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SMITHSONIAN INSTITUTION
BUREAU OF AMERICAN ETHNOLOGY
BULLETIN 143

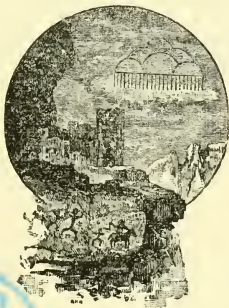
HANDBOOK
OF
SOUTH AMERICAN INDIANS

JULIAN H. STEWARD, *Editor*

Volume 1
THE MARGINAL TRIBES

Prepared in Cooperation With the United States Department of State as a Project of
the Interdepartmental Committee on Cultural and Scientific Cooperation

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UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1946

THE SAMBAQUÍS OF THE BRAZILIAN COAST

By ANTONIO SERRANO

INTRODUCTION

The sambaquís are heaps of mollusk shells which occur in the shape of cordons or mounds along a large section of the Brazilian coast. On the shores of some large rivers, such as the Amazon, these deposits are formed entirely by fresh-water species of mollusks.

In both cases these shell deposits often conceal archeological remains and burials of peoples who, in ages past, dwelt along the coast of Brazil.

The word "sambaquí" is of *Tupí-Guaraní* origin and means "hill of shells" (from *tambá*, "shell," and *quí*, "hill," in a figurative sense). Its literal equivalents would be *conchero* in Spanish and shell-heaps in English.

A sambaquí is not always a kitchen midden (*kjökkenmöddinger*); a large majority of the sambaquís are nothing more than natural deposits of mollusks which the receding ocean left on the shore.

ORIGIN OF THE SAMBAQUÍS

The study of the sambaquís has created two currents of conflicting opinions. One upholds the artificial origin of the sambaquís, stating that they were formed by the accumulation of the shells of mollusks eaten by the people living along the coasts. The other frankly admits that the sambaquís are littoral deposits that were first shaped by natural elements and later inhabited by native tribes. But between these extreme theories is one that admits a mixed origin of the sambaquís, maintaining that the inhabitants of the region kept piling the shells of mollusks which they used for food on top of natural mounds of shells, and thus increased their size. This is sometimes, but not always, true. In the upper part of some sambaquís, which are clearly of natural origin, I have observed shells and bones of fish and mammals that are typical "kitchen waste." But, on the whole, the artificial contribution has hardly affected the general size of the sambaquí. On the Island of Casquerinho, Ihering (1903) observed small hills of oyster shells which represented one family's consumption

of shellfish over a period of 20 years. These hills measured 15 to 18 feet (5 to 6 m.) in diameter and 16 to 20 inches (40 to 50 cm.) in height.

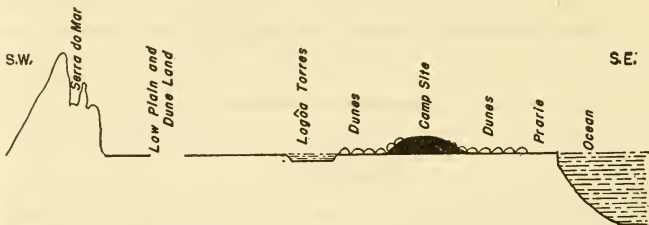


FIGURE 43.—Schematic profile of Torres site, showing location of camp site. (Redrawn from Serrano, 1938.)

The extent of human contributions to these deposits can be judged by the Torres site (figs. 43, 44), which I studied in 1937 (Serrano, 1937). This site consists of a low hill rising near the sea. Old inhabitants state that the hill was covered some 60 years ago with thick woods and was surrounded by level pasture lands. Today, the entire area is waste land, covered with sand dunes.

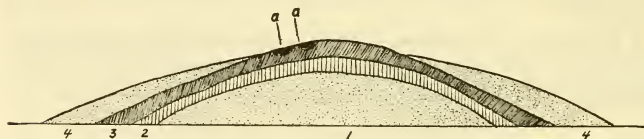


FIGURE 44.—Schematic cross section of camp site at Torres. *Stratum 1*, nucleus of sand (ancient dune); *Stratum 2*, mixed zone between 1 and 3, about 0.50 m. (19 in.) thick; *Stratum 3*, sandy decomposed vegetal material, rich in artifacts, varies from 0.10 to 1.20 m. (4 in. to 3 ft. 11 in.) in thickness; *Stratum 4*, recent dunes; *Stratum a*, hearths. (Redrawn from Serrano, 1938.)

The hill is approximately 160 feet (50 m.) in diameter at the base and reaches a height of 230 to 260 feet (70 to 80 m.) above sea level. Embedded in the third stratum are small lenses of kitchen middens, 2 to 4 inches (5 to 10 cm.) thick, and, by all indications, not exceeding 3 to 4½ feet (1 to 1½ m.) in diameter.

Through historical references, we know that the tribes which inhabited or frequented the coast of Brazil ate great quantities of mollusks, the shells of which accumulated and, in some places, became true kitchen middens. As knolls shaped by the ebb and flow of the ocean tides in ages past afforded the highest places along the coast, the native peoples chose these as camp sites and there deposited their refuse.

The fact that the shells of most of the sambaquís are unopened refutes the theory of the artificial origin of these deposits. The mollusks are generally tightly closed, or, if open, there are indications that the meat was removed long ago by the action of wind or water.

We recognize, therefore, that, in general, the sambaquís are littoral cordons or concentrations of shells, broken and reshaped by natural forces; they were later covered with vegetation and occupied by native tribes, who used them as dwelling places and burial grounds.

MORPHOLOGY

As regards their shape, the sambaquís may be classified into three groups: (1) More or less conical mounds; (2) elongated or oval mounds; and (3) low, broad conchiferous layers.

In structure, they are either stratified or homogeneous. The species of shells forming the first group are segregated in definite layers, which argues in favor of their natural origin, as it is inconceivable that the same people could subsist for too long a period exclusively on oysters, then on *Mytilus*, then again on oysters. Furthermore, this specific alternation of layers is characteristic of the coastal deposits formed by the tides.

A typical stratified sambaquí is that of Guarahy Mirim (fig. 45), which was studied by Clerot in 1928. This sambaquí is located on the left bank of the Guarahy River (in the Federal District) in an

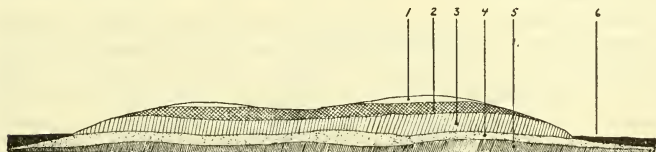


FIGURE 45.—Cross section of stratified sambaquí of Guarahy Mirim. 1, Rain-washed shells; 2, white sand mixed with ferns; 3, shells and sand; 4, sand mixed with bluish mud and ferns; 5, sand; 6, modern refuse. (Redrawn from Serrano, 1938.)

enormous mangrove swamp. It is 160 feet (48 m.) long, 60 feet (18 m.) wide, and 6 feet (2 m.) high. It has, according to Clerot, "five superimposed, clearly stratified layers with indisputable evidence of natural formation" (1928, p. 462). The first layer (1), 4 inches (10 cm.) thick, was formed by an accumulation of rain-washed shells. The second (2), 23 inches (60 cm.) thick, is of white sand mixed with ferns. The third (3), 10 inches (25 cm.) thick, a mixture of shells and sand, rests upon a fourth (4), 14 inches (45 cm.) thick, formed of sand mixed with bluish mud in which occur ferns. Beneath the fourth layer is a layer of sand 23 inches (60 cm.) thick (5), without mollusks.

The solid, or homogeneous, sambaquís are those without stratification, which some authors consider as proof of their artificial origin. Nevertheless, I must point out that the solid sambaquís generally consist of species which preferably live in regions around estuaries, a circumstance which is decidedly favorable to their formation by natural agencies.

ANTIQUITY OF THE SAMBAQUÍS

Elsewhere I have said that "the origin and antiquity of the sambaquís is purely a geological problem, and it is a waste of time to maintain that native artifacts found in them are of the same age, merely because of having been discovered there" (Serrano 1938 b, p. 50).

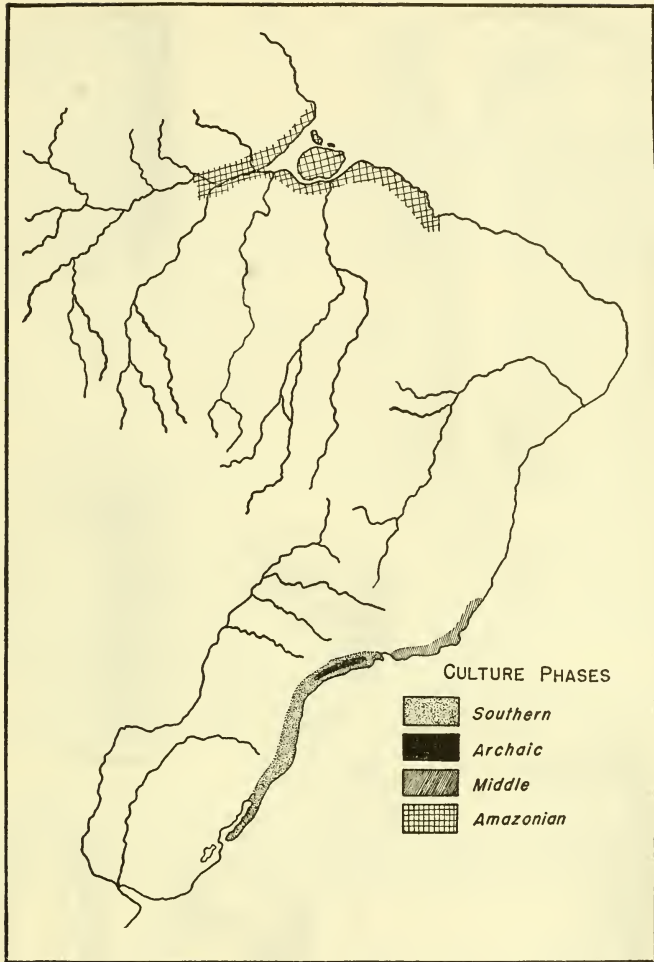
Littoral cordons, which in the great majority of cases resulted from the ebb and flow of tides in the Pleistocene Period, were broken, reshaped, and later covered with thick vegetation. Throngs of native tribes on approaching the sea in an age very close to our own found those places very desirable and settled on them. In 1895, Ihering, noting the presence of *Azara prisca* in some of the sambaquís, pointed out the convenience of dividing them into two series: the more ancient sambaquís with this species, which are the farthest from the sea; and the more modern without it. This fact was verified years later by Krone (1914) through his studies of the sambaquís of Iguapé (State of São Paulo).

It is interesting to note that both types of sambaquís have different cultural phases. Artifacts in the most ancient sambaquís, which are farthest from the sea, correspond to the primitive culture of Lagoa Santa, while the most modern are analogous to the classic archeological culture of the coastal region, with its carefully polished stone articles, to which I have given the name of "lithic culture of southern Brazil."

CULTURES AND RACE

The prevailing idea in the study of the sambaquís has been that of a cultural unity—a single sambaquís culture—that is distinctive and characteristic of these deposits. It is no longer possible to maintain this. The cultures which flourished along the coast on the sambaquís are mere littoral occurrences of other cultures of wide geographical distribution. The culture of the sambaquís of the southern States, for example, extends many thousands of kilometers toward the west in the States of Rio Grande do Sul and Santa Catalina and bears no relation to that of the sambaquís with *Azara prisca*, or to that of the Amazonian sambaquís.

These cultural manifestations may be grouped into four phases: the southern; the middle; that of the sambaquís with *Azara prisca*; and the Amazonian (map 6).



MAP 6.—Distribution of the four sambaquí culture phases.

The southern phase (the meridional) includes the sambaquís of Rio Grande do Sul, Santa Catarina, Paraná, and the southern part of São Paulo. It is characterized by the concave zoöliths (pl. 79, *a*) and well-shaped polished axes of well-defined types. In the southern region may be found circular sling shots and stones for bolas (pl. 80).

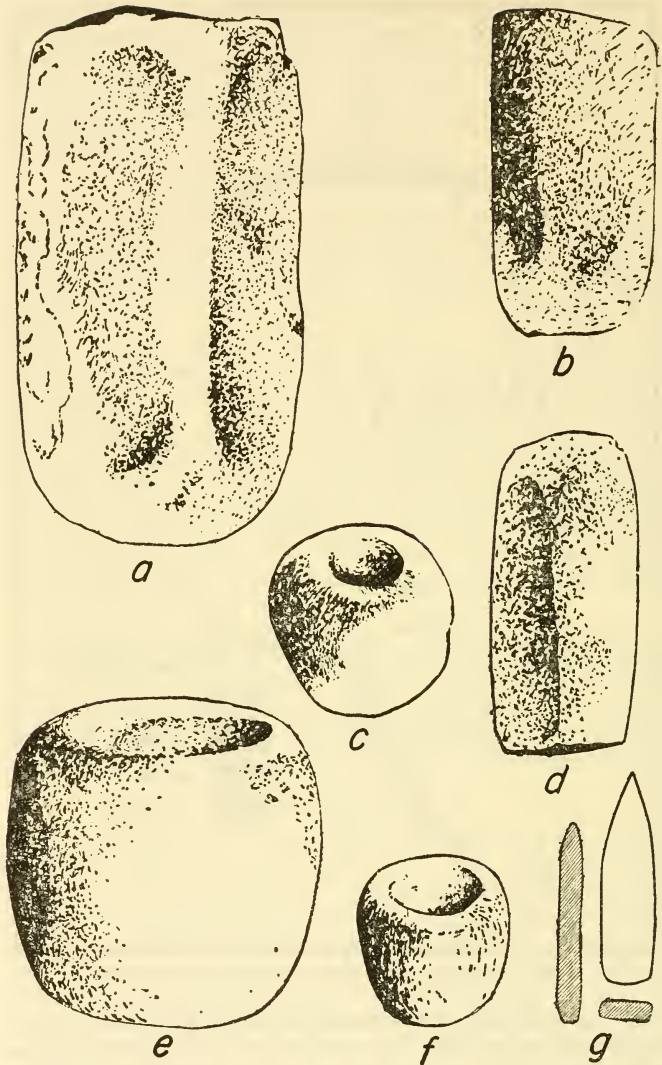


FIGURE 46.—Ground-stone artifacts from the sambaquís. *a, b, d*, Hachas tabulares, Torres site, Rio Grande do Sul, presumably meridional phase; *c, e, f*, mortars, Torres site, Rio Grande do Sul, presumably meridional phase ($\frac{1}{4}$ natural size); *g*, arrow point, meridional phase ($\frac{1}{2}$ natural size). (After Serrano, 1938, pls. 5, 6.)

There are also pieces of pottery, with thumb impressions, which show unquestioned *Guaraní* influence and which demonstrate that the *Guayaná*, inhabitants of these sambaquís, were acculturated by the invading *Guaraní*.

The archaic culture phase of the ancient sambaquís of São Paulo—those containing *Azara prisca*—belong to the culture of Lagoa Santa man. Stone artifacts are represented especially by axes, which are more or less triangular in form, or are oval and crudely fashioned by heavy blows (pl. 78, *d, e*); sometimes these are slightly polished (pl. 78, *a, b, c*). Chipped-stone knives and scrapers (pl. 78, *f, g, h*) and hammer stones complete the list of stone implements of this phase. There is no pottery.

The middle (*media*) phase corresponds to the sambaquís of the States of Rio de Janeiro and Espírito Santo. Stone articles consist of fine polished axes of diorite (pl. 79, *c, h*), which are similar to some types of the second cultural stage of the valley of the Rio das Velhas (Serrano, 1940 *f*). Of pottery there are only undecorated fragments.

In the Amazonian phase, the cultures are not homogeneous and are related to typical Amazonian cultures. Those of the sambaquís of southern Brazil correspond to the ancient *Tapuya*, tribes which occupied the coast before the invasion of the *Guaraní*. The migration of the *Guaraní* toward the Atlantic Ocean is relatively modern, although pre-European. On invading the coast, the *Guaraní* drove out the *Tapuya* and took their dwelling places or conquered them and influenced their way of life. This is why typical *Guaraní* cultural elements and skeletal remains appear in the sambaquís.

The paleo-American is the racial element that produced the culture of the southern sambaquís; this element is now divided by Imbelloni into *raza láquida* and *raza fueguida*.

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