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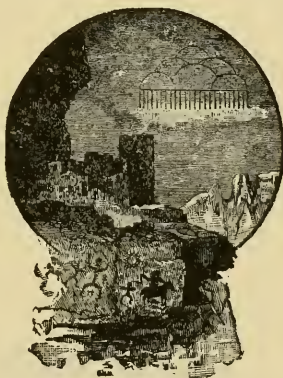
**HANDBOOK
OF
SOUTH AMERICAN INDIANS**

JULIAN H. STEWARD, *Editor*

Volume 3

THE TROPICAL FOREST TRIBES

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THE ARCHEOLOGY OF THE AMAZON BASIN

By BETTY J. MEGGERS

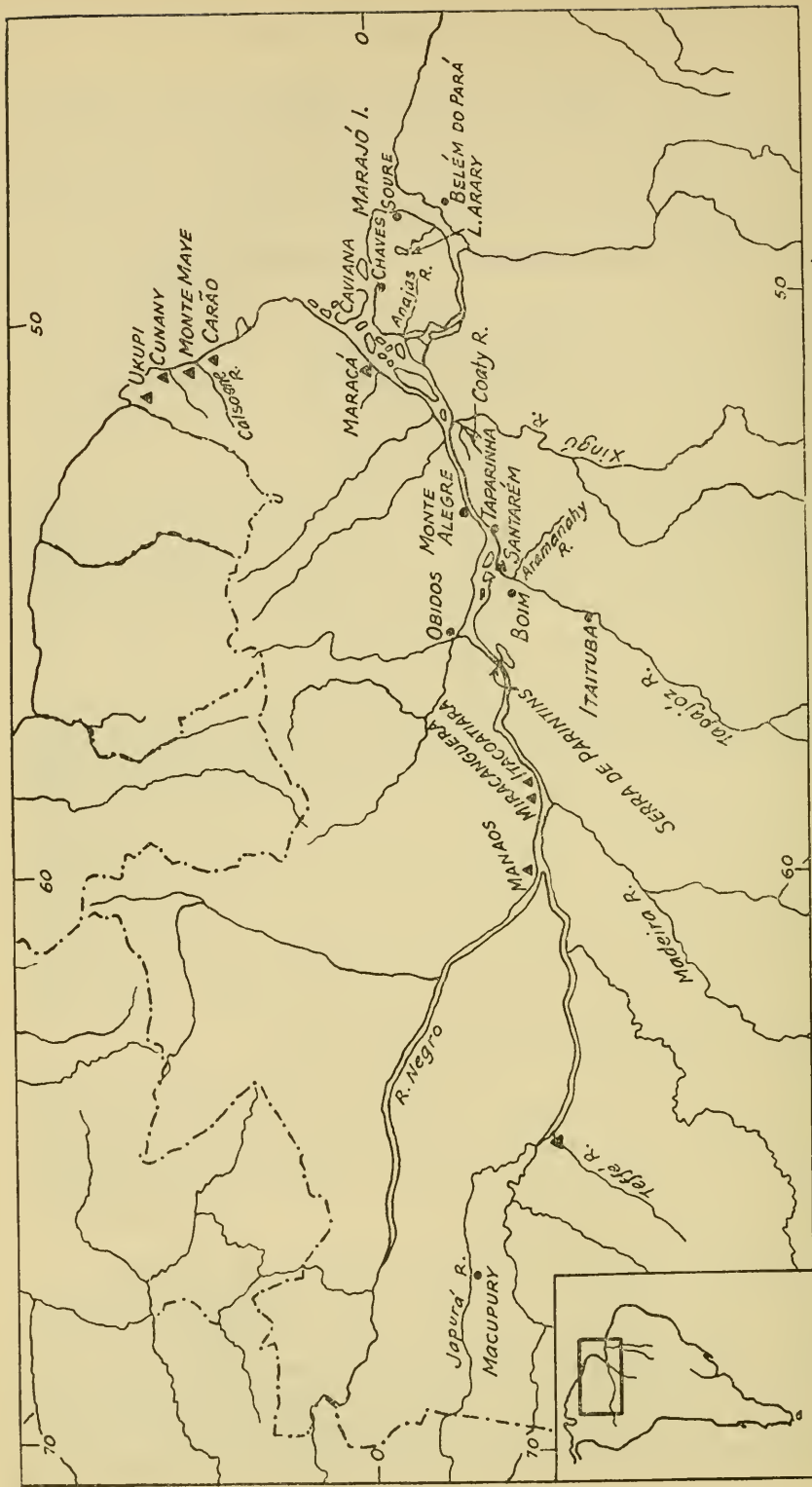
INTRODUCTION

The Amazon has its source in the Andes close to the Pacific and flows northeast 4,000 miles to empty into the Atlantic at the Equator. A dozen large tributaries flow into it at intervals, draining four-tenths of the continent. At the mouth of the Rio Negro the valley is about 200 miles wide, but between the Tapajóz and Xingú Rivers it narrows to 50 or less. Below and above these points the uplands retreat sharply from the river and the valley widens abruptly. Above the Madeira River the forests are just out of water and are inundated long before the river attains its maximum flood level. The natural vegetation of the valley and the uplands is selva, except for scattered savanna lands north of the river and on the Island of Marajó.

In this immense area archeology has made little progress. Here there are none of the large imperishable buildings which mark sites of former human habitation for the archeologist in Perú, and the virgin forest effectively obscures all lesser clues on the surface. The discovery of a site often awaits an accident such as occurred at Santarém when a cloudburst washed out the streets and revealed quantities of pottery. In the more open country on Marajó Island and in the Mojos area of Bolivia, the existence of mounds makes the task somewhat easier.

Stone is scarce in most of the valley and was not a major item in the material culture. Few stone tools, mainly polished axes and celts, have been recovered. The perishable objects which took their place have not survived. Metal tools are rare and were acquired by trade from the Andes and later from the Europeans. As a result, pottery is almost all that the archeologist can hope to find.

Attempts have been made to link the archeological remains with known Indian groups. Many of the earlier writers attributed the elaborate pottery to the *Carib*, whose presence had been recorded along the lower Amazon. The tendency of the later writers has been to favor the *Arawak*, whose high cultural level and widespread migrations are offered as an explanation for the similarities noted from southern Brazil to the Antilles. The question has not yet been settled to the satisfaction of all, however.



MAP 2.—Archeological sites of the lower Amazon and the Guianas. (Compiled by Betty J. Meggers.)

SOURCES

The written sources leave much to be desired. The early work was done largely by men trained in other fields, and it is difficult to know what reliance to place upon their conclusions. The more recent publications are for the most part general summaries or descriptions of collections in museums. An exception is Linné (1928 b), who describes some of the sites excavated by Nimuendajú in Northeast Brazil. Except for Palmatary on Santarém, Métraux on the Upper Amazon, and Goeldi on Cunany, the following sources deal mainly with Marajó: Angyone Costa (1934), Farabee (1921 a), Goeldi (1900), Hartt (1871, 1876, 1885), Holdridge (1939), Joyce (1912), Lange (1914), Linné, (1925, 1928 a, 1928 b), Métraux (1930 a), Mordini (1934), Netto (1885), Nordenskiöld (1930 a), Palmatary (1939), Penna (1877-78), Steere (1927), Torres, H. A. (1929, 1930, 1940), and Uhle, M. (1923).

The largest and most representative museum collections of Amazon pottery are in the Museu Paraense Emilio Goeldi, Belém, Brazil; the Ethnographical Museum, Göteborg, Sweden; and the University of Pennsylvania Museum, Philadelphia, Pa. The Musée du Trocadéro, Paris, has a collection from the Middle Amazon, and the American Museum of Natural History in New York one from Pacoval on Marajó Island.

ARCHEOLOGICAL REGIONS

In this article, the Amazon has been divided for convenience into four areas: Marajó Island, Northeast Brazil, the Santarém region, and the Middle Amazon. The sites in Northeast Brazil (map 2)—Caviana, Maracá, and Cunany—have been grouped together on the basis of a few traits which they have in common and by which they differ from Marajó and Santarém. These are the absence of mounds, with the burial urns placed directly in the ground or in caves, the presence of anthropomorphic funerary urns, the interment of two or more individuals in a single urn, and similarities in the pottery. The urns from these sites show very marked differences in form and detail which indicate the maintenance of distinct local styles in spite of close areal proximity and contemporaneity.

Marajó Island is characterized by the presence of mounds containing burial urns and domestic pottery including tangas, and by a distinctive style of decoration in which painted and incised designs are prominent. At Santarém, both mounds and burial urns are absent. Vessels of unusual shapes, often resting on caryatids and ornamented with bird and animal figures in full round, are characteristic.

A hundred and fifty miles up the Tapajóz River and above the Serra de Parintins on the Amazon, burial urns again appear. The latter area, which we have called the Middle Amazon, includes sites at Miracanguera, Manãos, and Teffé. This area is little known and no accounts of exca-

vations have been published. A comparison of two anthropomorphic urns from sites in the area over 500 miles apart shows a similarity in style. Other fragments are reminiscent of Santarém and Marajó. The upper reaches of the Amazon are virtually unknown archeologically.

The general culture-subsistence pattern for the Amazonian area was probably quite uniform. Agriculture was supplemented by hunting, fishing, and gathering. The high development of the ceramic art, as well as the amount of labor which would have been required to build the stone walls along the coast and the mounds on Marajó, presupposes relatively large communities and indicates an economic and social organization advanced enough to permit the expenditure of large amounts of time and effort on projects unprofitable from the point of view of subsistence. The presence of greenstone objects on Marajó believed to originate from somewhere in the vicinity of Obidos is evidence of widespread trade connections. Early explorers on the Amazon reported that the pottery of Santarém was an important item of barter, and the discovery of a clay bird head on the Island of Carriacou in the Antilles identical with those found at Santarém substantiates their statements. The stone works along the coast are presumed to be evidence that an advanced type of religion was practiced there.

Chronological relationships are uncertain. At Caviana and Maracá objects of European origin have been found in association with the pottery, indicating that these cultures were flourishing in post-Columbian times. Cunany is also dated as contemporary with the Conquest. At Carão on the Mayacaré, however, no objects of European origin or showing European influence have been discovered. Although no objects of European manufacture have been found on Marajó, the reports of travelers on the lower Amazon in the 17th century indicate that fine pottery was still being made there at that time. Nordenskiöld (1930 a, pp. 33-34) has suggested the possibility of arriving at a chronology by comparison with the Andean area, where a relatively precise time sequence has been established. The extension of this method to the Amazon cultures, however, awaits detailed study of the whole region. At present, it is impossible to say what the actual relationships are.

The pottery from Santarém presents a problem because it differs so markedly from that in the rest of the valley. It approaches the pottery of the Antilles in some respects, and the use of the caryatid, of the tripod, and of frogs in jumping position as ornaments are characteristics reminiscent of Central America.

The descriptions given in this account must be recognized as tentative and incomplete. A description of the archeology of the Amazon is largely a story of problems unsolved and work still to be done. To date, this area has attracted the interest of few trained archeologists. The written sources offer few details of the sites and circumstances of discovery of the pottery,

and even these are often contradictory. Another difficulty is that the Amazon Valley has never been mapped in detail. As a result many of the places referred to in the early literature cannot be found on a map. The pottery in museum collections is not accompanied by any information about its excavation and, although attempts have been made to draw conclusions from its study, much more could be gained by a few sessions in the field. Nimuendajú has engaged in some explorations in recent years, and the publication of his findings should contribute substantially to our knowledge.

MARAJÓ ISLAND

Mounds.—Since 1870, Marajó Island has been the classic spot in Amazon archeology. Located in the mouth of the river just south of the Equator, it has an area of 14,000 square miles and an elevation of about 3 feet (1 m.) above river level in the dry season. At this time of the year all but a few of the larger rivers are dry and water is scarce. The opposite situation occurs in the wet season, when the greater part of the island is flooded. The north central section is rendered uninhabitable by the presence of immense swamps. In the west are dense forests. Across most of the remainder of the island stretch the level campos, broken here and there by clumps of trees and by artificial mounds.

These mounds have proved a fertile field for the archeologist. More than 100 are known, and these are usually located on river banks or at the edges of lakes or swamps. Some were evidently used only as dwelling sites. Others served both as house substructures and for burial purposes. It has not been determined whether any were used exclusively for burial. Although these mounds have long been known, few of them have been located on a map or described in any detail. None have been scientifically excavated. No conclusions have been reached about their relative age. There is disagreement as to whether or not stratification is present. Opinion is also divided on the question of intentional zoomorphic shape.

The most famous of the mounds is Pacoval in Lake Ararí. It was first described by Hartt in 1871, and since then it has been visited repeatedly. It is located close to the east shore of the lake immediately south of the Igarapé das Almas. It is oblong and divided into two parts, the main mound and a small one at the north end of it and separated from it by a channel. The north-south length is about 90 m. (290 ft.), the width about 38 m. (125 ft.), and the height about 4 m. (13 ft.) when the water level is low. Steere (1927) was able to distinguish three strata showing differences in pottery design and other ornaments, with the best examples in the lowest level and the poorest at the top. Penna (1877) confirmed this sequence on his visit and concluded that these represented phases of a declining civilization. Derby (*in* Hartt, 1885, p. 22) however states

that "all the objects, plain as well as ornamented, were encountered near the surface and in the middle and lower parts of the mound so that it does not seem possible to establish divisions in the deposit." Although stone objects are rare, pottery is abundant here as in most of the mounds. Penna (1877, p. 53) speaks of pottery as covering the ground like a great mosaic. Lange (1914, p. 321) was able to collect over 3,000 specimens in the course of a week.

Pottery similar to that from Pacoval is found at Ilha dos Bichos, a mound of about half an acre in extent which rises 5 to 8 m. (about 16 to 26 ft.) above the plain along Ararí River north of Cachoeira. This was examined by Steere in 1870, and he distinguished two layers of occupation separated by a layer of earth. Burial urns were visible at different levels in the ravines which had been washed in the sides of the mound.

Along the Anajás River is a group of mounds known as Os Camutins. Derby (*in* Hartt, 1885, pp. 23-25) describes four in some detail and states that his informant mentioned 12 in a distance of $1\frac{1}{2}$ miles (about 2.4 km.), all but one on the east side of the river. The majority are in the narrow zone of trees along the bank but at least two are farther off on the plain. The principal mound has a length of approximately 210 m. (680 ft.), a width of 80 m. (260 ft.) at the base, and a height of about 13 m. (42 ft.) above the level of the surrounding plain. It is covered with vegetation, and the slopes have been eroded into ravines. On the west side of the river is a large excavation which appears to have furnished the earth for the construction of the mounds. Derby states that, the pottery encountered in the largest mound of the Camutins is of the same character as that from Pacoval. From what I could observe it appears that the large jars are more frequently painted than incised, contrary to what is observed at Pacoval. The predominant shape is large, depressed and globular, while at Pacoval smaller sub-cylindrical and conical forms are more common. These observations are insufficient as a basis for a distinction and all the principal shapes are represented in both sites. Fragments of tangas are extremely abundant, but no complete ones were found. The majority are red in color and undecorated, although I saw some painted like those from Pacoval. [Hartt, 1885, p. 25.]

Monte Carmelo is located near the source of the Anajás River. Fragments of pottery are exposed here from the river bed to the summit. Three stratified layers were observed by Holdridge (1939). The top and bottom ones contained quantities of simple, red pottery both incised and plain. Between these two was a layer containing the highly developed incised, sculptured, and painted ware which is characteristic of the highest development on Marajó.

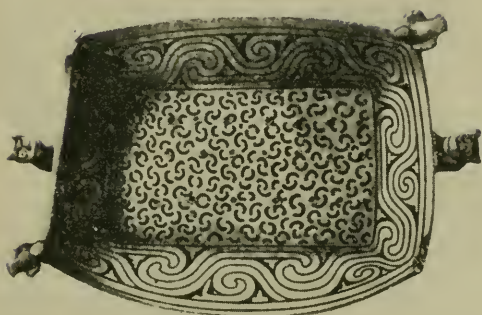
Teso de Severino was described by Mordini (1934, pp. 63-64). This mound is located near the Igarapé de Severino, a tributary of Lake Ararí. It has been completely leveled and is marked only by a ring of old trees which outlines its former extent. The pottery here is more



a



b



c



d



e



f



g

PLATE 15.—Amazonian pottery from Counany. Red-on-yellow ware. (After Goeldi, 1900, pls. 1, 2, 3.)



PLATE 16.—Amazonian burial urns from Marajó. *a*, Modeled bichrome with white slip (height approximately 3 ft. (92 cm.)). *b*, Two modeled urns, both with inverted bowl lids and found superimposed. These represent a double burial with cremated remains in small urn and entire body in larger one. (Total height approximately 4 ft. 7½ inches (1.41 m.)) *c*, Modeled champlévé urn with white paint filler in designs (height approximately 1 ft. (30 cm.)). *d*, White-slipped incised (height approximately 1 ft. (30 cm.)). (Courtesy University Museum, Philadelphia.)



a



b



c



d

PLATE 17.—Amazonian pottery from Marajó. *a*, Platter-bowl with annular base, white-slipped with some interior painting. *b*, White-slipped and incised urn (height 9 inches (23 cm.)). *c*, Unslipped incised (height 8 inches (20 cm.)). *d*, Interior of white-slipped, incised and red zoned bowl (greatest diameter 17½ inches (44.5 cm.)). (*a-c*, Courtesy University Museum, Philadelphia; *d*, courtesy American Museum of Natural History.)



PLATE 18.—Amazonian pottery from Marajó and Santarém. *a, b*, Hollow figurines, Santarém. (Larger, approximately 5 inches (13 cm.) high.) *c, d*, Marajó effigy burial urns, incised white, red retouched decoration. (Respective heights, 14 inches (35.5 cm.) and 8 $\frac{3}{4}$ inches (21 cm.)) *e*, Marajó red on white (height, 9 inches (23 cm.)) *f*, Marajó incised white, red retouched (height, approximately 8 inches (20 cm.)) *g*, Marajó red and black on white (height, 7 $\frac{1}{4}$ inches (19.5 cm.)) *h-j*, Tangas, or women's pottery "fig leaves." (*a, b*, Courtesy University Museum, Philadelphia; others, courtesy American Museum of Natural History.)

advanced in design and technique than that from Pacoval. The clay is finer and better fired, the workmanship more careful, and the vessels are partly covered with a kind of glaze probably produced by the resin of *jutaisica*. Tangas found here are decorated with complicated stylized anthropomorphic motifs. The characteristic frieze of vertical and diagonal lines with the intervening spaces painted a solid color found on tangas from Pacoval, does not occur here.

Santa Izabel, located on the plain northwest of Lake Ararí, has also been leveled to the surface of the plain. Penna (1877, p. 51) describes the artifacts as inferior in number and extent to those of Pacoval, but as rivaling the ceramics of the latter in choice of material and perfection of designs, painting, and relief.

Fortaleza was visited by Farabee. The mound had been built up artificially and then used as a village site. Apparently the people had cremated the remains of their dead and buried the ashes in small urns in the floor of their houses. These urns were beautifully decorated with incised lines or paint or both. Many plates, small bowls, cooking pots, and seats were found buried with these urns. [P. 145.] Four other mounds in the vicinity were excavated but nothing of value was found. They had been used as house sites only, as was indicated by the presence of ashes and fragments of pottery. [Farabee, 1921 a, p. 144.]

Larenjeiras is located northeast of Lago Guajará. It is 5 m. (15 ft.) in height and covers over 2 acres. Pottery of all types is abundant.

These brief accounts represent practically all the definite information that has been published about the mounds. A dozen more are mentioned by name and vaguely located but not described at all. Mordini (1934, p. 62) cites Serra, Teso do Gentios, Menino Deus, and Panellas in the area enclosed by the Ganhão and Cururú Rivers and Lakes Mututi and Asapão. These and a group of seven small mounds on the road from Cajuliros to Faz Café are oval and oriented in an east-west-direction. Pacoval do Cururú, Mataforme, and Ananatuba, also oval, are oriented north-south.

Pottery.—In general, pottery shapes are varied but the paste appears to be constant. The basic clay is light gray which turns orange-red in firing. Sand admixture is rare. The texture varies from coarse to medium, depending on the size and number of particles of pounded sherd used as temper. In some cases these are large enough to retain traces of the original white slip. Manufacture was by the coiling method, and overlapping layers are visible on the interiors of some of the figurines. Firing was done in a kiln and was sufficient to change the color of the paste only on the surface, except in cases where the walls were thin.

The following classification of wares based on surface finish was made by Junius Bird after an examination of the collection from Pacoval at the American Museum of Natural History. These were probably not all contemporary but lack of documentation makes it impossible to establish the chronological sequence.

Plain ware.

Incised plain ware. Both fine and broad incised lines occur, sometimes combined with punctate marks (pl. 17, *c*).

Incised white. The surface is covered with a white slip and decorated with fine incised lines (pls. 16, *d*; 17, *b*). The color of the slip varies from white through cream to orange as a result of variations in firing.

Incised white, red retouch. Like the preceding except that the incised design is accented in places by the addition of red paint to the incisions (pls. 17, *d*; 18, *f*).

Red champlévé. Red slipped ware in which the background or field of the design has been cut back from the original surface and roughened.

Red champlévé, cream paint in cuts. The design is produced by the same technique as in the preceding. A contrast is made between the cut-out parts and the rest of the design by the addition of a light-colored paint to the cuts (pl. 16, *c*).

Double-slipped champlévé. Here the red slip was applied over a white slip and shaved off in the cut-out areas. The use of a double slip produced the same contrast as the preceding method but eliminated the rough surface caused by the presence of tempering granules in the paste.

Incised plain ware, white paint inlay. The designs are applied in bands around the rim and are composed of finely incised lines and a deeply gouged background which were filled with white paint.

Painted ware. Painted decoration was used by itself or in combination with incised and relief ornament (pls. 16, *a, b*; 18, *e, g-j*). Red and brown paint were used separately or together on a light-colored slipped surface.

Two other types occur in the collection at the Museum of Anthropology, University of Michigan:

Incised red. The decoration is in simple geometric patterns of broad incised lines which go through the slip to the orange paste surface to produce a two-color design.

White champlévé. The incised lines and indented areas show the orange original surface while the intervening areas have a white slip.

Nonfunerary pottery is abundant and varied in form. Water jars with narrow mouths are common at Pacoval. Handles, which are present on some, are of two types: two protuberances or lugs placed below the rim, and handles perforated for the insertion of a cord. Large plates or dishes are common but are usually recovered only as fragments. Bowls vary in shape from deep flat-bottomed ones with sloping sides to shallow concave ones. Some are circular, others oval. The former have level rims, and the rims of the latter rise to a high point at the ends and slope downward to the center of the long sides. Decoration on this type is painted or incised, and relief ornament is sometimes found on the rim. Some are decorated both on the interior and exterior and others on the interior only. An unusual form is a bowl with a flaring annular base and an extremely broad concave horizontal rim, so broad that it almost triples the diameter of the vessel (pl. 17, *a*). The interior is painted red or brown on a white or cream slip. The exterior is usually unslipped and undecorated. Of problematical use is the so-called "offertorio" of the older writers. It is a flat or slightly concave disk on a slightly flaring annular base. A few are

oval. The usual size is about 17 cm. ($6\frac{3}{4}$ in.) in diameter and 7 cm. ($2\frac{3}{4}$ in.) tall. Some, however, are only half this large. They are unslipped and the surface of the disk is covered with incised patterns. In the case of the smaller vessels these design areas are often cross-hatched. An anthropomorphic face in low relief is often used as decoration on the side. Anthropomorphic and zoomorphic vessels are rare (pl. 18, *c, d*).

Jars of several shapes have been called funerary urns. One has the form of two truncated cones joined together at a point about one-fourth of the distance from the bases of the vessels (pls. 16, *d*; 17, *b*). Another type has a globular body with a flat bottom and a cylindrical neck with an everted lip (pl. 16, *c*). In a third type the body is also globular, but the neck has the shape of a short truncated cone joined to the body at its base (pl. 18, *e, g*). The height of all these rarely exceeds 60 cm. (24 in.). Much larger are the urns with anthropomorphic faces in relief on the neck (pl. 16, *a, b, c*). These may be as much as 95 cm. (37 in.) tall with a rim diameter of 75 cm. (28 in.). They have globular bodies which taper down to an extremely small flat base only about 18 cm. (5 in.) in diameter. The neck joins the body at a pronounced shoulder and terminates in a widely flaring rim. The greatest diameter of the body is only a little more than that of the rim. Two anthropomorphic faces in low relief adorn the neck, one at front and one at back. A small human figure often occupies the intervening space at each side. The body of the vessel is covered with painted decoration in large curvilinear patterns.

Figurines.—Figurines, or "idolos," are variations of the seated type found in many parts of South America. The larger ones are hollow (fig. 16, *right*). The legs are separated and rounded at the end. Often there is a ridge across the base of the tip to represent the foot, which is left smooth or marked with three to eight toes. Arms are shown at the sides, raised, or only suggested by a protuberance or lateral extension at each shoulder. Heads differ in shape and detail, but almost invariably the nose and eyebrows are joined to form a Y or T. The sex is usually indicated and is, in a majority of cases, female. In addition to these separate figurines, many anthropomorphic and zoomorphic heads are found which once were part of the relief and molded decoration of vessels. These are generally solid. Some show traces of slip and decoration, while others have the orange-red color and rather rough surface of the unslipped clay.

Tangas.—Tangas, which are found in abundance, are thought to have been worn by the women as a pubic covering (pl. 18, *h-j*). They are triangular in shape, about 15 cm. (6 in.) long and 12 cm. (5 in.) wide at the upper edge. The upper edge is convex and the other two are concave. The inner surface is concave and the outer convex. There is a small pierced hole, 1 to 2 cm. from each corner, for the insertion of a cord for attachment to the body. Many show grooves where the friction of the cord has worn away the clay. The clay used is always very fine, and

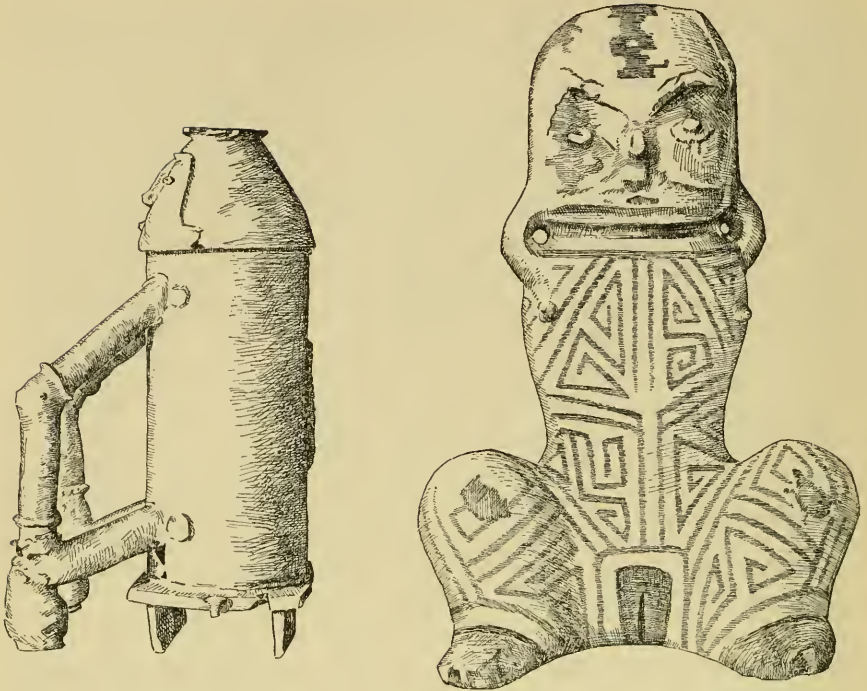


FIGURE 16.—*Maracá* and *Marajó* pottery. *Left: Maracá* urn (height, approximately 2½ ft. (75 cm.)). *Right: Marajó* hollow figurine (red-on-white) (height 24 cm. (9½ in.)). (After Nordenskiöld, 1930 a, pl. 18 and Frontispiece.)

the objects themselves are often exceedingly thin. Both surfaces are smoothed and usually slipped either red or white. The outer surface in the latter case is decorated with great care and beauty in a symmetrical pattern. Mordini (1934) noted that the majority of the tangas found at Pacoval show consistently the same border pattern across the top. This was not found on tangas from Teso de Severino. Tangas with dark red slip and no decoration are found at Camutins.

Decorative styles.—Holdridge (1939, p. 74) states that

while there are slight regional differences in the pottery designs and manner of execution, there is a general identity of artistic motives and technic that points to an island-wide cultural integrity. The most complicated designs found in the Chaves pottery can be duplicated satisfactorily in a piece from Soure.

This continuity of style makes it possible to list a few very characteristic features. One of the most common geometrical motifs in painted, incised, or relief decoration is the spiral which occurs in many variations, single and interlocking. Also characteristic are stylized representations of the human face which occur in almost an infinite variety and produce a symmetrical design used on tangas as well as on funerary urns and other vessels. The **T** is another design element often used. The sides of

funerary urns sometimes show an **H**-like motif in relief. Relief decoration was usually confined to the rim except on the larger vessels, where anthropomorphic and zoomorphic heads in the round were used as decoration on rims and as appliqué on the sides. These as well as the figurines show conventional treatment both in modeling and painting. The most characteristic facial feature is the joining of the eyebrows and nose in a **Y** or **T**. Zoomorphic heads sometimes have coffee-bean eyes and are generally more crude than the anthropomorphic heads. Characteristic of the latter are a double protuberance to indicate the ear, a protuberance on the top of the head, and conventional painted outlines of eyebrows, eyes, nose, mouth, and ears.

Burial.—Secondary urn burial was practiced throughout the island. The urns were buried in the mounds and the most richly decorated were sometimes placed inside cruder ones for protection. A shallow bowl-like cover was inverted on top (pl. 16, *b*). At Camutins, the large urns contained whole bodies placed in seated position while the small urns held the ashes of cremated individuals (Farabee, 1921 a, p. 145).

When the urn was placed in the grave, the bottom of the hole was dug to fit it, so that all of the smaller pieces of pottery placed with the dead were deposited at the side of the neck on the shoulder of the urn. [Ibid., p. 146.]

NORTHEAST BRAZIL

Caviana.—Caviana is an island about 50 miles long lying in the mouth of the Amazon north of Marajó. At a cemetery in the southeast of the island, Nimuendajú (Linné, 1928 b) excavated a group of funerary urns. These had been buried directly in the ground. They are of several types and show diversity in the technical skill of the makers as well as in the shape and style of the decoration of the vessel. An urn 33 cm. (13 in.) tall with the mouth at the side and a tiered profile was found at Apany. A similar vessel from Pará was described by Joyce (1912). Both are crudely made and have appliqué decoration of lumps of clay. A more advanced type is a semicylindrical urn with a stylized human figure outlined in low relief on one side. A third type has painted decoration reminiscent of that found on pottery from Ukupi and Cunany. A seated anthropomorphic urn illustrated by Nordenskiöld (1930 a, pl. 20) resembles those from Maracá. The features are in low relief, and the painted decoration is red and gray.

Glass beads, metal knives and axes, and small brass bells from European trade were found with the urns and establish their origin as post-Columbian. Small objects, possibly ornaments, of greenstone were also found.

In the urns, the smallest bones were placed at the bottom, the large ones at the sides, and the skull on top. A single urn sometimes contained the remains of more than one individual. Occasional anthropomorphic urns

have two faces, and Linné (1928 b, p. 79) postulates that such an urn was destined to contain two skeletons.

Although its geographical position is that of a link between Marajó and Brazilian Guiana, culturally Caviana is most closely allied with the mainland. The differences which exist between it and Marajó are striking. The only features which are common to both are secondary urn burial and the custom of painting the bones red. The absence of mounds, the anthropomorphic character of the urns, and the style of relief and painted decoration indicate stronger affiliations between Caviana and the coast to the north. Nimuendajú (Linné, 1928 b) has explained this by the theory that the inhabitants of Caviana, the *Aruã*, immigrated from Brazilian Guiana and returned there when the pressure of the Europeans became too strong.

Maracá.—This site has been known since 1870. It is located on a small tributary of the Maracá River which flows through Brazilian Guiana and empties into the Amazon almost at the Equator. There are no mounds. The pottery was found in natural grottos at the edge of a plain close to the river. Funerary urns are abundant, and the majority are in the form of a human being seated on a bench. The trunk, arms, and legs are cylindrical (fig. 16, *left*). The head which forms the cover is about 18 cm. (7 in.) high and has a flat top covered with small knobs. The features of the face are made by ribbons of clay and are enclosed at top and sides by a relief stripe. The sex is either male or female. These figures often have painted ornaments, and Nordenskiöld (1930 a, p. 20) reports that the calf of the leg is swollen, indicating perhaps that binding was practiced by the people. One of these urns was ornamented with green, blue, and white glass beads attached to the arms and spine. These date from the 17th-century European trade contact and indicate the manufacture of these urns in the post-Columbian period. Zoomorphic urns in this same tubular style have also been found in the caves.

The paste is coarse and composed of clay mixed with sand. Cariapé (a vegetal temper) does not appear to have been used. The workmanship is crude; the vessel walls are thick and irregular, and the surface is rough. Paint was restricted to the ornaments mentioned above, and the surface of the vessel as a whole exhibits the tan to orange-brown color produced by firing. Firing was not thorough enough to bake the walls through, and the interior retains the original dark gray color.

According to Penna (1877), these urns contained entire skeletons. The bones were arranged with the pelvis at the bottom, the rest of the bones along the sides, and the skull on top.

Cunany.—The Cunany site on the coast of Brazilian Guiana was discovered by Coudreau in 1883 and described in detail by Goeldi in 1895 (1900). The funerary urns were found in artificial subterranean galleries. Goeldi offered the hypothesis that the ancestors of the builders lived in an

area where caves occurred naturally and were used as repositories for burial urns. Their descendents, accustomed to this situation and finding no natural caves in this new area, constructed substitutes. Fragments of pottery identical with those from Cunany were found recently by Nimuendajú (Linné, 1928 b) in a cave of Mont Ukupi near the Arucará River. If Goeldi's hypothesis is correct, these later discoveries may be of greater age. Linné (1928 b, p. 73) states that it is possible to detect some evolution in the painted decoration. The Cunany urns are believed to be post-Columbian or contemporary with the Conquest.

The paste is gray or bluish in cross section. The amount of sand is small and large amounts of crushed sherds were used as temper, especially in the thick-walled vessels. A microscopic examination showed no admixture of ashes of caraipé or of sponges. Firing was sufficient to bake the thin-walled vessels but those with thick walls show a poorly baked center. Fine white clay was used as a slip.

A variety of forms are found, almost all of which are divided into horizontal zones by the more or less sharp changes in plane of the vessel wall, by relief bands, or by changes in design motif. Shapes include large jars with globular bodies and straight necks; jars with small bases, constricted necks and wide rims, often with anthropomorphic facial features in low relief (pl. 15, *d, g*); bowls with vertical sides and flaring rims (pl. 15, *b, f*); rectangular vessels with flat bottoms and outward flaring sides (pl. 15, *c, e*); and oval "boat-shaped" vessels on a cylindrical pedestal (pl. 15, *a*).

Ornament is painted and relief. Painted designs are red on a yellowish slip. The rim and base are sometimes painted solid red. Frets, spirals, steps, commas, and a rambling three-line design are typical geometrical motifs. The corners are occasionally ornamented with a row of vertical notches. Relief decoration includes the outline of a human face on the rim and of the human body on the body of the vessel, and anthropomorphic and zoomorphic figures in the round jutting out from the sides of bowls and rectangular vessels.

All of the vessel shapes listed above except the large jars with globular bodies and straight necks were recorded by Goeldi as having contained traces or fragments of human bones.

Rio Calsoene.—On high points along the coast of Brazil north of the Amazon, as for example on the Calsoene River and on the tributaries of the Cunany River, rows of stones have been found. The largest of these is located on the Estancia José Antonio on the north bank of the lower Calsoene River. It is 100 m. (325 ft.) long but has been damaged in many places. One hundred and fifty stones of all sizes are visible above ground. The largest measures 2 m. ($6\frac{1}{2}$ ft.) by 70 cm. ($26\frac{1}{2}$ in.) by 25 cm. ($9\frac{3}{4}$ in.), and has an estimated weight of 600 kilograms (1,323 lbs.). These stones must have been brought from a considerable distance,

an enormous task with primitive methods of hauling and transportation. Excavations made by Nimuendajú (Linné, 1928 b) show that these rocks were not placed over graves. Little pottery was found in the vicinity, and much of that was in a fragmentary state. A vessel with a wide mouth was covered with a large stone slab and protected by two stones at the sides. A few other similar objects have been discovered in the ground. To explain these structures we must resort to speculation, but it seems probable that they had a religious purpose.

Ilha de Carão.—Ilha de Carão is located in a swamp at the mouth of the Mayacaré River. On it is a mound about 10 meters (33 ft.) long and 2.2 meters (6 ft. 8 inches) high. It is stratified into three distinct layers. The lowest, composed of ashes, is 70 cm. (26½ in.) thick and covered with a thick layer of potsherds. These appear to be mainly from platters as much as 80 cm. (30½ in.) in diameter. They show incised decorations as well as traces of red and white paint. The second stratum is about 50 cm. (19½ in.) thick and composed of gray dirt. On top is a layer of yellow clay 1 meter (3 ft. 3 in.) thick. Some stones belonging to the same category as those described from the Calsoene River had been set up on the summit. Pottery fragments in the two upper layers were so badly disintegrated that only sherds from a few small vessels were preserved.

The three layers of the mound do not appear to correspond to three different cultures. While the thick debris of the lowest level may be the product of an independent ancient population, it must be recognized that the differences of technique, decoration, etc. are not great enough to furnish absolute proof for this hypothesis. The pottery of the two upper layers appears to belong to a single period, although some vessels are buried deeper than others. [Linné, 1928 b, pp. 75-76.]

This mound was apparently constructed prior to European contact since no object of European origin or showing European influence has been found associated with it.

SANTARÉM

Distribution.—The lower Tapajóz River is the center of another culture type. Evidence was meager until the summer of 1922 when a cloudburst washed out the streets of Santarém and uncovered stone tools and a great quantity of pottery. Much was saved through the efforts of Nimuendajú, and a subsequent survey by him has made it possible to outline the boundaries of the complex. It extends up the Tapajóz to Aramanahy and is represented by numerous inland sites on the right bank. On the left, there is a site at Boim. To the east, remains are common as far as Taperinha and scattered to the eastern limit at Bocca de Coaty on the Jaraucú River, a tributary of the lower Xingú. The western limit is Serra de Parintins and there are numerous sites on both banks of the Arapiuns River, a tributary entering the Tapajóz

northwest of Santarém, and in the region of Lago Grande de Villa Franca. North of the Amazon there are some sites around Monte Alegre, but Nimuendajú found nothing between here and Obidos (Palmatary, 1939, pp. 4-5).

Ceramics.—The pottery of this area is perhaps the most remarkable in the Amazon Valley. The paste is light gray in cross section and light tan on the surface. Santarém pottery is notable for its unusual shapes and profusion of modeled bird and animal ornament (fig. 17). Many vessels show traces of red paint and some of a white slip. Among the principal forms are: (1) A six-lobed vessel resting on a flaring annular base or small caryatid. The neck is tall and narrow and flares out in one or more places to form a flange or series of flanges. At two opposite sides of the body, the lobe is extended outward and upward and terminates in a stylized bird head with the beak curved downward in a loop. Other decoration consists of animals modeled in the round, geometrical relief patterns, and lightly incised geometrical designs. (2) A bowl supported on a caryatid with an hour-glass-shaped base. The bowl has a vertical rim which is decorated with an incised pattern. At the widest diameter modeled ornament is attached. (3) A bowl with almost vertical sides, a flat bottom, and a concentric, or trough rim. The two edges of the trough are connected at four regular intervals by a wide loop. (4) A tall jar with a narrow base. The greatest diameter is about one-fourth of the distance from the base and above this the sides slope inward to the rim. The height is about 34 cm. ($12\frac{1}{2}$ inches). There is little or no relief and no incised decoration. (5) A jar with a globular body and a short vertical neck with a wide mouth. The base is flat or slightly pointed. Decoration is relief or incised. (6) Numerous small vessels in four-lobed and other exotic shapes. (7) Effigy vessels in seated positions with globular bodies. Two illustrated by Palmatary (1939, figs. 3-4) are covered with painted geometrical figures in red and black on a light-colored background. (8) Seated figurines (pl. 18, *a, b*). These are hollow and larger on the average than those found at Marajó. The top of the leg slopes downward toward the tip. The hands are placed at the side, on the leg, or on the chest. Numerous anthropomorphic and zoomorphic figures and heads are found which were part of the ornament of vessels. These are generally small and solid. Anthropomorphic heads, whether figurines or part of the applied decoration of vessels, show various conventional traits: a headdress resembling a diadem, an oblong nose, and ears indicated by a double prominence or with the lobe pierced for the insertion of an ornament. The eyes are commonly coffee-bean or a horizontal ribbon of clay, although there are numerous other types (Palmatary, 1939). Zoomorphic heads are abundant and represent a great variety of animals and birds. Some of the most common of these appear to have been conventionalized and conform rigidly to the con-

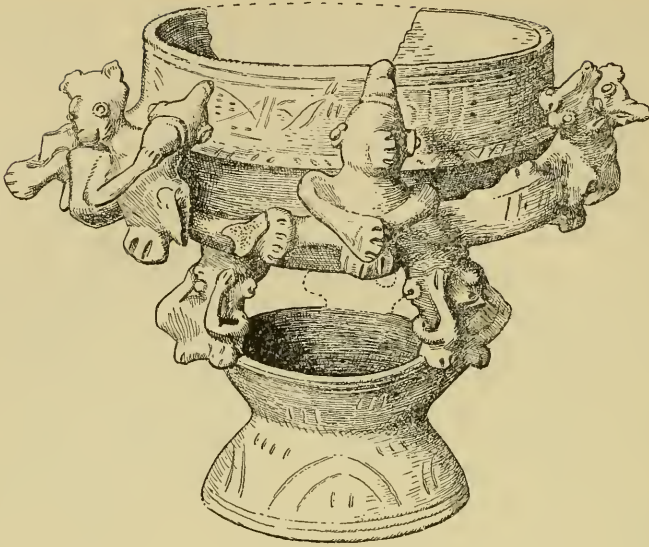


FIGURE 17.—Santarém pottery. (After Palmatary, 1939, figs. 2 and 7.)

vention in modeling and decoration. The jaguar has a wide-open mouth, the agouti has its front paws drawn up under the chin, birds have down-curved beaks, etc. Almost all have the round-rimmed protuberant type of eye.

Burials.—In spite of a diligent search, no burials have been discovered in this area. The explanation probably lies in the method of disposing of the dead which was described by Heriarte in the 17th century (Nordenskiöld, 1930 a). The body was left exposed until the flesh had decayed away. The bones were then pulverized and the powder mixed with chicha, which was drunk.

THE MIDDLE AMAZON

Miracanguera.—Miracanguera extends about 5 miles (8 km.) along the north bank of the Amazon opposite the mouth of the Madeira River. According to Nimuendajú, it has been ravaged by flood waters. Penna, writing in 1877, reported that most of the clay objects were found isolated from each other. The material is a fine clay slightly reddish-gray in color. It contains no sand. A white slip was used and there are traces of red paint. Some of the remains indicate a high degree of development of the ceramic art, but were too fragmentary for description. Penna's conclusion was that the ceramics of this area were inferior to those from Santarém and the lower Amazon.

A funerary urn from Itacoatiara, just down the river, is illustrated by Netto (1885, Est. VA). The round bottom rests on a short pedestal. The sides slope inward slightly at the neck and then flare out to the rim. A bowl-like cover fits perfectly over the top. The exterior is covered with a white slip. On one side of the neck is an anthropomorphic face with the features in low relief.

Manáos.—The city of Manáos is located on the north bank of the Amazon near the mouth of the Rio Negro, about 900 miles (1,440 km.) above Belém. Although it has been known as an archeological site since the end of the last century, we still have to rely largely on the descriptions of early travelers for information. There are a few articles in museums but these are accompanied by no information about their source.

The funerary urns were buried just below ground level. Steere (1927, p. 25) visited Manáos in 1870 and "on the parade ground of the Brazilian troops stationed there, I saw the rims of several burial urns which were being worn down by the bare feet of the soldiers." Marcoy (quoted by Métraux, 1930 a, p. 174) describes the urns:

These vessels, made of a coarse paste of an obscure red-brown color, are at the level of the ground. Their height varies from 70 cm. (26½ in.) to 1 m. (3 ft., 3 in.); the diameter of the mouth is about 40 cm. (15½ in.). Crude designs, lozanges, zig-zags, chevrons, billets are painted in black on their sides. Some have a cover, but the majority are open and empty.

Métraux has described the collection at the Musée du Trocadéro in Paris. Only one piece is intact, a bowl on a flaring annular base. The decoration is in low relief. There are many fragments including a rim sherd with a flat vertical handle ornamented with lines ending in volutes.

The color of the clay is rose-gray. There are numerous heads of birds and animals that were used as ornament on vessels.

Teffé.—Pottery discovered at the mouth of the Teffé River shows similarities both with Santarém and with Marajó. The extension of the eyebrows to form the nose so common on Marajó occurs here. The zoomorphic heads are similar to those from Santarém, and there are other striking resemblances between the pottery of the two areas.

Japurá.—Farther west, above Macupury on the Japurá River, a burial urn containing badly-preserved bones was discovered. It is 42 cm. ($16\frac{1}{4}$ in.) tall and 37.5 cm. ($14\frac{3}{4}$ in.) at the largest diameter. The domelike cover is 23 cm. (9 in.) in diameter and fits the mouth of the vessel exactly. The features of the anthropomorphic face on the neck are in relief and are enclosed by an incised line which runs across the forehead and perpendicularly down the sides, ending in a relief volute on each side below the level of the mouth. The urn is covered with a white slip and decorated at the largest diameter with a red band 6 cm. ($2\frac{3}{8}$ in.) wide.

BIBLIOGRAPHY

For bibliographic references, see page 151.