively reconstructed by comparing their vessels to those of other groups which functionality is known. This constitutes what is called ethnographic analogy.

The main problem is to prove that the correlation, verified in one group, will hold for other group, to assert that for any vessel category, or group of vessel categories, there is one and only one foodstuff or group of closely related foodstuffs, which *can* or *may* be prepared in them, everywhere or at least throughout a cultural area.

The range of variation in the techniques of food preparation and in the equipment used therefore, casts doubts about the possibility of the existence of any rigid correlation of the kind above, therefore Alexander (1969:123-129) warns that all cultural evidences based on analogy are non conclusive without non-cultural evidences, either direct or indirect.

However, some correlations *may* hold for many different groups and in the

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absence of other kinds of evidence, the ethnographic analogy *should* be attempted whenever possible. Better ethnographic analogies are dependent – among other requirements – in "good" examples. "Good" examples should – among other requirements – come from groups not culturally disrupted, still living their own ways; and should be widespread, not come from small, culturally isolated groups. Therefore, we chose the XVIth century Tupinambá of the Atlantic coast of Brazil, rather than any modern ethnographic group, because, if in one hand, we could have more data about a modern group, in the other hand we have to admit that everyone of them – even those who seem to be more remote – had to face 400 years of direct or indirect Western influence.

In the second half of the 16th century the Tupinambá were indeed pristine. The few iron tools, glass beads, small mirrors and odd pieces of cloth received from the Europeans could not have changed their pottery and the uses to what it was put by them. At the beginning of the 17th century many metal kettles, pots and caldrons, given to them by the French, must have indeed changed their pottery uses (D'Abbeville (1614) 1963:284).

No other indian group in Eastern South America presents so many possibilities of being used as an example, than the Tupi-speaking coastal groups, here called generically Tupinambá (Fernandes, 1963). We have plenty of first hand accounts from 16th and 17th centuries European chroniclers (Staden (1557); 1942; 1944; 1955; 1963), Thevet (1557) 1558; 1878; 1944; 1584; (1575; MS ca. 1585; MS 1586) Lussagnet (ed), 1953), Léry (1578) 1941; 1972), Gandavo (MS ca. 1570) 1924; 1964), Anchieta (MS 1584) 1964), Soares de Souza (MS 1587) 1851, 1938), D'Abbeville (1614) 1945, 1963), D'Évreux, (1615) 1864) some of them illustrated with many plates engraved after sketches made on the spot.

Therefore, we know from precise literary references of people who lived among them, illustrated with excellent graphical material, what the 16th century Tupinambá did eat drink and what kinds of vessels did they use to prepare and to serve their food. Moreover, there is a kind of pottery, found archaeologically throughout the area known to be occupied by the Tupinambá in historic times, which is attributed to them therefore it is up to us to try to related the two sets of informations.

The most useful results of this relation would be:

- a. To assert if the purported Tupinambá pottery was indeed produced and uses by the Tupinambá – at least by historic ones – and, being proved the first assertion:
- b. To identify the different uses these vessels were put to.

We *can* do this, because between the literary references and the archaeological pottery vessels we have illustrations of Tupinambá vessels in actual use, and these represent direct cultural evidence.

As the Tupinambá diet was based on manioc, any reconstruction of it would deal in the first place with the diverse uses to what manioc could be put.

The range of variation in the operations performed to prepare manioc for consumption and the material artifacts used for this purpose, have been described

in diverse extent by all the early chroniclers. (These accounts have been synthesized among others by Métraux, 1928, 1948.a:102; Pinto, 1938; Lowie, 1948:6; Steward & Faron, 1959:293-294; Lathrap, 1970:51-53; Meggers, 1971:47-49, 89-91, 126; Schwerin, 1971; Girard, 1976:144 seq., and Brochado, 1977:26-44.)

I have attempted before myself to correlate vessel morphology with patterns of manioc use, but using a too general set of vessel categories to be truly effective (Brochado, 1977:53-103). So much so that, in one hand, the interesting sets of relationships between diet composition and vessel forms could not be fully proved or even exploited farther, and in the other hand, the form categories, because of their own generality – *panela*, *tigela*, *jarro* and *prato* or *assador* – could not be always easily applied to the vessels actually found in any archaeological record.

It is surprising that, given the plenty of information about the historic Tupinambá and the existence of archaeological pottery attributed to them, this kind of reconstruction had not been attempted before. The causes are at least two.

In the first place, the accuracy of the engravings which illustrate the chroniclers texts were doubted for long time and nobody would like to rely on them, because they were considered as reflecting only the fancy imagination of the European engravers, depicting something they actually had never seen. In the second place, even if many Museums in Brazil had shown for at least one century collections of vessels claimed to be Tupinambá (eg. Museu Nacional do Rio de Janeiro, Museu Paulista etc.) the actual recorded archaeological findings were too scattered and too inconsistent and nobody had as yet drawn a list of these vessels sufficiently complete to make any comparisons possible. This last limitation – not to know for sure which were actually Tupinambá among the pottery vessels from coastal Brazil – doomed to failure the only one attempt I know about. Drimond (1950) tried to compare depictions of four different vessels used by Tupinambá, after illustrations by Staden and Thevet, with the neck and rim of a clearly Guarani vessel from São Paulo.

The historic coastal Tupi – also referred to in general as Tupinambá – occupied the coast from Cananéia, in São Paulo, near the boundary with the State of Paraná, to Maranhão, in Northern Brazil, and on the interior had smaller holdings in the upper Tietê river and in sections of the upper and middle São Francisco river. The traditional boundary between the Guarani (or Cario) and the Tupinambá (or Tupinikin) followed the coastal mountain range from Cananéia to the northeast, cutting through it to reach the upper Tietê river and following this river to the Paraná¹.

The pottery attributed to the Tupinambá has been so far found in at least 153 archaeological sites, scattered in Eastern and Northeastern Brazil, north of a line represented by the Tietê river valley. Most of the external and internal surfaces of the vessels appear to have been left plain, because in the surface collections made on these sites there are much more plain sherds than decorated ones (up to 90%). The decoration consists in polychrome painting in red and/or black on a white slip,

1 More complete accounts in BROCHADO (1984), SCATAMACCHIA (1990).

red slip, nail incising, rim notching and body fluting. The corrugated decoration is even less frequent.

Only surface collections and test pits have been made in all sites, and very few have been stratigraphically excavated.

The known radiocarbon dates - coupled with historic accounts - indicate the continuity of the occupation of Eastern and North eastern Brazil by the ancestors of the Tupinambá, at least from the 8th century to the 19th century, for ca. 1100 years, beginning at least 800 years before the coming of the Europeans to this part of South America in the XVIth century. The consecutive C14 dates suggest a movement down the Atlantic coast all the way from the lower Amazon to São Paulo, with many branching with many to the interior. (map 1, table 1).

What impressed me first in the chronicler's illustrations was the striking resemblance between the tall biconical strongly carenated beer-brewing jars depicted in Staden's illustrations of Tupinambá drinking; bouts and the similiary shaped vessels found in the area formerly occupied by them. In the development of the comparison, most of the actual Tupinambá vessels have been found to be almost identical in shape, if not is in size, with those depicted in the engravings.

I am fully aware that to say that the engravings are accurate because the vessels depicted look very much like the archaeological Tupinambá vessels and at the same time, base my proof that the archaeological vessels are Tupinambá because they resemble those vessels depicted in Tupinambá scenes, entails some sort of circular reasoning. But this circularity can be easily broken using circumstantial evidences of another order.

To the purpose of an easier and more accurate comparison, all the vessels represented in the engravings have been redrawn to the same scale and in vertical profile with aplit frontal external-internal views, as is usual in the presentation of archaeological materials. The first problem in order to achieve this was to find the true dimensions of the objects depicted.

This has been done, in an approximate form, using the proportions of the human body - usually the height of the head to find the proper scale.

Once the scale was found, the vessels form was interpreted following the art conventions of the time, proper consideration always being given to the distortions produced by the artist's attempts to show the vessels tridimensionally, employing some sort of naive perspective.

The thickness of the vessel wall has been provided only in a very tentative way, being always calculated in proportion to the size of the vessels.

THE ETHNOHISTORICAL DATA

Twenty different plates, illustrating various editions of Staden, Thevet and Lèry, show some kind of pottery vessels.

We have consulted all the available editions at the The University of Illinois Library, using whenever possible the first ones.

Around 51 vessels of different shapes and size are depicted in those engravings. (About 70 vessels, supposed to be Tupinambá, have been published so far - some being complete vessels and some reconstructions from large sherds) Therefore we have almost as many vessels depicted in the engravings in the ethnohistorical sources as actual vessels from the archaeological record.

Most of the plates which depict any vessels in use, show them in the context of the drinking feasts, sometimes also related to the anthropophagic ritual, which struck so much the fancy and the imagination of the European readers (Bucher, 1977:55-85) (figs. 2, 4-7, 9-12, 11, 13 and 18). So I will review in the first place those plates which illustrate the preparation and consumption of alcoholic beverages, following the natural flow of the process, as it is described by the chroniclers. We will be using the texts in the original.

Staden lived for some time among the Tupinambá around Santos in the coast of São Paulo. At this time (1548-1555) the Tupinambá were allied to the French but hostile to the Portuguese and Staden; who manned a battery at the entrance of the Portuguese establishment of São Vicente (Santos); was imprisoned by them and only narrowly managed to escape being sacrificed in an anthropophagic ritual. So he had a first hand account of the Tupinambá living still free in the forests along the shores and the many islands.

He begins by explaining how the Tupinambá of São Paulo (also sometimes called Tupiniquim) produced their pottery.

"Die Weiber stellen die Gefäße, die sie benutzen, folgendermaßen her: Sie nehmen Ton, kneten ihn wie Teig und machen daraus die Gefäße, die sie haben wollen. Dann lassen sie sie eine Zeitlang trocknen. Sie verstehen auch, sie fein zu bemalen. Wenn sie die Gefäße brennen wollen, stulpen sie sie auf Steine, legen viel trockene Baumrinde darum und stecken diese an. So werden die Gefäße gebrannt, Daß sie glühen wie heißes Eisen" (Staden (1557) 1963:125).²

The account of the preparation and consumption of their beer is as follows:

"Die Weiber machen die Getränke. Sie nehmen Mandioca wurzeln und kochen grosse Topfe voll. Wenn sie gekocht ist, nehmen sie die Mandioca aus den Töpfen, giessen sie in andere Töpfe oder Gefäße und lassen sie ein wenig kalt werden. Dan setzen die jungen Mädchen sich daran, kuen sie und tun das Gekaute in ein besonderes Gefäß" (id. ibd.: 126).³

"Sind alle gekocht en Wurzeln gekaut, so tun das Gekaute vie in den Topf, gießen Wasser dazu, vermengen beides und laßen es dannwieder warm werden" (id. ibd.:127).⁴

The vessels used to warm or to bring to a second boil the masticated manioc mush are depicted much in the same way in both plates: a tall biconical jar, strongly

2 "Women make all the vessels they need. They bring the clay and knead it; from it they make all the vessels they like; they put them to dry and they know to paint them. When they wish to burn them, they invert them over some stones and pile a great deal of tree bark around them, which they kindle and, with it they are burnt, turning like live coals or hot iron".

3 "Women make the beverage. They take manioc roots and boil them in large pots. When they are thoroughly boiled, they take them from these pots and put them in other pots or vessels and leave them there for some time to cool. Next, the girls seat all around, masticating them and spitting in yet another vessel".

4 "Once all these boiled roots have been masticated, the masticated mush is put back in the pots, who are then filled with water, thoroughly mixed and warmed again."

carinated, with a cambered or exteriorly reinforced rim (fig. 4.b).

"Dann haben sie besondere Gefäße, die sie halb in die Erde graben ind die sie gebrauchen, wie man hier Fäßer für Wein und Bier gebraucht. Das gießen sie die Maße hinein und machen die Gefäße gut zu. Das gärt dann von selbst und wird stark. So lassen sie es zwei Tage stenen, Dann trinken sie es und berauschen sich daran. Es ist dick fläßig und nahrhaft" (id.ibd.:127).⁵

The special vessels alluded to in the text are depicted almost in the same way in both plates and they resemble also very much the tall jars used to bring the masticated mash to a second boil (fig. 4.b). They look somewhat smaller but it is difficult to say how much, because they are actually part buried in the ground.

In fig. 2 are also depicted some small hemispnerical open bowls used to draw beer from the fermenting jars and pour it into some larger bowls (fig. 2.a) used to serve it by pouring into some smaller bowls used as drinking cups (fig. 2.d) as we see in the upper row of figure.

"Sie setzen sich um die Gefäße, aus denen sie trinken. Die Weiber reichen ihnen das getränk güz, wie ihre Sitte es verlangt" (id.ibd.:127).⁶

In this account, from the second part of his book, Staden mentions only manioc as ingredient of the beverage made by the Tupinambá, but in the first part he says, about the same Tupinambá, who latter imprisoned him:

"...dann wird der Mais reif, den sie Abatí nem en und mit dem sie ein Getränk bereiten, das Cauim heißt. Dabei verwenden sie auch die Mandioca-Wurzel, von der sie etwas hineinmengen. Sobald sie mit dem reifen Abatí von ihrem kriegszug heimkehren, machen sie das Getränk zurecht und verzehren dabei ihre Feinde, wenn sie welche gefangen haben. Sie freuen sich ein ganzes Jahr im voraus auf die Abatizeit" (id.ibd.:49).⁷

Thevet lived for some months, between 1555 and 1556, in the French establishment located on a island in Guanabara Bay (Rio de Janciro) but his account of the Tamoyo deals with the indians living still free near Cabo Frio, some distance to the East along the same stretch of coast. There are around 470 km between the area of São Vicente, where Staden was kept prisoner by the Tupinambá, and Cabo Frio, where Thevet went to visit the Tamoyo.

In his *La Cosmographie ...* (1575). Thevet begins by explaining how the Tamoyo of Cabo Frio produced their pottery.

"Ce pendent leur monstre à faire certains vaisseaux de terre, comme pots à cuyre chair et poisson, et autres viandes qu'ils mangent entre eux: plats et escuelles marquetées de compartiments assez beaux selon le pais, lesquels ils vernissent d'une certaine gomme blanche qui croist en des arbres ... Elles font aussi d'autres grands pots à cuyre leur breuvage, et d'autres pour le mettre, dont y en a qui tiennent plus d'un muyd" (Lussagnet, 1953: 131).

5 "There are then some special vessels, who are buried to their middle in the ground and which they use as we use casks for wine or beer. They pour the mash into these vessels and close them. The beverage ferments and turns strong. So it is left for two days. Afterwards they drink from it and get drunk. It is thick and must be nutritious."

6 "They seat around the vessel from which they are drinking. Women serve the drink in the same order in which they are seated" (fig.2 and 9).

7 "... when the maize is ripe, they call it Abatí and make from it a beverage called cauim. There are also manioc roots, which they mix therein. When they return from war they like to have ripe maize in order to make beer, that is when they eat their enemies, if they had captured any. Therefore they wait anxiously all the year round for the time when the abatí is ripe".

"... de laquelle [terre] ils font des vases a leur usage, tant pour cuire leurs viandes qu'ils bouillent, quoy que ce soit rarement, que pour faire leur farines de Mil or Manihot, que aussi pour dresser leur breuvage, y estans aussi subtils selon leur mode que nous saurions estre" (id.ibd.:2224).

The account he gives of the preparation and consumption of beer by the Tamoyo, is as follows.

"... du leur Cahouin, qui est un breuvage composé de mil gros comme pois, et se nomme en leur langue: Avaty. Il en a de deux especes, de noirs et de blancs, et font de la plus grand partie de ce qu'ils recueillent ce gentil breuvage, faisant bouillir ce gros Millet, avec autres racines: lequel après avoir bouilly fort long-temps dans de grands vaisseaux de terre cuite (car y en a tels qui tiennent un muid) et estant parfait, il devient de couleur de vin clairet. Ces pandards de Sauvage le trouvent si bon qu'ils s'en enyvrent si bien que lon feroit de pardeça de vin: j'entends quand ils en prennent outre mesure. Mais escoutez une superstition a faire de breuvage, la plus estrange qu'il est possible de croire: çavoir, qu'après qu'il est bouilly dans ce grands vases, viendront quelque nombre de filles vierges macher ce mil ainsi bouilly; puis estant bien deuëment masché et broyé, le metront en d'autres vaisseaux à ce propres, jusques a ce qu'ils voyent qu'il n'y ait rien dans cestuy, pour en faire buillir et cuire d'autre... Cela ainsi fait, le feront bouillir de rechef, puis le laissent quelques jours jusque à ce qu'il soit purgé, comme nous voyons le vin bouillant dans le tonneaux...Voyla...comme ils font leur boisson, façon et maniere comme je vous l'ay descrit, et comme je vous en donne icy le pourtraict au naturel, suyvnt le creon que j'en ay apporté de dessus les lieux" (id.ibd.:55-56).

Figure 11 is from *Les Singularitez...*(1557:46) but fig. 13 is a latter redrawing printed in *La Cosmographie...*(1575) Lussagnet, 1953:fig. 2).

"Leur breuvage'est fait de gros millet, blanc et noir" (id.ibd.:121).

"Elles font aussi d'autres grands pots à cuyre leur breuvage et d'autres pour le mettre dont y en a qui tiennent plus d'un muid" (id.ibd.:131). 3

"Le dimensions considerables des vases à caouin ent frappé tous les voya-geurs: si Thevet indique une contenance d'un muid (168 l), Soares va jusqu'à une pipe (534 l)" (id.ibd.:131, note 3).

If in the case of Staden there is a strong suspicion that the engravings which illustrate his book were made following some instructions sketched by Staden himself, Thevet plainly states that the illustrations for his book had been based on sketches made by him on the spot, what makes them very important as iconographic documents.

It seems also interesting that; even if the texts do not mention it expressly; all these vessels which are not on the fire appear to be part buried in the ground, as happens to the tall jars used for the same purpose depicted in Staden's illustrations. Consequently this seems to be a general characteristic of all fermenting vessels, independent of their form; perhaps because they have to hold more liquid than the ones used for boiling, therefore the strenght of the vessel walls has to be buttressed by burying their lower part in the ground.

In fig. 13.c-e the vessels who hold boiled maize before and after it is masticated, have quite different sizes. In fig. 15.a,b, beer is being served in very shallow bowl-like drinking cups, apparently of two different sizes.

We estimated the volume of the large bowl-shaped pots illustrated in Thevet, using their approximate dimension, and found that the largest one (fig. 11.a) could

not hold more than 190l. Therefore, if it looks as if their size had been somewhat exaggerated by the engraver, they are actually smaller than the ones described by Thevet as capable of holding up to 268 l. (Lussagnet, 1953:131, note 3; Huguet, 1925; Larousse, 1971)

In his voyages along the east coast of South America Thevet met also the Tupi who lived far to the Northeast of Rio de Janeiro, along the coast of Rio Grande do Norte, in the bulge of Brazil.

Describing how they prepared and consumed their beer, Thevet says:

"...Caouyn ... qui est un breuvage, lequel, selon que j'ay descrit en ma Cosmographie, est fait par les femmes, de racines, qu'ils nomment *Alpi*, et de mil ensemble bien cuits, et pillés: puis après le mettent en des grandes vaisseaux qu'ils nomment *vassave*. Et le troisième jour ils le beuvent, d'autant qu'il ne se pourroit garder d'avantage sans estre corrompu et gasté" (Lussagnet, 1953:197, note 2).

"Et quand ils veulent faire banquet, ils prennent de la mesme farine, [maize flour] laquelle ils font bouillir, comme pour remplir des poëles de terre contenant pour le moins demy muid. Ils appellent leur vin *Cahouyn*. Celuy qui est bouilly demeure fort espoix. Mais ils ont une astuce pour le faire affiner, c'est que de la mesme farine bouillie ils en prennent quelque portion, laquelle ils mettent hors de l'eau, et la font mascher à des jeunes filles ... e l'ayant bien masché, la laissent tomber de dedans leur bouche dedans les grands poëles, esquelles est le vin, tellement qu'après grande quantité par icelles filles, ou femmes mise dedans icelles poelles, leur vin demeure affiné. Et après mettent quelque maniere de levain fait de la mesme farine de Mil, lequel ils gardent long temps (id.ibd.:267-268).

"Je n'ay voulu descrire plus amplement la maniere d'acoustrer le Manioc ... Ils composent une sorte de vin, lequel ils font bouillir, tout ainsy comme la farine de Mil, de quoy j'ay cy devant parlé, mesmes en font mascher aux jeunes filles à fin de la faire affiner et en font tout ainsy que du vin de Mil" (id.ibd.: 269).

It is clear that Thevet is here speaking about bitter Manioc because he had explained before the dangers of drinking the poisonous juice extracted from it before it is boiled.

"... *Aquaïoux*. Ce fruit [caju] est tres excellent a manger, et d'iceluy ils en font du vin, duquel ils sont yvres ordinairement ... et n'y a que trois mois en l'an, esquels ils n'ayent fruit, [caju] à savoir Septembre, Octobre, et Novembre, encores audit mois de Novembre ils commencent à avoir desdits fruits" (id. ibd.:270)

In Thevet's accounts we have therefore to distinguish when he is speaking about the Tamoyo of Cabo Frio, near Rio de Janeiro (*Les Singularitez ... and La Cosmographie ...*) or about the Tupi of Rio Grande do Norte, in Northeast Brazil (*Les Deux Voyages ...*). The Tamoyo are said to use maize and *other roots* (id.ibd.:55-50) or only maize (id.ibd.:131) while the Tupi of Rio Grande do Norte are said to use sometimes sweet manioc mixed with maize (id.ibd.:197, note 2), sometimes only maize (id.ibd.:267-268), or bitter manioc (id.ibd.:269) or *caju* (id.ibd.:270).

It becomes clear from the texts that the Tamoyo of Rio de Janeiro, having maize two times a year (December and May) (id.ibd.:210) employed almost exclusively maize to make their beer, while the Tupi of the Northeast, having only little maize and only once a year (id.ibd.:267) used more *caju*, but also some maize, some sweet manioc mixed with maize and some bitter manioc. That *caju* was more important than the other plants, is implied the statement: "...duquel ils sont yvres ordinaire-

ment".

We have so far commented only about the vessels used by the Tamoyo of Rio de Janeiro because there are no illustrations pertinent to the Tupi of Northeastern Brazil. It is only stated that beer made from sweet manioc mixed with maize was fermented in large vessels called *vassave* and that beer made from maize flour was boiled, masticated and possibly also fermented in *grands poelles*, probably large basin-like caldrons, very similar to the ones used by the Tamoyo of Rio de Janeiro to brew their maize beer. These caldrons are said to be able to hold at least half a *muy* or *muyd* (ca. 134 l) (Nuguet, 1925; Larousse, 1971).

There are however no explanations about the shape and size of the vessels used to brew beer from bitter manioc. As for the caju beer, even if there are no explanations in the texts, an illustration of *Les Singularitez ...* (fig. 16) depicts some men crushing *caju* fruits in a large, probably ovoid jar, part buried in the ground. The parallel lines on the body of the jar probably are intended to depict corrugations.

In fig. 17, clearly redrawn after fig. 19, the same scene is pictured but the jar now assumes a more spherical contour and presents a more complicated neck profile which looks suspiciously European. These illustrations probably apply better to the Tupi of Northeastern Brazil, an area very well known from its large patches of wild *caju* trees, than to the Tamoyo of Rio de Janeiro.

Léry lived for 10 months, between 1557 and 1558, in the same French establishment at Guanabara Bay (Rio de Janeiro) where Thevet had lived before, but his account deals more with the Tupinambá living on the shores of the Bay than with the Tamoyo of Cabo Frio, further to the East.

As the others, he begins by explaining how the Tupinambá produced their pottery.

"... les femmes ... font force cannes et grands vaisseaux de terre pour faire et tenir le breuvage dit *caou-in*; semblablement des pots à mettre cuire, tant de façon ronde qu'ovale; des poëles moyennes et petites, plats et autre vaisselle de terre, combien qu'elle ne soit guère unie par le dehors, est néanmoins si bien polie et comme plombée par le dedans de certaine liqueur blanche qui s'endureit, qu'il n'est possible aux potiers de par-deçà de mieux accourter leurs posteries de terre. Même ces femmes, détrempant certaines couleurs grisâtres, propres à cela, font avec des pinceaux mille petites gentillesses, comme guillochis, las d'amour et autres drôleries au-dedans de ces vaisselles de terre, principalement en celles où ont tient la farine et les autres viandes; de façon qu'on en est servil assez proprement, voire dirai plus honnêtement que ne sont ceux qui usent par-deçà de vaisselle de bois".

"Au surplus, ... nos sauvages ont des courges et autres fruits mi partis et creusés, de quoi ils font tant leurs tasses à boire, qu'ils appellent *coui*, d'autres petits vases dont ils se servent à autre usage" (Léry, 1972:217 - 218).

The account of the preparation and consumption of beer is as follows.

"Après donc qu'elles les ont decoupées [... ces racines d'*aypi* et de *maniot*...] aussi menues qu'on fait par deçà des raves à mettre au pot, les faisant ainsi bouillir par morceaux, avec de l'eau dans de grands vaisseaux de terre, quand elles les voient tendres et amollies, les ôtant de dessus le feu, elles les laissent un peu refroidir. Cela fait, plusieurs d'entre elles étant acroupies à l'entour de ces grands vaisseaux, prenant dans iceux ces rouelles de racines ainsi mollifiées, après que sans les avaler elles les auront bien mâchées et tortillées parmi leur bouches, reprenant chacun morceau l'un après l'autre, avec la main, elles les remettent dans d'autres vaisseaux de

terre qui sont tous prêts sur le feu, èsquels elles le font bouillir de rechef. Ainsi remuant toujours ce tripotage avec un baton jusqu'à ce qu'elles conaissent qu'il soit assez cuit, l'ôtant pour la second fois de dessus le fou, sans le couler ni passer, mais le tout ensemble le versant dans d'autres plus grandes cannes de terre, contenantes chacune environ une feuillete de vin de Bourgogne; après qu'il a un peu ecumé et cuvé, couvrant ces vaisseaux, elles y lassent ce breuvage, jusqu'a ce qu'on le veuille boire en la manière que je dirai tantôt. Et afin de micux exprimer le tout, ces derniers grands vases dont je viens de faire mention, sont faits presque de la façon des grands cuiviers de terre, èsquels, comme j'ai vu, on fait la lessive en quelques endroits de Bourbonnois et D'Auvergne, excepté toutefois qu'ils sont plus étroits par la bouche et par le haut".

"Or nos Americains, faisant semblablement buillir et mâchant aussi puis après dans leur bouche de ce gros mil, nomme avall en leur langage, en font encore du breuvage de la même sorte que vous avez entendu qu'elles font eclui des racines susmentionées... Les sauvages appellent ce breuvage *caou-in*, lequel étant trouble et épais comme lie, a presque goût de lait aigre; et en ont de rouge et de blanc comme nous avons du vin".

"Au surplus, tout ainsi que ces racines et ce gros mil dont j'ai parlé croissent en tout temps en leur pays, aussi quand il leur plaît, font'ils en toute saison faire de ce breuvage, voire quelquefois en tel quantité que j'en ai vu pour un coup plus de trente de ces grands vaisseaux (lesquels je vous ai dit tenir chacun plus de soixante pintes de Paris), pleins et arrangés en long au milieu de leurs maisons, ou ils sont toujours couverts jusqu'à ce qu'il faille *caou-iner*".

"... l'er coutume... étant de boire ce *caou-in* un peu chaud, la première chose que les femmes font est un petit feu à l'entour des cannes de terre, où il est pour le tiédér. Cela fait... puissant après dedans avec de grandes courges parties en deux, dont les unes tiennent environ trois chopines de Paris, ainsi que les hommes en dansant passent les uns après les autres auprès d'elles, leur présentant et baillant à chacun en la main une de ces grandes gobelles toutes pleines..." (id. ibd.: 115-117).

Therefore Lèry speaks first about a kind of beer made from a mixture of sweet and bitter manioc (*aypi* and *manioc*) and only after says that there was another kind made from maize, suggesting that manioc was more important than maize. It is also interesting that the Tupinambá of Guanabara – being in the same general stretch of the coast, somewhere midway between the Tupinambá of São Paulo, more to the Southwest, and the Tamoyo of Cabo Frio, more to the Northeast – made their beer both from manioc, as the first, and from maize, as the second.

Lèry's account of the making of manioc beer almost repeats Staden's, therefore references to Staden's illustration have been interpolated in the text. Even in the absence of the pertinent illustrations concerning the beer brewing process, there are, in Lèry's text, many interesting hints about the vessels used.

The almost graphic account of the vessels used to bring the beverage to a second boil and of those vessels where it was fermented and served, suggests strongly that they looked very much like the ones depicted in Staden, being tall and constricted in the upper part and in the mouth. What is more, Lèry calls these vessels *cannes*, term which gives the idea of a cylindrical form and was applied to a *grand cruche de forme alongée*, a sort of very tall cask; he uses also the term *cuivier*, which came from *cuve*, meaning some sort of large *barrique servant à faire la lessive, le vendange etc.*, a large cask or vat (Huguet, 1925; Larousse, 1971). The capacity of these vessels was said to be around a *feuillete* or more than 60 *pintes de paris* (ca. 55.8 l). The capacity of the large halved gourds used as drinking cups, is said to be around three *chopines de Paris* (ca. 4.2 l) (Huguet, 1925; Larousse, 1971).

However, when Lèry describes the making of maize beer, there are no hints about either the size or the form of the vessels employed; we can only wonder if they did not look like the ones illustrated in Thevet for the same purpose.

The large bowls used to draw, pour and serve beer, like the ones depicted in Staden are said to be, among the Tupinambá of Guanabara, not clay vessels but halved gourds.

Gandavo, who had lived in Northeastern Brazil for a few years before 1573, says, about the Tupinambá, that they:

"... aparelhão muitosinhos para se embebedarem, e fazem-nos da raiz duma herua que se chama aipim, a qual fervem primeiro e depois de cozida mastigão-na humas moças virgens, e espremem-na nuns pótes grandes, e dali a três ou quatro dias o bebem" (*Tratado...* (ca.1570) 1964:89).

Soares de Souza, who also had lived in Bahia for some years before 1587, describes first how the Tupinambá made their pottery.

"... e as [mulheres] que são muito velhas tem cuidado de fazerem vazilhas de barro a mão; como são os pótes em que fazem os vinhos, e fazem alguns tamanhos que levam tanto como uma pipa, em os quais e em outros menores, fervem os vinhos que bebem; fazem mais estas velhas, panelas, púcaros e alguidares a seu uso em que cozem a farinha, e outros em que a deitam e em que comem, lavrados de tintas de cores; a qual louça cozem em uma cova que fazem no chão, e põem-lhe a lenha por cima;..." (1587)1938:261).

Then follows the account of the preparation and consumption of beer from sweet manioc.

"... fazem de todos os legumes, até da farinha que comem; mas o seu vinho principal é de uma raiz a que chamam aipim, que se coze, e depois pisam-na e tornam-na a a cozer, e como é bem cozida, buscam as mais formosas moças da aldeia para espremer estes aipims com as mãos, e algum mastigado com a boca, e depois espremido na vasilha, ... a esta água e sumo destas raizes lançam em grandes pótes, que para isso tem, onde este vinho se coze, e está até que se faz azedo; ... andam dando o vinho em uns meios cabaços, a que chamam cuias..." (id.ibd.:258-259).

The Portuguese term *póte*, refers to tall jars, biconical, ovoid or round, as the ones depicted in fig. 16 and 17 (Freire, 1954), and some are said to be so large that they could hold about a *pipa*, which is a measure of capacity around 534l (Lussagnet, 1953:131, note 3). But the jar depicted in fig. 16, even if it was half buried in the ground, could not hold much more than 30l.

D'Abbeville lived for some time in the French establishment located on the coast of Maranhão, where it is now São Luiz, very far to the North of either São Vicente (Staden, Rio de Janeiro (Thevet and Lèry) or Northeastern Brazil (Gandavo and Soares de Souza). His account deals with the coastal Tupi which he calls *Maragnans* (or *Mearigois*) and who lived on the islands and around the shores of São Luiz Bay. Like all the others, he begins by describing the pottery made by the *Maragnans*.

"Ils ont encore quantité de grandes vaisselles de terre dans lesquelles ils font leur Manipoy, & d'autres plus grands vaisseaux aussi faits de terre en forme de vase, qui tiennent trente, quarante & cinquante pots dans lesquels ils font leur Caouin. Les François leurs ont aussi porté forte marmites qu'ils appellent Gnaëßin ou Gnaëpépo, & des chaudrons

Gnaïouue..." (D'Abbeville (1614) 1963:284)

"Les femmes font aussi force vaisselles de terre de toutes sortes, de grandes, de petites, de rondes, en oualle, en quarré: les unes en forme de vases, les autres en forme de terrines & autres, fort unies & polies, principalement par le dedans. Elles se servent de gommes blanché & noires pour les plomber au dedans, y faisant diverses figures à plaisir & selon leur fantasie" (id.ibd.:310).

Speaking about the preparation and consumption of beer, D'Abbeville says:

"Que si c'est durant la saison des *Acaïou* (qui durent quatre ou cinque mois comme il a esté dit) ils prennent de ces fruits fort spongieux & remplis de ius, qu'ils expriment & en tirent en grande quantité. Ils appellent ce ius *Acaïou Caouin*, lequel est comme le vin blanc... ayant cela de propre que plus on le garde & meilleur il est."

"... lors qu'ils ont amassé grande quantité de ce vin, comme ils font ordinairement, ils le mettent dans des beaux vaisseaux de terre que les femmes font pour ce subject, fort grands & larges, mais estroits par le haut, chacun desquels contient tousiours au moins trente, quarante & cinquante pots:..." (td.ibd.:302).

Even if D'Abbeville text as no illustration depicting vessels of any kind, it is nevertheless possible to find some relationships between his accounts and Staden's or Thevet's illustrations. For instance, the large clay vessels described above as wide-bodied but narrow-necked, could have been very similar those illustrated in Thevet, in a scene depicting the gathering and crushing of *cajú* fruits to make beer (figs. 16 and 17). Both the Maranhão and the Rio Grande do Norte are reputed for their large patches of wild *cajú* trees.

D'Abbeville says that the time for *cajú* gathering lasts in Maranhão for 4 to 5 months; but he had stated before that *Acaïou caouin* could be made either from *Acaïou piran* (*cajú-pirã* or red *cajú*) which bears fruit from August to December or January, or from *Acaïou Cuássou* (*cajú-açu* or large *cajú*) which bears fruit from March or April to June; therefore it seems that actually only between 2 or 4 months every year, there were no caju available to make beer (D'Abbeville (1614) 1963:218-219).

"Ils se servent quelquefois & principalement hors de la saison des *Acaïou* d'un autre sorte de breuvage qu'ils appellent *Caouin-été* fait en cette sorte. Les femmes prennent les racines de *Macachet* (dont il est traité cy devant) [sweet manioc or *aipim*... & les font bouillir avec de l'eau dans de grands vaisseaux de terre: lors qu'elles sont molles & assez cuites elles les estent de dessus le feu & les laissent refroidir un petit, puis elles s'assemblent plusieurs & s'accroupissent autour des vaisseaux, prenant les susdites racines de *Macachet* qu'elles mettent en la bouche, & les ayant maschées sans les avaler elles les jettent dans d'autres vaisseaux de terre avec de l'eau selon la quantité du breuvage qu'elles veulent faire, puis elles y mettent un levain de farine de Mil ou de May, & de rechef font bouillir le tout sur le feu, le remuant continuellement tant qu'il soit assez bouilli. Alors elles le retirent du feu & versent tout ce potage aussi espez qu'il est dans les susdites cruches estroites par le haut: & quand il a cuvé & escumé suffisamment dans icelles elles le couvrent & le reservent jusques a ce que la compagnie soit assablée pour *Caouinner* (id.ibd.:302).

"Elles font encore une autre sorte de vin doux qu'il appellent *Karacou*. Ce vin est fait de racines de *Manioch-eau* préparées & maschées comme celles que dessus; & estant mises avec de la farine de May & de l'eau en telle quantité qu'il leur plaist elles font bouillir le tout sur le feu dans leur grandes vaisselles de terre. Ce potage estant assez cuit il devient espez ainsi que la bouillie de lait ou environ comme le ris, & puis elles font rostir quelques espis de May qu'elles maschent & jettent dedans; ce qui fait clarifier le tout & le rend plus liquide, demeurant néanmoins assez espez à cause qu'elles ne le coulent ny passent aucunement".

"... les femmes le preparent quelque jours auparavant & en font quelquefois plus de quinze ou vingt des susdicts grands vaisseaux tout plains qu'elles arrengent emmy leurs loges."

"Cependant les femmes mettent un peu de feu à l'entour des susdicts vaisseaux pour chauffer un petit le *Caouin* qu'ils boivent estant presque tiède, puis apres remuent & trouble ce *Caouin*, commençant aussi tost à boire & *Caouinner*..." (id.ibd.:302-304).

The process described above of making beer from manioc either bitter or sweet – mixed with some maize flour or with maize roasted on the cob, seems to have been the same described by Staden for the Tupinambá of São Paulo and by Thevet for the Tupi of Rio Grande do Norte, who also used a great deal of *cajú* beer. The same narrow-necked vases appear to have been used to ferment beer from *cajú*, sweet manioc or bitter manioc (*Maniöch-caue*). The particulars in D'Abbeville account, coupled with the illustrations of something put to a very similar use in Thevet suggest that these vases should be very much like the ones used to ferment manioc beer in Staden's illustrations: tall, wide-bodied jars, with narrow necks; but probably not biconical nor carinated but rather ovoid. As it seems to be also the case in Staden's account these tall jars were probably not used to boil the manioc, but only to ferment and serve the manioc beverage. In the case of the beverage made from *cajú*, it probably was not boiled, so the same jars could have been used to hold the juice, to ferment and to serve it.

"Ils ont des courges qu'ils nomment *Euä* dont ils se servent pour aller à l'eau & d'autres couppees par le milieu, peintes de rouge & de noir, appelées *Couy* [cui] qui leurs servent de plats & escuelles & de godets pour boire, ainsi que les plus petites courge leur servent aussi de cuilliers pour manger" (id. ibd.:283).

After the drinking feasts the events more times depicted in the chronicler's books are these related with the anthropophagic ritual.

We will quote here only those passages of Staden cho deal with the vessels used during this ritual.

"Dabei stellen sie viele Gefäße her, in die sie ihre Getränke tun, und brennen auch besondere Gefäße für die Sachen, mit denen sie ihn bemalen und schmücken" (Staden (1557) 1963:138).⁸

"Dann füllen sie alle Gefäße voll Getränk" (id.ibd.:139).⁹

"Das Eingeweide behalten die Frauen. Sie sieden es und mit der Brühe machen sie einen dünnen Brei, *Mingau* genant, den sie un die Kinder schlürfon. Das Eingeweide essen sie, ebenso das Fleisch vom Kopf. Das hirn dem Schädel, die Zunge und was sie sonst genießen können, essen die Kinder" (id.ibd.:144-145).¹⁰

Thevet describes also at length the antropophagic ritual but says only that all the flesh was roasted over the rack (*moquém*) (Lussagnet, 1953:193-203).

Lèry also describes, as an eye witness, the anthropophagic ritual, as it was held

8 "Afterward they make many vessels to put the beverage into them some other vessels where they store all the necessary for painting them"

9 "Then they fill up with beer all the vessels"

10 "The innards belong to the women. They boil them and with the broth they prepare a kind of soup, called *mingau*, which they and their children drink. They eat the intestines and also the flesh from the head; the brain, the tongue and what is left, the children eat"

in the Tupinambá villages around Guanabara Bay (Lèry (1578) 1972:175-185). He says that immediately after the prisoner was killed:

"... les... femmes se présentant avec de l'eau chaude qu'elles ont toute prête, frottent et échaudent de telle façon le corps mort qu'en ayant levé la première peau, elles le font aussi blanc que les cuisiniers par-deçà sauraient faire un cochon..." (id.ibd.:178).

These are the only vessels mentioned or depicted and Lèry says that all the flesh, even the viscera, were roasted over a rack (*moquém*) and not boiled (id.ibd.:179-185).

Gandavo states another use for a clay vessel during the anthropophagic ritual. He says that the killer dons beautiful feather ornaments:

"E assi sae desta maneira com hum Índio que lhe traz a espada sobre um alguidar, a qual he de hum pão muito duro..." (1964:63).

No one of the 16th century chroniclers ever illustrated the making of manioc or maize flour (*farinha*) or the baking of *beiju* (manioc cakes) but we can find sometimes find in the texts hints about the kind of vessel used therefore.

Staden says:

"Das Gefäß, in dem sie ihr Mehl dörren und backen, wird aus Ton gebrannt und hat die Form eine großen Schüssel" (Staden (1557) 1963:123)¹¹.

In the account of how the Tupinambá made a kind of flour also from dried fish or meat, there is another mention of the vessel utilized for roasting manioc flour.

"Eine Art Mohl bereiten sie auch Fish und Fleisch auf folgende Weise: Sie braten das Fleisch oder den Fisch über einem Feuer im Rauch, lassen es ganz dürr werden, serpflücken es, dörren es danach einmal über dem Feuer in Gefäßen, die zu diesem Zweck gebrannt werden und Inhepoan heißen;..." (id.ibd.:124).¹²

Thevet, dealing with the Tamoyo of Cabo Frio, describes the making of the three basic kinds of manioc flour, but is still less explicit as to the characteristics of the vessels used.

"... ils pilent ou rompent, seiches ou vertes, ces racines [manioc] avec une escorce de quelque arbre, qu'ils garnissent de petites et menues pierres fort dures, ... : apres passent et coulent ce qui est ainsi rapé, et le font chauffer sur le feu, dans quelque vaisseau à ce propre: et nomment ceste plant avec sa racine *Manihot*, laquelle tandis qu'elle chauffe, ils brassent et remuent, en sorte qu'elle devient comme drageons et petites graines..." (Lussagnet, 1953:214).

As Staden he mentions also the dried fish flour.

"Ils font encor de la farine d'un poisson fort dessaché, tresbonne, et se garde dor longuement plus que celle du *Manihot*,... et se nomme icelle farine de poisson *Ouic* (id.ibd.).

There is also an account of how they ate *farinha* throwing it from far away into their mouths.

11 "The vessel where they roast and bake their meal (*farinha*) has the form of a large flat basin".

12 "They make another meal (*farinha*) from fish and meat in this manner: They roast the meat or fish over the fire and smoke until it is very dry; then they rip it to small pieces with their hands and put it a second time over the fire to toast in a clay vessel called *inhepoan*". In a note to the Portuguese version of Staden it is stated that the term *inhepoan*, from the Tupi *nhaen-puna oryaouna*, means also an oven to roast manioc flour (*farinha*) (Staden (1557) 1955:213 and note 118).

"... en mangeant tant ceste farine que autre viande, ... n'approchent jamais la main de la bouche en mangeant, mais la jettent de plus d'un pied loing de la bouche, sans toutefois faillir de prendre la bouchée" (id.ibd.). Figure 8 depicts this scene (a).

Thevet also suggests that sweet potato was perhaps so importante to the Tamoyo as manioc flour.

"Ils font leur pain de racines d'Aiez et Battaté, qui sont nommés par les Bresiliens Aypi et Hetich ..." *Le Grand Insulaire* (1586 MS., f. 208 v.; quoted in Lussagnet, 1953:74, note 4).

"... et leur est si commune cette viande [Hetich or Jety, sweet potato] que l'usage leur est en tout tel, que le pain à nous de pardeça" (Thevet (1575) Lussagnet, 1953:76).

Dealing with the Tupi of the Rio Grande do Norte, Thevet also describes the making of all the three basic kinds of *farinha* and of the *beiju*, but there is no hint as to the form of the vessels employed (id.ibd.:266-267). He says also that the juice extracted from bitter manioc is boiled and eaten.

"Je n'ay voulu descrire plus amplement la maniere d'acoustrer le Manioc ... et le danger lequel est au jus estant ratté et broyé pour mettre en farine,... d'où lon verra le danger du jus provenant de la farine avant qu'il soit cuit, lequel après est tresbon à manger" (id.ibd.:269).

As is the case of the Tamoyo of Cabo Frio, Thevet suggest that the Tupi of Rio Grande do Norte used more sweet potato than manioc in their diet.

"... à present ils en ont si grande abondance, qu'il ne mangent gueres autre choses [Hetich or sweet potato]: et leur est cela commun ainsy que le pain à nous..." (id.ibd.:266).

Lêry, gives some more information than either Staden or Thevet. He says that the sweet or bitter manioc roots are sometimes dried over the fire on a rack (*boucan* or *moquém*), sometimes grated in a wooden grater set with small stones:

"Après cela... ayant de grandes effort larges poêles de terre, contenant chacune plus d'un boisseau, qu'elles font elles-mêmes assez proprement pour cet usage, les mettant sur le feu, et quantité de cette farine dedans; pendant qu'elle cuit, elles ne cessent de la remuer avec des courges mi parties, desquelles elles se servent ainsi que nous faisons d'écuelles. Cette farine cuisant de cette façon..." (1972:111).

Lêry describes therefore the vessels for roasting manioc flour as enormous and wide-mouthed, using the French term *poëlle*, which, as we have seen before, was used for large basin-like caldrons, not very deep but not flat either (Huguet, 1925; Larousse, 1971). These caldrons are said to have been able to hold more than a *boisseau*, here used in the same meaning as the measure of capacity for liquids called *myud* or *muid*, which has varied from 270 to 788 l (Huguet, 1925; Larousse, 1971).

The same term *poelle* or *poêle* is used by Thevet for the large vessel, called by the indians *vassave*, employed by the Tupi of Rio Grande do Norte to brew their beer either from maize flour or from sweet manioc mixed with maize. The large pots used by the Tamoyo of Cabo Frio for brewing maize beer, are also described by Thevet as being able to hold more than a *myud* or *muid* (268 l.); so they had about the same capacity as those employed for roasting manioc flour and it is very probable that they had also the same form, as it is depicted en fig. 11.a,c and fig. 15.c.

Lêry describes also halved gourds being used as spoons to stir the manioc flour. There is also an account of how the Tupinambá ate *farinha* throwing it into their

mouths.

"... accoutumés de la manger toute sèche au lieu de pain [farinha]...la prenant avec leur quatre doigts dans la vaissele de terr ou autre vaisseau où ils la tiennent, encore qu'ils la jettent d'assez loin, ils la rencontrent néamoinis si droit dans leur bouches qu'ils n'en épanchent pas un seul brin" (1972:112).

Afterwards Lèry describes the preparation of *beiju*. He says that sometimes the sweet os bitter manioc roots were grated fresh and the pulp squeezed by hand; the juice was saved:

"... lequel elles retenant dans des plats et vaissellede terre, après qu'elles l'ont mis au soleil, la chaleur duquel le fait prendre et figer comme caillée de fromage, quand on la veut manger, le renversant dans d'autres poêles de terre, en icelles les faisant cuire sur le feu comme nous faisons les omelettes d'œufs..." (id.ibd.:112).

Therefore the vessels used to obtain the starch from the juice squeezed from grated manioc, are sometimes described as being like the *plats* or dishes and therefore wide and flat, and sometimes like *poêles*, and therefore deep. The vessels used to bake the *beiju* are also described as *poêles* or basin-like caldrons.

In what amount for us to a cautionary note, Lèry speaking about the uses of maize (*avati*), says:

"... duquel semblablement elles font de la farine, laquelle se cuit et mange en la manière que j'ai dit ci-dessus que fait celle de racines" (id.ibd.:113).

Therefore the same kind of vessel could be used to prepare flour either from manioc os form maize.

Gandavo, describing the preparation of *farinha* from bitter manioc, says:

"E depois de assi a terem curada desta maneira poem hum alguidar sobre o fogo em que a lançaõ, a qual esta mexendo huma India até que o mesmo fogo lhe acabe de gastar aquela humidade e fique enxuta e disposta para se poder comer que era por espaço de meia hora pouco mais ou menos". *História...* (1964:36).

"Assi que depois de a terem deste modo curada, poem hum alguidar grande sobre o fogo e como se aquenta, botão aquela mandioca nelle e por espaço de meia hora esta naquela qüentura cozendo-se, alli a tirão, e fica temperada para se comer". *Tratado...* (id.ibd.:84).

Soares de Souza, describing the kinds of vessels made by the same Tupinambá, said:

"... ô alguidares a seu uso, em que cozem a farinha, e outros em que a deitam e em que comem, lavrados de tintas de cores..." (1963:261).

D'Abbeville explains at length the different processes of making *farinha*, *beiju*, *mingau* and *manipoi*, but speaks only very generally about the use of *vaissele de terre*, so is not of much help (1963:fol. 305-306).

There are also some accounts and even illustrations of the kind of vessel used to boil food. For instance, Staden says:

"Wenn die Wilden Fisch oder Fleisch kochen, tun sie gewöhnlich grünen Pfeffer daran. Sobald es einigermäßen gar ist, nehmen sie es aus der Brühe und machen einen dünnen Brei daraus. Der heißt Mingau. Den trinken sie aus Kürbissen, die sie als Gefäße benutzen" (1963:124).(13)

Figure 3 illustrates a small globular pot near the fire, resting on three pot-rests and at the left a man collecting shellfish with a basket. The stone in his hand in being used to remove shellfish from the rocks where they are attached. The two handles on the pot represent some European loan, because no Tupinambá vessel presents any instance of them. The relation of the pot to the *moquém*, suggests that it is a pepper-pot, holding the peppery sauce used as an accompaniment for fish and other meats.

Thevet states that the Tamóyo boiled only shellfish.

"S'ils font bouillir quelque chose, ce ne sont que des petites huîtres et autres escailles de mer" (Lussagnet, 1953:120).

But describing what kinds of pottery they did produce, he alludes to:

"... pots à cuyre chair et poisson..." (id.ibd.:131)
and "... pour cuire leur viandes qu'ils bouillent, quoy que ce soit rarement..." (id.ibd.:224).

Figure 8 of his *La Cosmographie...* shows people eating right from the cooking pots, but in another passage he says that they made:

"... plats et esuelles marquetées de compartiments assez beaux selon le país, lesquels ils vernissent d'une certaine gomme blanche qui croist en des arbres..." (id.ibd.:131).

Thevet gives also a short account of the making of salt from sea water incidentally of its importance as an article of long distances trade. In order to obtain salt, he says, they:

"... prennent seulement l'eau marine, et la font bouillir et consumer jusques à plus de moitié: puis y adjoustans quelque autre chose, la font convertir en sel, lequel ils appellent *Ioncure* [jukyru]. Et de ce sel ils en font grand trafic avec leurs voisins, lesquels y viennent de plus de deux cens lieues pour en avoir, leur estant fort necessaire" (id.ibd.:215) and note 5).

Léry describes the rack (*bucan* or *moquém*) over which most meat was roasted but concludes by saying that the Tupinambá:

"... ne laissent pas, quand il leur plait, de faire bouillir leurs viandes" (1972:124).

Soares de Souza also describes the making of salt from sea water.

"... o sal de que usam..., fazem-no de água salgada que cozem tanto em uma vasilha sobre o fogo até que se coalha e endurece..." (19.:259).

In all these accounts there is however no explanation of how the vessels used looked like.

Describing the burial usages of the Tamoyo of Cabo Frio, Thevet says about the dead:

"... ils le couchent en un bloc et monceau, dans le lict ou il est decadé:... puis ainsi envelopé, lié, et garroté de cordes de coton, ils le mettent dans un grand vase de terre qu'ils couvrent d'un plat aussi de terre où le defunct souloit se laver..." (Lussagnet, 1953:97).

Note 5 says:

"Les Sings., avars de details, se bornaient a représenter un enterrement dans une fosse, mais sans urne, le couvercle seul subsistant (217-219)" (id.ibd.:97, note 5).

This plate is our fig. 14, where we see the washing basin alluded being placed over the head of the deceased about to be buried.

About the use of basins for washing, Lèry states:

"Comme aussi quelques-uns ont cette honnête coutume de se laver les mains et la bouche avant et après le repas..." (1972:118).

The vessel depicted in fig. 10 full of water, near the European who is being welcomed with what is called the *weeping salutation*, is perhaps also one of these washing basins (Lussagnet, 1953:112-114). Lèry states that food and drink was served, in that occasion in which case the pail-like vessel could be for serving beer, but he also describes that the feet and legs of the voyagers being washed (1972:222-223, 226).

Soares de Souza states that the deceased were buried in large excavations with some water and food:

"... e poêm-lhe de comer em um alguidar; e água em um cabaço..." (19...:286).

But he also describes urn burials:

"E quando morre algum moço, filho de algum principal, que não tem muita idade, metem-no em côcoras, atados os joelhos com a barriga, em um pote em que ele caiba, e enterram o pote na mesma casa debaixo do chão..." (id. ibd.:286).

As we have seen before, *alguidar* is a basin-like vessel and *pote* is a tall, wide-bodied jar with a narrow neck.

Only one plate is left, about which no passage of any text could apply easily. To the right of fig. 12 a large bowl with an introverted or interiorly reinforced rim is shown on a rack used either for drying and smoking or roasted meat (*moquém*) or for holding and storing vessels inside the house (*girau*). The tall jar represented to the left is clearly a European intrusion, because no such kind of jar has been ever found in the Tupinambá archaeological area.

At least *seven* different kinds of vessels can be distinguished in these *twenty* plates and they can be listed and described as follows.

1. Strongly carenated, biconical, jars presenting distinctive cambered or everted rims;
2. Wide-bodied elliptical or ovoid jars, narrow-mouthed and sometimes flat-bottomed;
3. Flat-bottomed basins with a characteristic cambered rim which forms a strong carenation near the opening;
4. Small and medium-sized, shallow or deep, hemispherical or slightly constricted bowls;
5. Large basin-like bowl with inward slanting or interiorly thickened rim;

6. Espherical pots with extroverted rins and slightly narrower openings;
7. Large flat wide-rimmed dishes or plates and bucked-like vessel in the form of an inverted truncated cone.

COMPARISON BETWEEN THE ETHNOHISTORICAL AND ARCHAEOLOGICAL VESSELS

Seventy different archaeological vessels attributed to the Tupinambá tradition have been so far published and are illustrated in figs. 18, 19, 20, 21, 22 and 23. Some have been reproduced from photos of complete vessels, some after reconstructions from large sherds, but all have been redrawn in frontal view, at the same scale, for easy comparison with the vessels illustrated by Staden, Thevet and Lèry. In the case of reproductions from photos, the wall thickness has been provided in a tentative way, being calculated in proportion to the size of the vessel.

I will begin the comparison between the archaeological vessels attributed to the Tupinambá and the vessels illustrated and/or described by the 16th century chroniclers as produced and used by the historic Tupinambá, considering first the most characteristic ones.

As we have seen before, Staden, Thevet and Lèry illustrated around seven different kinds of vessels, and some more are described but not illustrated.

1. The strongly carenated, biconical jars, presenting distinctive cambered or everted rins, illustrated in figs. 18.a-b, were all found in the coast of São Paulo and Rio de Janeiro, west of Guanabara Bay, and on the interior of São Paulo, near the headwaters of the Paraná river. These jars are certainly the same large and tall jars illustrated in Staden as being used by the Tupinikin of São Paulo to prepare an alcoholic beverage from sweet manioc (fig. 2.b, fig. 4.b,c) and described by Lèry as used by the Tupinambá of Guanabara to prepare an alcoholic beverage from mixed sweet and bitter manioc (Lèry, 115-117, 217).
- a. The larger jars are always depicted over the fire, being used to bring to a second boil the previously boiled and masticated manioc (fig. 4.b).
- b. The relatively smaller jars are depicted always with approximately one third of its height buried in the ground, being used to ferment, to store and to serve manioc beer (fig. 2.b, 4.c). Lèry suggests that the Tupinambá of Guanabara used the same kind of jar to ferment, store and serve also maize beer (Lèry, 1972:116-117).
- c. One of the relatively smaller jars of this kind is shown on the fire but being used to boil water to skin the corpse of a sacrificed prisoner before it is butchered (fig. 22.1) (Lèry, 1972:178; D'Abbeville 1963:194).

The most important difference between the archaeological examples and the illustrated vessels seems to be in their size. The texts attribute to them capacities of

over 55,8l (Lèry, 1972:217) and the largest illustrated in Staden could hold almost double this amount or around 100 l., so it seems to have been grossly exaggerated in the illustration (fig. 4.b). The largest jar actually found barely attains the size of the smallest illustrated, holding honly around 23 l., therefore no more than half the highest capacity stated (fig. 18.b).

Some of these jars are plain (fig. 18.c) and some corrugated on the neck or nail incised on the beveled edge of the rim (fig. 18.b, c). This kind of corrugated or nail incised decoration is also alluded to by Lèry when he states that the Tupinambá pottery "...combièn qu'elle ne soit guère unie par le dehors..." (Lèry, 1972:217). Some jars present insted polychrome painting on the upper part of the body or on the neck and these should be the ones used to ferment, store and serve manioc or maize beer, even if the illustrated is too small to have had this use (fig. 18.a, d).

2. The tall elliptical or ovoid jars, wide-bodied and narrow-mouthed, represented in fig. 19.a-g, were found in the interior of Bahia (a-b) and in the coast and interior of São Paulo (c-g). These jars are certainly the same illustrated in Thevet being used by the Tupi of Rio Grande do Norte, and perhaps also by the Tamoyo of Cabo Frio, to store the juice of crushed *cajú* fruits to be fermented in an alcoholic beverage suitably called *cajú-y* (drink from *cajú*) (fig. 16) (Lussagnet, 1953:270). In this case the jar is shown partly buried in the ground, therefore we cannot say for sure if it had a conical or a flat cotton, but the ones with flat bottoms were found in the interior of Northeastern Brazil, that is in the same general area of Rio Grande do Norte (fig. 19.a, b). The parallel lines on the body of the jar, probably depict corrugationa, as some archaeological ones do actually have (fig. 19.c, c-g).

More to the Northwest, in Maranhão, D'Abbeville describes the jars used to brew the same alcoholic beverage from *cajú* fruits as

"... grands... en forme de vase, qui tiennent trente, quarante & cinquante pots..." (D'Abbeville, 1963:284)

and as

"... beaux vaisseaux de terre... fort grands & larges, mais estriets par le haut, chacun desquels contiente toujours au moins trente, quarante & cinquante pots" (id.ibd.:302)

what amounts to between 336 and 420l. Therefore these jars should have looked very much like the ones found in Bahia and to the South; but the jar depicted in Thevet could hold only around 60 l., even if one third of it was buried in the ground (fig. 16). The largest jar actually found could hold only around 100 l. (fig. 19.c).

Somons, Beltrão & Kneip and Nasser state that in São Paulo, Rio de Janeiro and Rio Grande do Norte, have been found sherds from vessels far larger than those which they could reconstruct and illustrate (Simons, 1966; Beltrão and Kneip, 1969; Nasser, 1971). Meanwhile we can only say that possibly this kind of jar were actually larger farther North in Maranhão than in Bahia or in São Paulo.

The jar illustrated by Thevet being used by the Tamoyo of Cabo Frio to carry water or boiled maize in the process of making an alcoholic beverage from maize, is very similar in shape and size to the ones from Bahia (fig. 7.b; fig. 19.a, b).

Gandavo describing the brewing, by the Tupinambá of Bahia, of one alcoholic beverage made from sweet manioc, report the vessels used to ferment and serve it, as being "... potes grandes..." (Gandavo, 1964:89). Soares de Souza, in the same general area, describes the vessels used to brew beer not only from sweet manioc but also from manioc flour and from other *legumes*, as "...grandes potes..." and "...potes tamanhos que levam como uma pipa... e outros menores..." (Soares de Souza, 1938:259,261). The Portuguese term *pote*, as we have seen before, corresponds closely to tall wide-boiled jars with narrow openings and flat bottoms, like the ones depicted in fig. 19.a-b and when found archeologically this kinds of vessels is always called *potes* in the interior of Northeastern Brazil.

D'Abbeville describing the brewing, by the Tupinambá of Maranhão, farther to the Northwest, of two kinds of beer made from sweet manioc mixed with maize flour and/or with some kind of yeast also from maize (*caouin-été* and *karacou*) says that they were fermented and served "... dans les susdittes cruches étroites par le haut..." or "...les susdites grands vaisseaux..." (D'Abbeville, 1963:302-304), in a clear allusion to the large jars used in brewing beer from *cajú* fruits.

The two flat-bottomed jars found in Bahia were actually burial urns, one being covered by a deep bowl (fig. 19.b, 21.g) and as we have seen before, Soares de Souza (1938: 286) says, about the same area of Northeastern Brazil, that the male children of chiefs were buried in large *potes*. This statement clearly links together the jars used to brew beer from *cajú* fruits, from sweet manioc and from sweet manioc mixed with maize, with the burial urns and with the jars depicted in fig. 19.a, b actually found on the spot in Northeastern Brazil.

When Thevet says that the Tamoyo from Cabo Frio also buried their dead into a "... grand vase de terre..." (Lussagnet, 1953:97) the vessel used as a burial urn could possibly be of the same kind, because the Tamoyo apparently employed the same large jars brew beer from *cajú*. Therefore, large beer jars were sometimes used as burial urns by the Tupinambá of Eastern and Northeastern Brazil, possibly also farther to the North in Maranhão, as they were used among the Guarani farther South.

3. The flat-bottomed basins with a characteristic cambered rim which forms a strong carination near the opening, depicted in fig. 18. f-k, were found on the coast, from São Paulo to Espírito Santo and also in the interior of São Paulo. Those with reinforced everted rims were found farther to the Northeast, in Bahia, and to the North, in the lower Araguaya (fig. 18.m, n). Some of these basin-like vessels are carinated (f, j, m) or have double carinated rims (k) and some are oval or squarish in plan, instead of circular (g, h, j, m, n). One in fig. 18.f appears to be rather intermediary between the carinated jars and the flat-bottomed basins, all of which present the same characteristic cambered rims; the same intermediary position could also apply to the one depicted in fig. 18.e. Their general outline and cambered rims link these vessels to the larger basin-like caldrons illustrated by Thevet being used by the Tamoyo or Cabo Frio throughout the process of brewing an alcoholic beverages from maize called *avaty*, sometimes mixed with *other roots* – manioc or perhaps sweet-potatoes – (fig. 11.a, c; 13.a, c-o; 15.c) (Lussagnet, 1953:55,56,121,131). In his illustrations we can see

these enormous caldrons being used either to boil maize, to hold the previously boiled maize who is being mastigated or to store and serve the already fermented beverage. Some of them appear to have been rather elliptical or oval in plan than circular, like the smaller archaeological ones. When they are not depicted over the fire, they appear to be part buried in the ground or perhaps flat-bottomed, probably both. Thevet says that they could hold up to 268 l. (id. ibd.: 131, note 3) but the largest one illustrated by him could not hold more than 190 l. (fig. 11.a). The largest actually found has a calculated capacity of less than 50 l. (fig. 18.j).

Even if there are no illustrations, Thevet's text strongly suggests that the same kind of caldron was used by the Tupi of Rio Grande do Norte, farther to the North-east, to brew beer from maize mixed with sweet manioc, or from maize flour (id. ibd.: 197, 267). Thevet describes these vessels as "...grands vaisseaux qu'ils nomment *vassave*" or as *poêles*, holding at least half a *mui*, i.e. ca. 134 l. (id. ibd.). This is only slightly less than the capacity which has been calculated for the largest caldron illustrated for the Tamoyo of Cabo Frio (fig. 11.a).

The large difference between the capacity attributed to the bowl-shaped caldrons with cambered rims in the texts and the size of the archaeological vessels linked to them, can be explained in two different ways:

- a. Like the tall carenated and non-careinated jars described before, these flat-bottomed basins with cambered rims could have been smaller versions of the larger ones. Most archaeological sites of the Brazilian coast, where the pottery attributed to the Tupinambá tradition is found, represent probably rather small seasonal camps of fishermen and shellfish gatherings, like the ones depicted by Staden (fig. 1 and 3), than large Tupinambá villages (Beltrão & Faria, 1970-1). The same judgement could also apply to some sites of the interior, found at some altitude on the top of hills or scarpments. If the sites were not the large central villages where the big drinking feasts could be held, but only small outlying posts for them, only smaller versions of the large beer brewing vessels should be logically found in them.
- b. Even if the flat-bottomed basins with cambered rims present the same form and are found in the same general area, from São Paulo to the Northeast, it is possible that they were not actually used for the same purposes. Some could have been used instead as pots to boil and stew. Lèry describes: "...pots à metre cuyre tant de façon ronde qu'ovale; des poêles moyennes et petits" (Lèry, 1972:217) and excluding the serving basins illustrated in fig. 22, these are the only other vessels to show forms which are elliptical or oval in plan (fig. 18.g-j, m, n).

Some others could perhaps be related to these same serving basins, even more to the last two ones (fig. 18. m, n). As those, some of them present polychrome painting on the beveled edge of the cambered rims or even on the inside and so could not have been used on the fire but only to store or serve (fig. 18.f, g, i) of them some have contained human bones, therefore have also the character of burial urns.

At this point it seems to me more important to follow and explore the suggestion

that the Tpinambá had vessels of quite different shapes to prepare alcoholic beverage from manioc or from maize. Even if Staden (1963:49) states that the Tupinikin of São Paulo made sometimes beer from manioc mixed with maize and even if the Tamoyo of Cabo Frio and the Tupi of Rio Grande do Norte did mix also some manioc in their maize beer, it is clear that manioc was more important to the former and maize to the latter. This is possibly related with the fact that, even today, little maize is planted on the coast of São Paulo, because of too much rain (Schmidt, 1958), and on the other hand, the Tamoyo of Cabo Frio had maize two times a year (Lussagnet, 1953:210). The Tupi of Rio Grande do Norte did use more *cajú* fruits, but even if, at least on the coast, they had little maize and only once a year, they apparently esteemed more maize beer than manioc beer (id.ibd.:267) and there are no hint how to the shape of the vessels used to brew the last one (id.ibd.:269).

As we have seen before, Gandavo and Soares de Souza in Bahia, and D'Abbeville in Maranhão, describe also as tall jars the vessels used to brew manioc beer – sometimes mixed with some kind of yeast from maize or maize flour. These jars were not carenated as those used by the Tupinikin of São Paulo and depicted by Staden. Therefore it seems to exist a very clear disjunction between the tall jars, carenated or not, used to brew manioc beer and the basin-like caldrons employed to brew maize beer. Why two utterly different vessels were used, if the process of brewing beer, either from manioc or from maize, was just the same, as the texts repeat over and over, we cannot explain.

We understand that the differences in the shape of the beer brewing vessels could also be tentatively related to other factors. At first sight we wondered about if these differences could not be only the result of the fancy of the two different engravers which illustrated Staden's and Thevet's books.

Moreover and what gives, at least for us, definitive proof of the accuracy of the drawings, both kinds of vessels – those depicted in Staden's and in Thevet's first editions – actually appear in the archaeological records of the general coastal Tupinambá area. It appears that both exist on the coast of São Paulo and Rio de Janeiro, but the tall biconical strongly carenated ones apparently have not been found to the north of Rio de Janeiro, on the coast of Espírito Santo and in all Northeastern Brazil, whereas the flat-bottomed basins have been found also on the interior of the Northeast and faraway as the lower Araguaya (fig. 18.n, m). Moreover, the large tall elliptical or ovoid jars with constrict openings, sometimes flat-bottomed but never carenated, appear all over the area, from São Paulo to the interior of Northeastern Brazil, and this could have been the form assumed by the jars for brewing manioc beer there, as they could be positively compared with the tall carenated biconical jars used by the Tupinikin of São Paulo (Gandavo, 1964:89); Soares de Souza, 1938:259, 261; D'Abbeville, 1963:302-304).

That the large basin-like caldrons could not have been exclusively a fancy of the Tamoyo of Cabo Frio, maintained against all the other Tupinambá, including the Tupinikin, is indicated by the fact that the information we have for the only other Tupinambá group also favoring maize beer, the Tupi of Rio Grande do Norte, states that they did use the same kind of vessel to brew it (Lussagnet, 1953:267).

Therefore, remain only to be explained as a fancy of the Tupinikin, the par-

ticular form assumed by the tall carenated jars used for brewing manioc beer in the coast of São Paulo and Rio de Janeiro, west of Guanabara Bay, which could be explained by some Guarani influence from the South, because the Tupinikin lived right on the boundary between the Tupi and the Guarani, and similar, even if not identical, jars are very common in the pottery attributed to the Guarani (Brochado, 1984).

4. In fig. 21.a-h are illustrated diverse kinds of bowls, some shallow and some deep, some hemispherical and some flat-bottomed or conic, but all open. One is squarish (f) and another presents a fancy lobar fermo (c). Most have polychrome painting on the inside (a, b, f) and/or on the rim (d).

These bowls can be related to the many small shallow hemispherical bowls shown in Staden's and Thevet's illustrations, being used as drinking cups, to drink manioc beer (fig. 2.a, 4.d), maize beer (fig. 15.a) or *mingau* (fig. 8.a, fig. 19.a).

In fig. 21.i-m are illustrated deeper vessels, some still bowl-like (i) some ovoid (j) or conical (k-m) but all restricted. Most are plain, only one corrugated and another has nail-incised decoration near the mouth opening. These vessels can be represented to the deeper, medium-sized, hemispherical or slightly restricted bowls, shown on the same plates, being used to serve manioc beer, by drawing it from the jars and pouring into the drinking cups (fig. 2.a) or to pour the masticated and boiled manioc mush into the fermenting jars, during the process of brewing manioc beer (fig. 4.a).

All the chroniclers state that most of these drinking, drawing, pouring and serving cups were not clay vessels but actually gourds or calabashes; halved, they were used to drink beer and called *cui* or *cuias* (Léry, 1972:117, 218; Soares de Souza, 1938:259; D'Abbeville, 1963:283) or drink *mingau* (Staden, 1963:124, 144, 145; D'Evreux, 1864:90). Some of these gourds and calabashes were painted in black and red (D'Abbeville, 1963:283) and the largest were reported to hold up to 4,2 l. The largest clay bowl found can hold around 1,3 l. (fig.21.f).

The larger gourds or calabashes were used to fetch water (id.ibd.:283) and sometimes also to present water to the deceased in pit burials (Soares de Souza, 1938:286; D'Evreux, 1864:126-127). Smaller ones were used as spoons to eat (D'Abbeville, 1963:283).

In the case of thearchaeological bowls, different uses are also attested by the fact that most of the open ones are painted on the inside or on the rim (fig. 21.1, b, d) whereas all the restricted ones are plain or corrugated (21.i-m).

5. In Staden a apparently large basin-like bowl with a inward slanting or interiorly thickened rim, is shown placed upon a wooden rack used for storing things (*girau*) (fig. 12.b). Even if there are no mention in the text, we propose that it is holding manioc flour, which is usually stored in vessels like this upon wooden racks.

There is no illustration of any vessel used to produce manioc flour or *beijú*. The process, as it is described by the chroniclers, was quite complicated, from the transformation of the roots in a pulp, to its squeezing, drying and roasting or baking; including the separation of starch from the juice squeezed; the process presented

also many branchings and feedbacks. The equipment used was likewise varied, including many different kinds of ceramic vessels. The more important ones were the vessels used to hold the grated roots, to receive the juice squeezed from them and/or to evaporate it to recover the starch, to roast the *farinha* and to bake the *beijú* (Lathrap, 1970:51-53).

The vessels where the manioc roots were grated into should be wide open and should have reinforced rims to support the pressure of the grater. Therefore, the most likely candidates for this function, are the round, oval or squarish flat-bottomed basins with strongly everted and reinforced rims illustrated in fig. 18.m, n and in fig. 22.a-n, q; but as most of these last ones present polychrome painting on the inside and on the rim, they must be ruled out for this use.

The texts describe the vessels used to roast manioc flour (*farinha*) as "... eine großen Schüssel" (Staden, 1963:123) "... quelque vaisseau à ce propre;..." (Lussagnet, 1953:214) "... grandes et fort larges poêles... contenant chacune plus d'un boisseau... vaissele de terre..." (D'Abbeville, 1963:304, 306) (*mui* = ca. 268 l.) (Lêry, 1972:111) and as "... alguidares" (Gandavo, 1964:36, 84; Soares de Souza, 1938:261). As we have seen before, *poêles* are basin-like flat-bottomed caldrons and *alguidares* are also basin-like and flat-bottomed, usually assuming the form of a truncated inverted cone. These vessels should also be able to withstand the very strong fire required for roasting *farinha*.

The most likely candidates to fit these requirements are therefore the wide flat-bottomed basin-like caldrons depicted in fig. 20.a-g. They assume the form of truncated inverted cones and present inward slanting rims which create a carination on the outside, near the opening and which should be very useful in preventing the spilling of manioc flour. Some are deep (fig. 20.a-d, g) some are shallow (fig. 20.e-f) and one presents a double shoulder, i.e. a large development of the introverted rim (g).

These are the large caldrons called *inhepoan* or *nhaen-puna* by the Tpinikin (Staden, 1955:213, note 118) and *and Gnaëiouue* or *nhaeiue* by the Tupinambá of Maranhão (D'Abbeville, 1963:226 and notes 10-12).

However, most of the archaeological examples present some sort of polychrome painting on the exterior surface of the inward slanting rim, so instead of being used to roast *farinha*, they actually should have been used to store and/or to serve it. These storing vessels have been described by Soares de Souza as: "... alguidares a seu uso, em que cozem a farinha, e outros em que a deitam e em que comem, lavrados de tintas de cores;" (Soares de Souza, 1938:261).

As in the case of all other vessels, these basin-like caldrons found archaeologically are far smaller than those described by the chroniclers, said to be able to hold up to 268 l. The largest one could hold no more than 40 l., what reinforces the idea that they were serving dishes instead of roasting pots.

Farinha was taken with four fingers of one hand from the serving vessels and thrown in the mouth from a distance, scene illustrated in fig. 8.a (Lêry, 1972:112; Lussagnet, 1953:214).

Some of these large lavishly painted serving basins were also used as burial urns,

having been found holding human bones. This use keeps in line with their use as serving vessels for food and/or as washing basins, as we will see in a moment (Lussagnet, 1953:97; Lèry, 1972:118, 222, 223, 226).

Farinha was stirred in these large caldrons by means of large halved calabashes or gourds (Lèry, 1972:111). There are also accounts of a kind of flour made from dried fish or meat, roasted over the fire in the same kind of vessel as the manioc flour (Staden, 1955:213, note 118; id., 1963:124; Lussagnet, 1953:214).

The vessels used to receive the juice squeezed from the manioc pulp, and to evaporate it to recover the starch, should have been of the same kind (fig. 20. a-d)) but those used to evaporate the squeezed juice must have been shallower, possibly like the slightly closed flat basins in fig. 20.e, f and fig. 22.r; or plain versions of the wide open basins illustrated in fig. 22.a-q.

The manioc cake or *beiju* apparently was never very important in the Tupinambá diet, because its preparation is described only by Lèry. He says that the manioc pulp was squeezed by hand, the juice saved and evaporated in " ... plats et vaisselle ..." and the starch dried and baked " ... dans d'autres poêles de terre ..." (Lèry, 1972:112). Accordingly only very few *beiju*-baking platters, like the one depicted in fig. 23.a, have been found throughout the Tupinambá archaeological area, in Rio de Janeiro, Espírito Santo and Rio Grande do Norte.

6. The large spherical pot with a narrow neck and a cambered rim, illustrated in fig. 19.h, was found in the interior of São Paulo and is very similar to the one depicted differences, with only some slight differences in two versions of Staden, being used by the Tupinikin of São Paulo to boil meat - in this particular case human flesh - with manioc flour, to make *mingáu* (fig. 5) (Staden, 1963:124, 144, 145). As in all the former cases, the archaeological pot is somewhat smaller than those illustrated.

Pots of different kind, possibly more like the ones used to brew maize beer, could have been also used to boil meat with manioc flour to prepare *mingáu*, because D'Evreux describes them as " ... grands poêles de terre ..." (1864:90).

In Staden's illustrations some smaller spherical pots with narrow necks and extroverted or reinforced rims, are shown apparently being used by the Tupinikin to stew or boil shellfish (fig. 3) or meat - in this case human flesh (fig. 7). In both cases, as the pots are not actually shown on the fire but only near it, they were more probably used as pepper-pots, holding the peppery sauce used as an accompaniment for meat or fish. Many pots of the same general outline and in that same size range, have been found archaeologically on the coast of São Paulo and Rio de Janeiro: and in the interior of São Paulo (fig. 21. n-r). They have spherical or ovoid bodies, slightly restricted necks and everted or cambered rims and could have been pepper-pots or small kettles.

7. Large flat wide-rimmed dishes or plates are shown in Staden's illustrations being used to:
 - a. Serve different kinds of food, like roasted fish (fig. 1) stewed meat-human flesh (fig. 6.b) or the *mingáu* prepared from it (fig. 6.c) (Staden, 1963:144, 145);

- b. Hold the boiled manioc being masticated for the preparation of beer (fig. 4.a);
- c. Throw the previously boiled and already masticated manioc mush into the jars to receive a second boil, during the same process as above or to throw meat (human flesh) into the big pot where it was to be stewed.

No archaeological dishes of this kind have ever been found in the area, but one of the most common vessels to be found in collections throughout all the Tupinambá area, are the flat-bottomed basins presenting some kind of exteriorly or interiorly thickened or reinforced rim, sometimes both (fig. 22.g, h, j, k; k; a-f, l, m). In the last case, the interior thickening of the rim being not so high near the opening as the exterior one, gives to the whole rim profile its characteristic interiorly stepped outline (fig. 22.a-f). The reinforced rim presents a beveled edge, in most cases showing a lavish polychrome painting, which may have been repeated also on the inside of the vessel. Many of them are elliptical, oval or squarish, rather than round or circular in plan (fig. 22.a-f, h, j-m).

Their form, size and fancy polychrome painting indicate that these basins were the serving dishes actually used by the Tupinambá, as they have been described by Thevet: "... plats et escuelles marquetées de compartiments assez beaux selon le país, lesquels ils vernissent d'une certaine gomme blanche qui croist en des arbres ..." (Lussagnet, 1953:131), Lèry: "..., plats et autre vaisselle de terre, ... si bien polie et comme plombée par le dedans de certaine liqueur blanche qui s'endurcit, ... Même ces femmes, détrempant certaines couleurs grisâtres, propres à cela, font avec des pinceaux mille petites gentillesses, comme guillochis, lacs d'amour et autres drôleries au-dedans de ces vaisselles de terre, principalement en celles ou ont tient la farine et les autres viandes;" (1972:217, 218) and Soares de Souza: "... e alguidares a seu uso em que cozem a farinha, e outros em que a deitam e em que comem, lavrados de tintas de cores;" (1938:261).

The polychrome painting found on the inside of the serving basins described above, is the same who occurs also (1) on the upper part of the body and on the neck and the cambered rim of the biconical carenated jars used to ferment and serve manioc beer; (2) on the beveled edge of the cambered rims and on the inside of the flat-bottomed basins used to ferment and serve maize beer; (3) on the inside and on the rim of the drinking cups and (4) on the exterior surface of the inward slanting rim of the large vessels used to store *farinha*. This painting usually consists in red and/or black lines on a white, sometimes yellowish, sometimes grayish, slip. The drawing patterns are reminiscent not of the marajoara polychrome paintings but rather of their fine line increased decoration. Remains of the resin glazing are sometimes still faintly visible.

Some of these basins are also described as being divided in two or more compartments by interior division walls, but we could not find anyone illustrated. They appear also in the Guarani pottery on the coast of Santa Catarina, just South of the boundary between the Guarani and the Tupinambá (Schmitz, 1959).

The dimensions of the illustrated dishes and of the archaeological basins, are almost in the same range, and seen from above - as they are shown on the illustrations - the interiorly stepped reinforced rims of the basins (fig. 22.a-f) should look

very much like wide rims.

This same kind of vessels were used also to present food to the dead in grave pit burials: "... e poem-lhe de comer em um alguidar ..." (Soares de Souza, 1938:286; D'Evreux, 1864:126, 127) and as washing basins (Lèry, 1972:118). Thevet describing the urn burials says: "... ils le mettent dans un grand vase de terre, qu'ils couvrent d'un plat aussi de terre ou le defunct souloit se laver, ..." (Lussagnet, 1953:97) but the illustration shows a pit burial and the basin being placed over the head of the deceased.

The same kind of relation is represented by the large shallow bowl shown holding boiling water to skin, to wash off the skin, of the corpse of the sacrificed prisoner being prepared to be butchered (Lèry, 1972:178; D'Abbeville, 1963:194) (fig. 9.b) which is very similar to the bowls and basins depicted in fig. 22.g, h, j-o).

A deep bucket-like vessel, in the form of an inverted truncated cone, shown in fig. 10 near the European being welcomed with the *weeping salutation* (Lussagnet, 1953: 112-114) was perhaps for serving beer, but could also have been for washing. Lèry states that food and drinking was served, but also that sometimes the feet and legs of the voyagers were washed (1972:222, 223, 226). A similar vessel has been found in a archaeological context, holding some human bones and two smaller bowls (fig. 22.p; fig. 21.b, c) therefore assuming the character of one of those washing basin - burial urns (Silva, 1922).

In many instances pairs of these reinforced rim basins have been found, in archaeological contexts, inverted one over the other and also containing some human bones. A good résumé of these occurrences is in César (1966). Therefore the burial uses of the basins employed also to serve solid foods and as washing basins, were many. They could be used:

- a. To present food to the dead either in the case of urn burials or grave pit burials;
- b. To cover the large pot in urn burial;
- c. To cover the head of the deceased in grave pit burials;
- d. To receive the bones of the deceased in urn burials composed of two superimposed basins.

This odd relationship between vessels for serving solid food and their burial uses is not so surprising and can be extended further. As we have been before, the large fermenting and serving jars for manioc and *caju* beer, were also used as also to some of the smaller and sometimes painted versions of the large caldrons used to serve maize beer (fig. 18. g-n).

This kind of relationship between food and drink and the disposition of the deceased, is worth pursuing and is further enlarged by the account that in some cases serving basins were also used as a kind of "cushion" or platter to present the ritual club to the killer in the anthropophagic ritual. The killer "... assi sac desta maneira com hum Indio que lhé traz a espada sobre um alguidar ..." (Gandavo, 1964:63).

Some pot-rests in the form of truncated cones, like the ones depicted in fig. 3, have also been found in the general Tupinambá area.

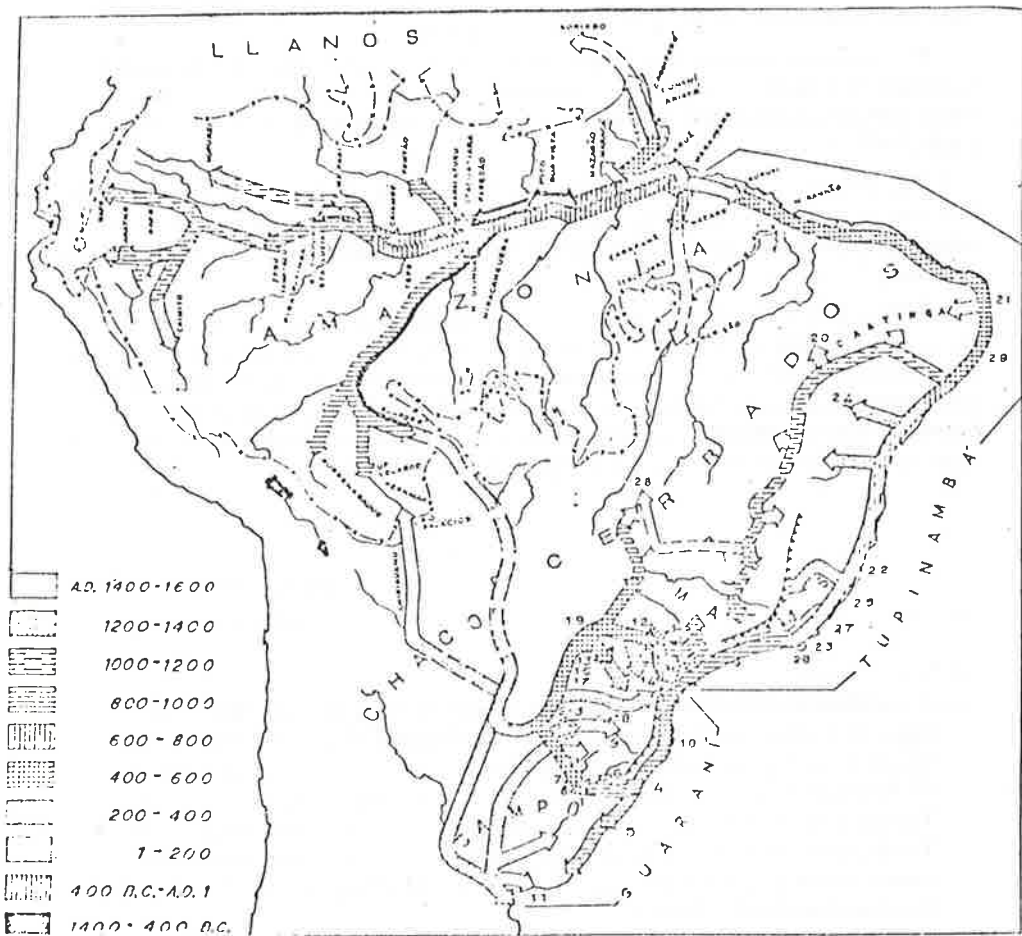
It is worth mentioning that in all these accounts of the processing of manioc roots to be consumed, there are no clear mention of the use of the basketry cylinder or manioc sleeve, called *tipiti*, to squeeze the juice from the pulp (Metraux, 1928:104; Dole, 1960:244).

The three vessels shown in fig. 12.a, fig. 13.b and fig. 17, have all been dismissed, because they look suspiciously like European vessel. Moreover we do not have anything even remotely like them in the archaeological record of Eastern South America.

Figure 28.b-k illustrate some vessels who somewhat do not fit anywhere in the precedent classification. One represents probably some European influence (c). All others, except 23, have counterparts in the Guarani pottery. As most of them came from areas on the coast or in the interior of São Paulo, adjoining the historic boundary between the Tupinambá and the Guarani, we can safely assume that they represent some sort of Guarani influence of whichever kind.

*este trabalho foi escrito em 1979,
Urbana, Illinois (U.S.A.)*

ABSTRACT: The ethnohistorical informations given by the engravings which illustrate the accounts of the 16th and 17th century chroniclers which described the indigenous peoples of Eastern and Northeastern coastal Brazil, permit to establish that the archaeological pottery of the so called Tupiguarani Tradition, found throughout the same area, was made by the Tupinambá. From the descriptions of the Tupinambá diet given by the same chroniclers, it has been possible also to establish the functionality of these archaeological vessels.



MAPA 1

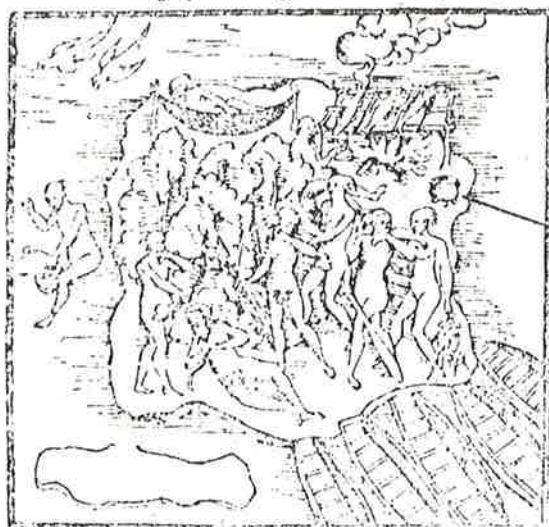


FIG. 3 - STADEH (1557) 1963



FIG. 4 - STADEH (1557) 1963

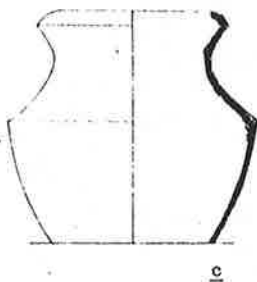
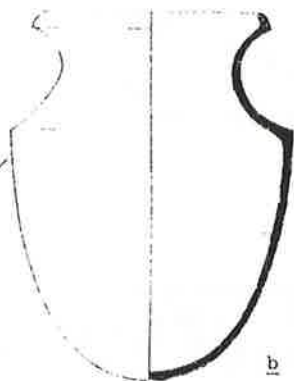
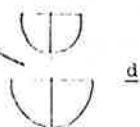


FIG. 4.



e



FIG. 5 - STADEL (1557) 1963

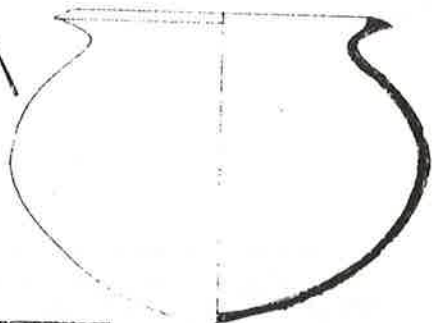


FIG. 6 - STADEL (1557) 1963



6



b



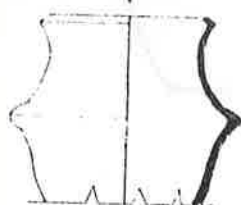
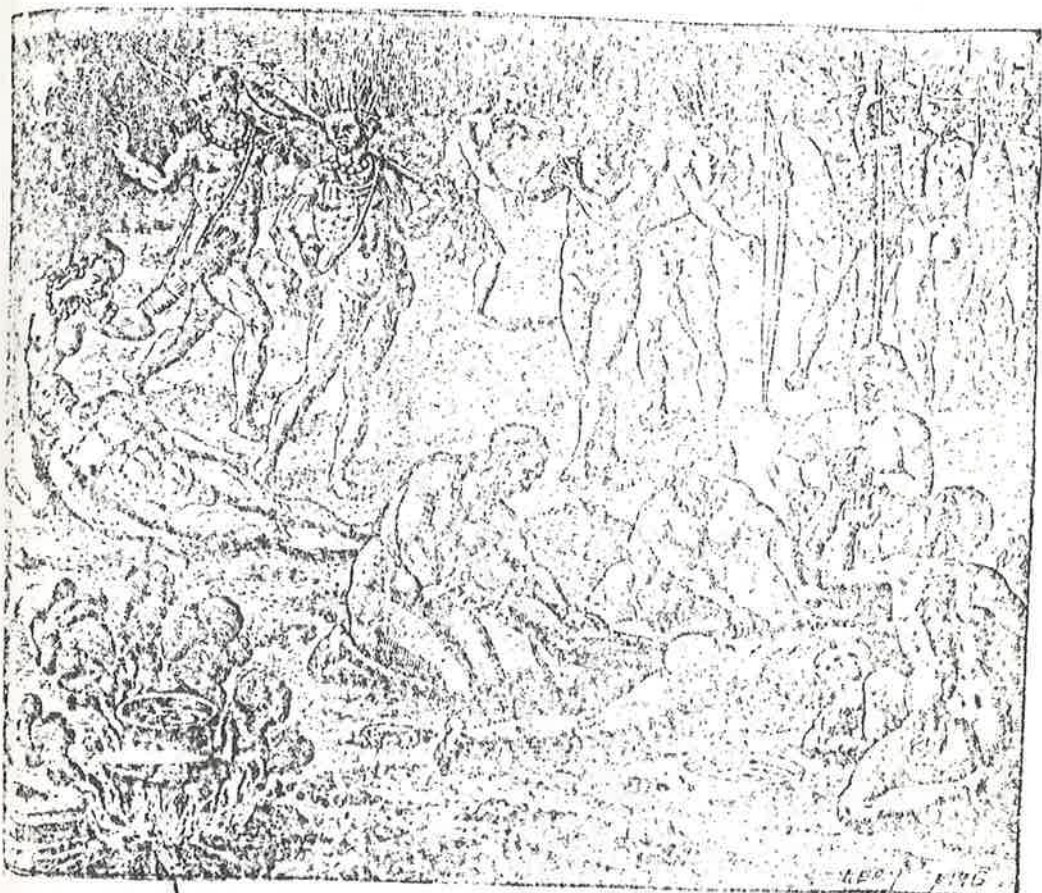
c



FIG. 7 - STADEL (1574) 1963



FIG. 8 - THOUVENOT (1578) 1963



a



b

FIG. 9 - LÈRY (1578) 1938

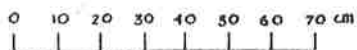
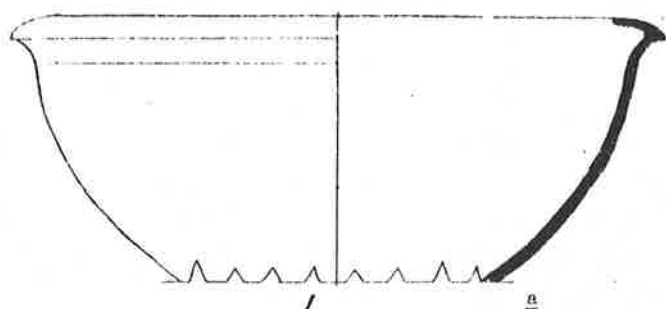
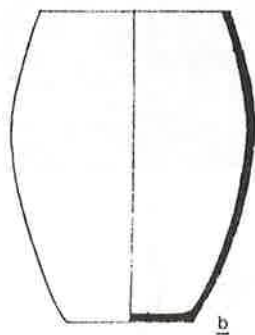


FIG. 10 - LÉRY (1578) 1938

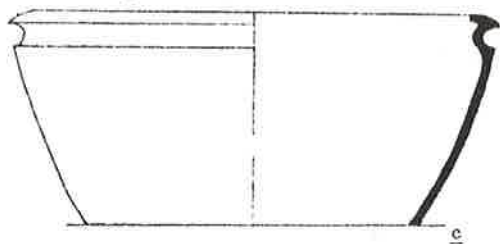


a



b

FIG. 11 - THEVET (1575) 1953



c

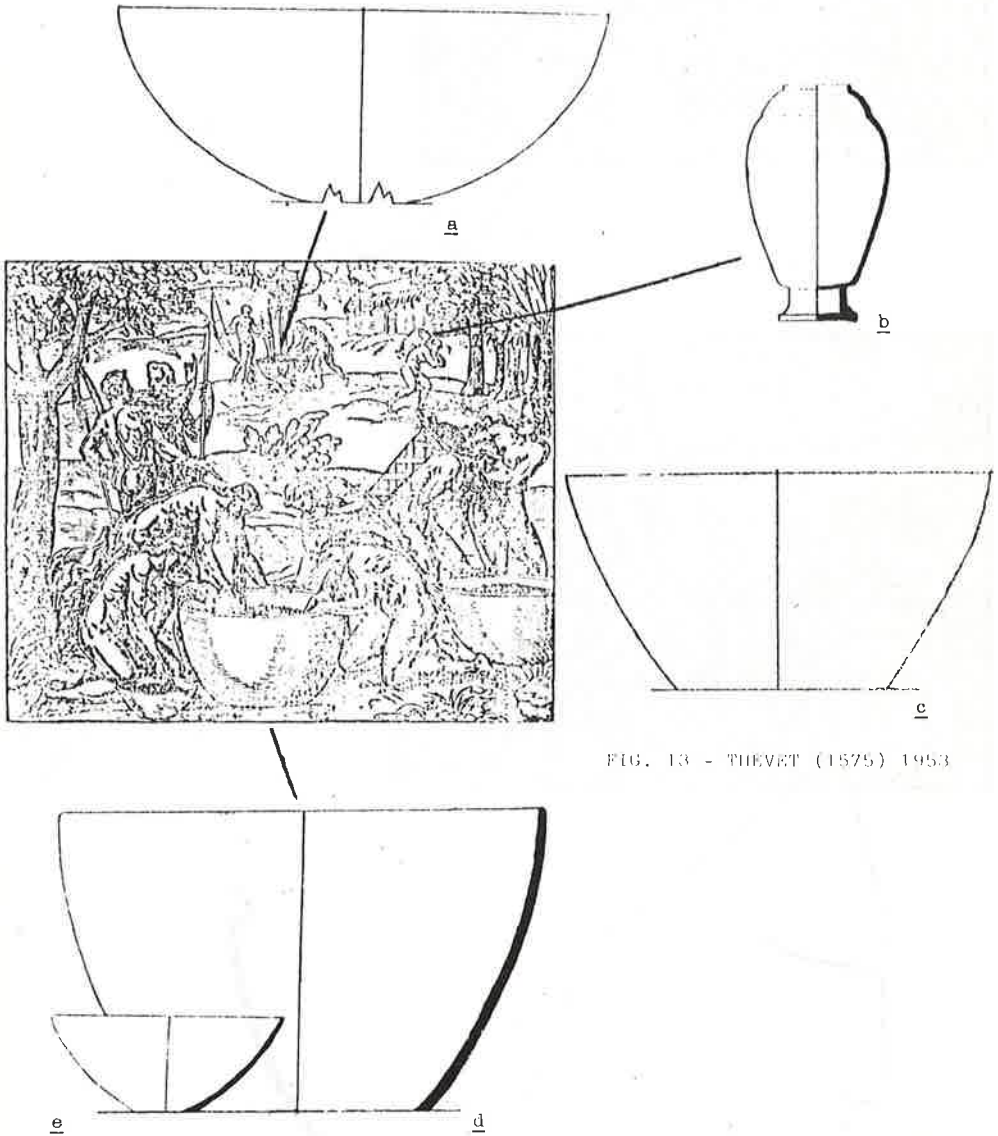
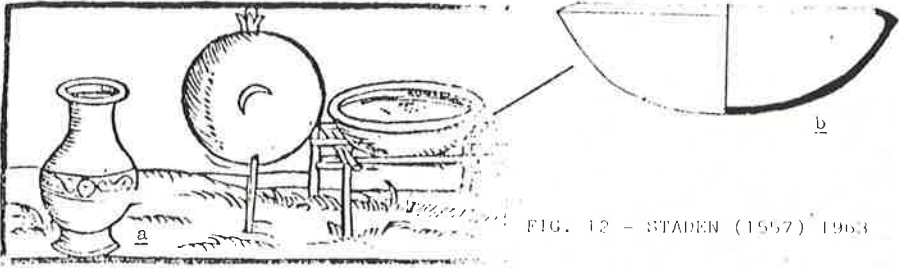
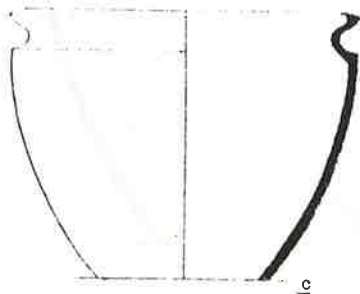
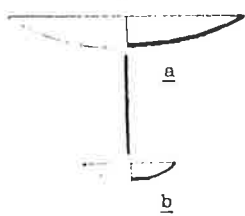




FIG. 14 - THEVET (1575) 1953



FIG. 15 - THEVET (1575) 1953



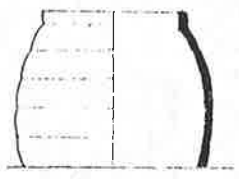
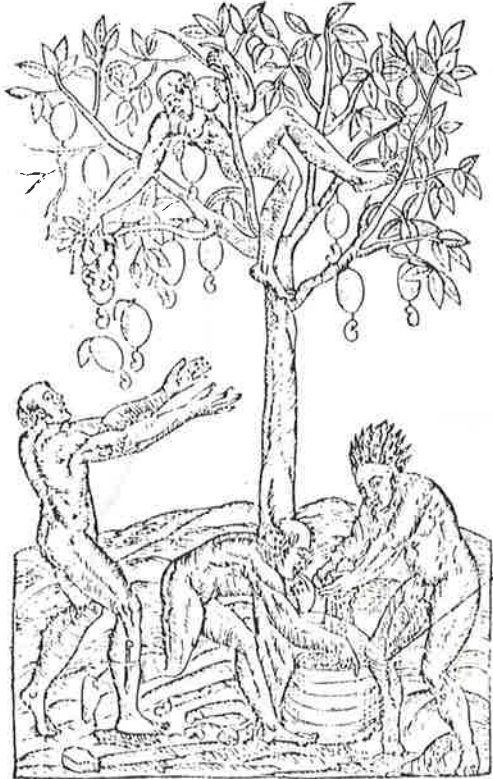


FIG. 16 - THEVET (1575) 1-53

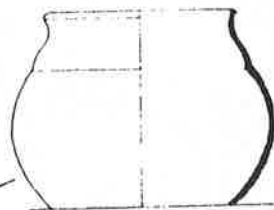
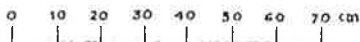


FIG. 17 - THEVET (1575) 1953

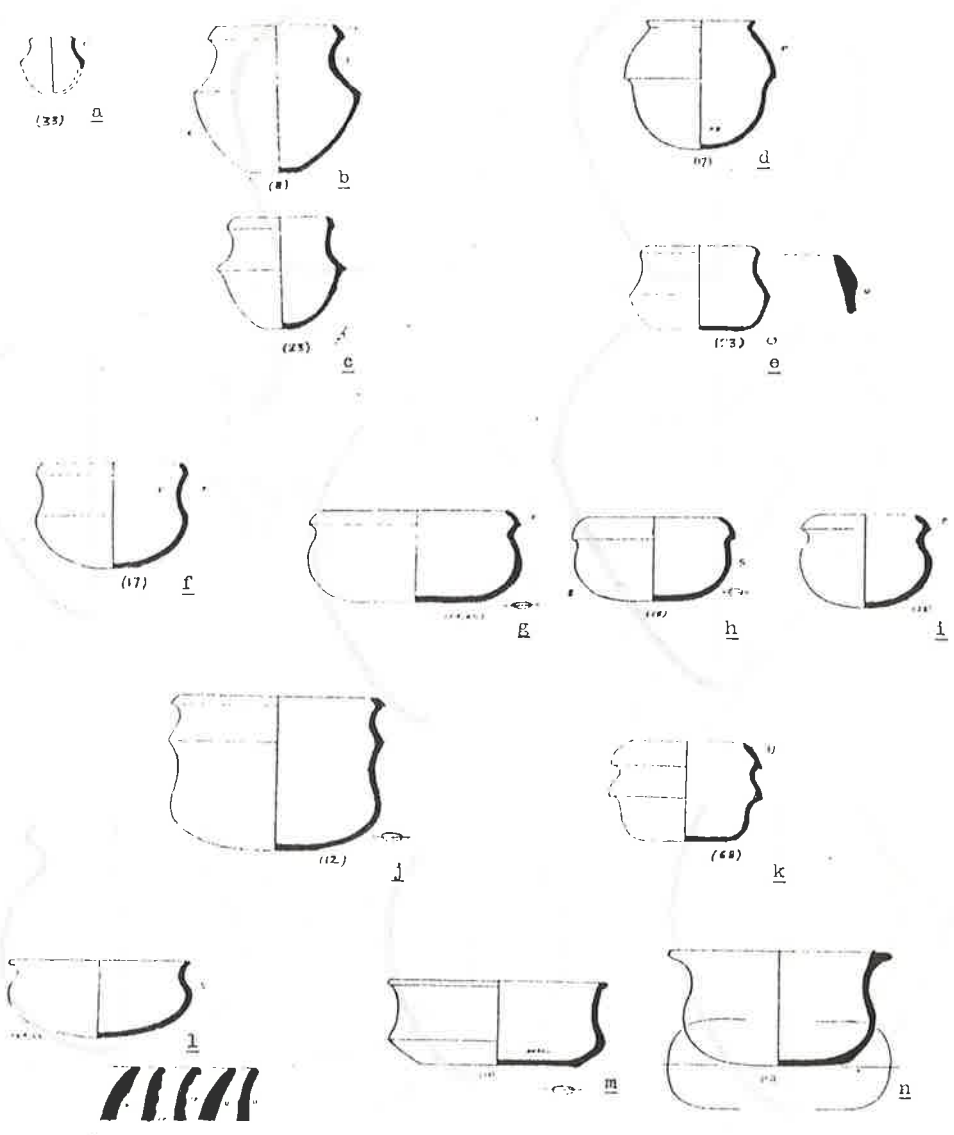


FIGURA 18 - REF.: PEREIRA JR. (1964); DIAS JR. (1967, 1975); SIMONS (1966); TIBIRIÇA (1935); GODOY (1946); OTT (1944).

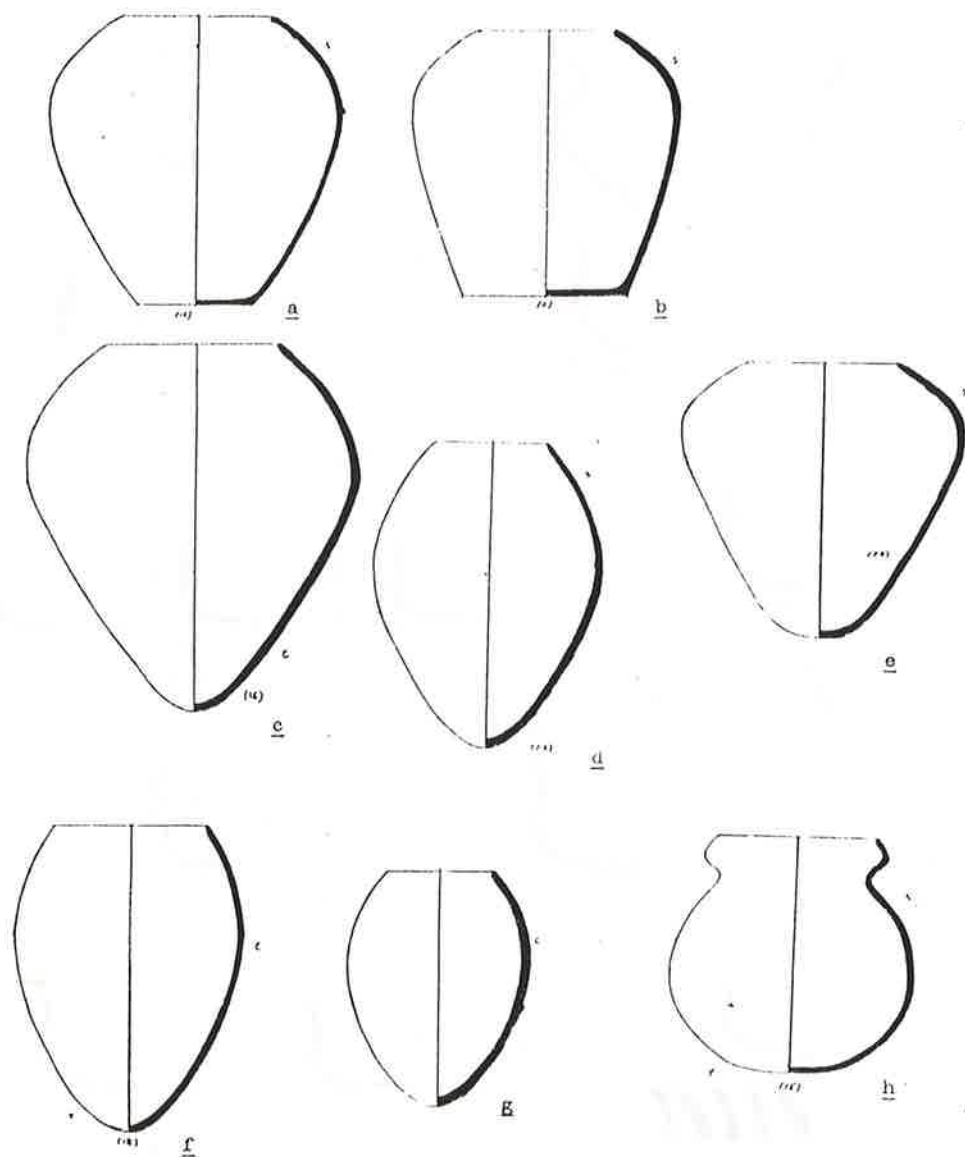


FIGURA 19 - REF.: OTT (1944); GODDY (1952); SIMONS (1966).

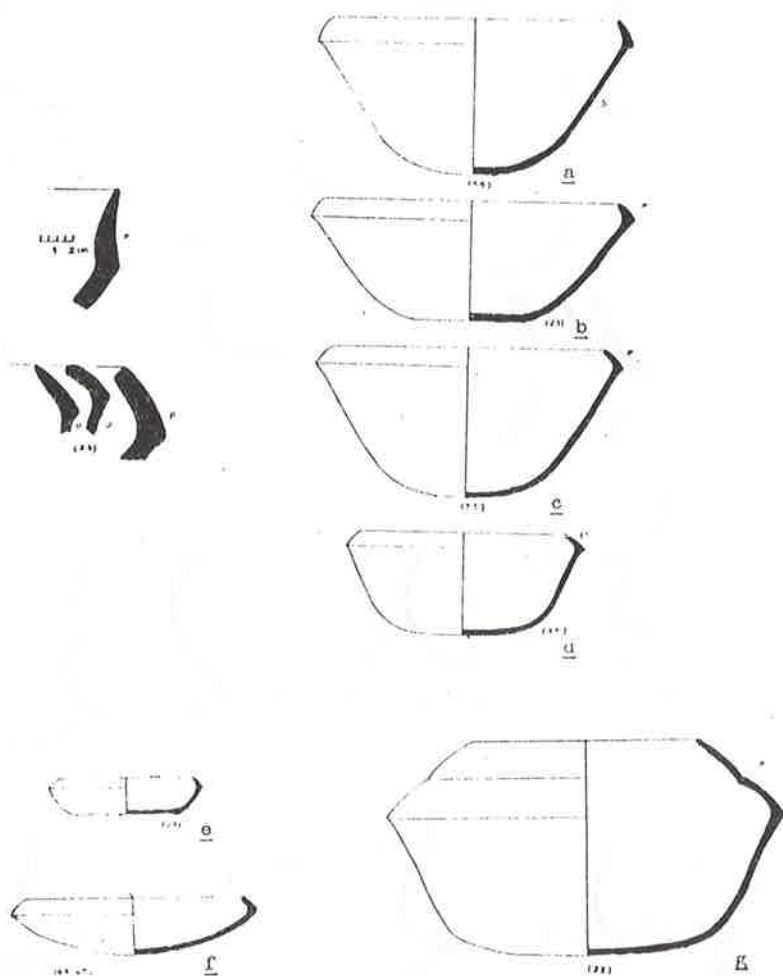
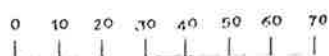


FIGURA 20 - REF.: PEREIRA JR. (1964); SIMONS (1966); BELTRÃO E KNEIP (1969).

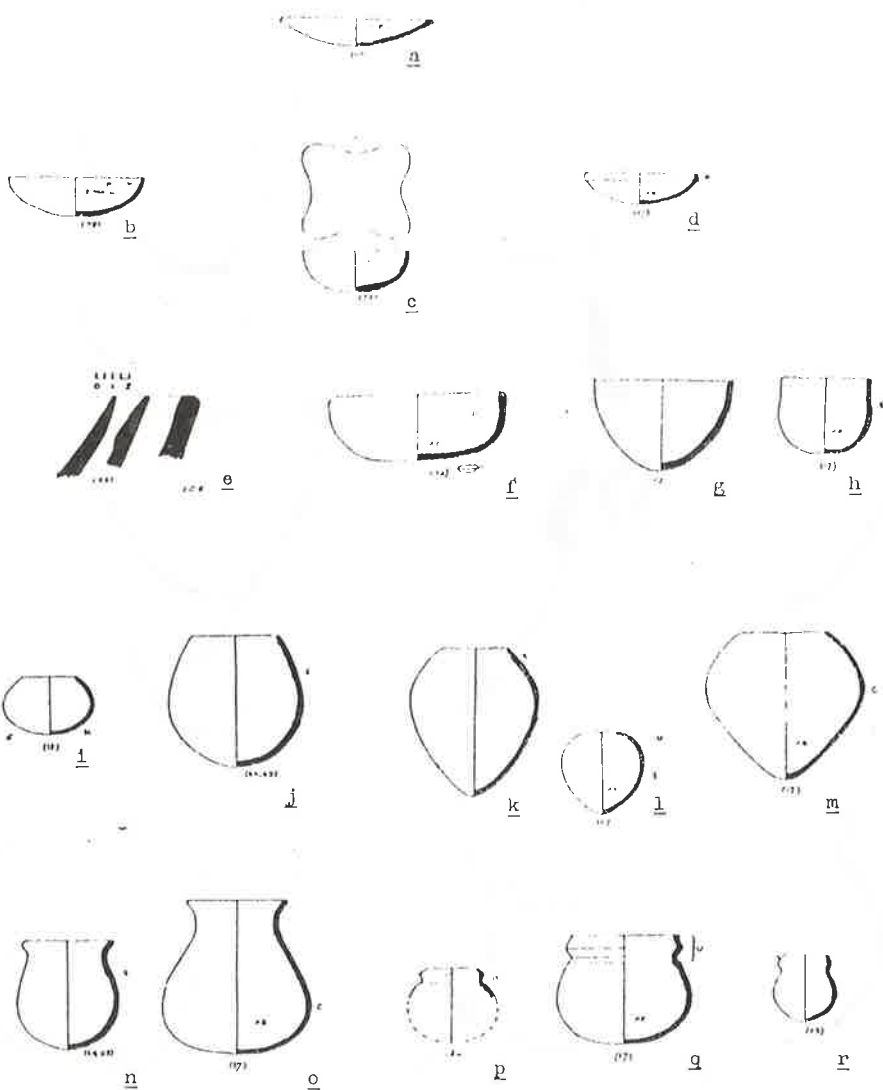


FIGURA 21 - REF.: SILVA (1924); TIBIRIÇA (1935); OTT (1944); BELTRÃO & KHEIP (1969); PEROTA (1972); SIBONS (1966).

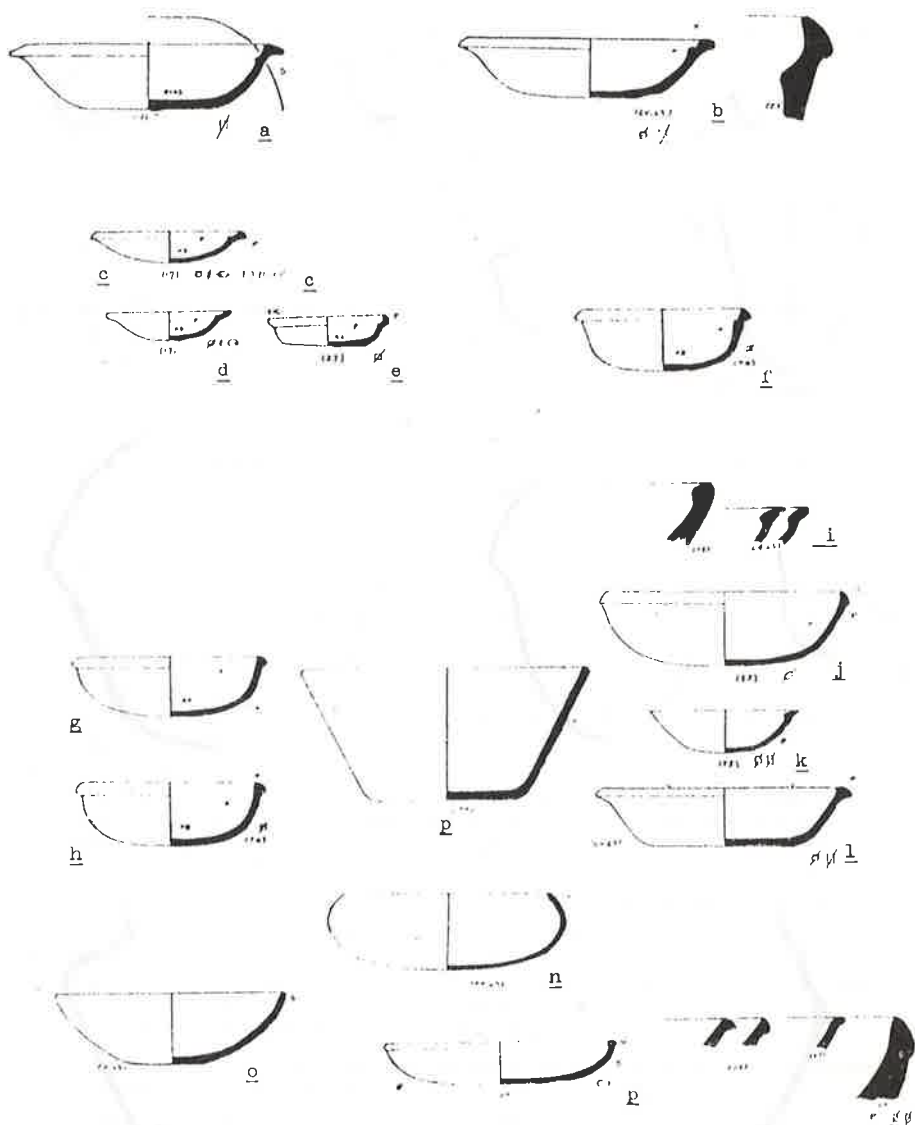


FIGURA 22 - REF.: OTT (1944); BELTRÃO E KNEIP (1969); PEROTA (1972); TIBIRIÇA (1935); SILVA (1924); PEREIRA JR. (1965); GODDY (1946).

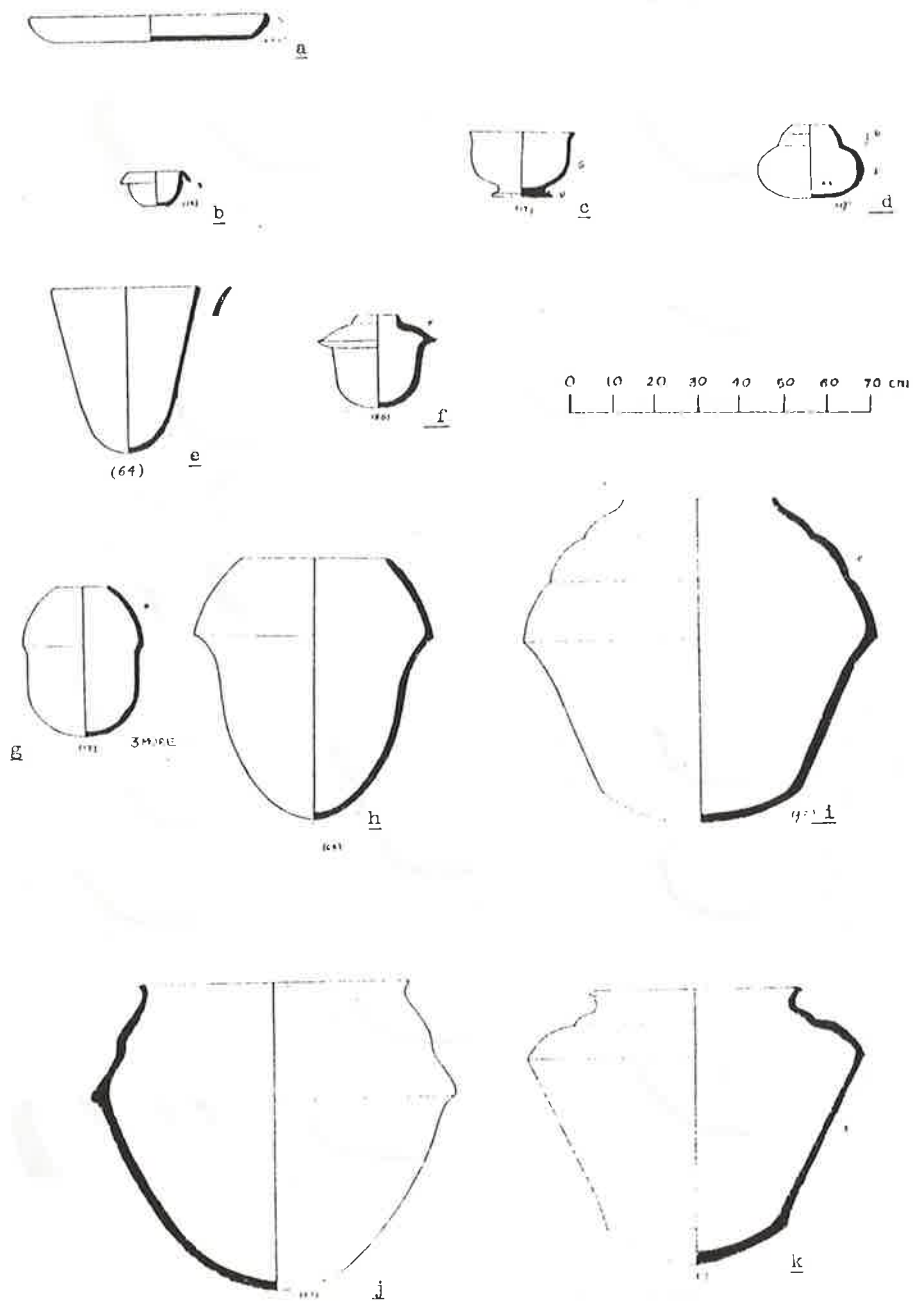


FIGURA 23 - REF.: SIMONS (1966); TIBIRIÇA (1935); BELTRÃO E KNEIP (1969); OPT (1944); PEREIRA JR. (1957, 1965).

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