

**THE ORIGINS OF THE BRAZILIAN SAMBAQUIS  
(SHELLMOUNDS): FROM A HISTORICAL PERSPECTIVE**

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# THE ORIGINS OF THE BRAZILIAN SAMBAQUIS (SHELLMOUNDS): FROM A HISTORICAL PERSPECTIVE

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**Resumo:** O tema da origem dos sambaquis é de interesse da pesquisa acadêmica desde o século XIX. As tentativas de elucidação da questão são muito variadas, possuindo implicações e desdobramentos tanto sob o ponto de vista da biologia humana, quanto sociocultural. As páginas que seguem buscam abordar todas estas implicações através de uma abordagem historiográfica, propondo uma discussão de caráter revisional e integradora, compondo uma hipótese explicativa.

**Palavras chaves:** Sambaquis, Origens possíveis, Povoamento costeiro, Revisão histórica.

**Abstract:** The theme of the origin of the sambaquis is an interesting one to academic research since the nineteenth century. Attempts to elucidate the question are diverse, and present implications and developments from both human biology and sociocultural perspectives. The pages that follow seek to address all these implications through a historiographical approach, proposing a discussion of revisional and integrating character, composing an explanatory hypothesis.

**Keywords:** Sambaquis (shellmounds), Possible origins, Coastal settlement, Historical review.

## INTRODUCTION

Sambaquis are the first archaeological sites considered as such in Brazilian historiography, considering that, since the 16th e 17th century they were identified as remnants of various indigenous activities, such as fishing stations or mollusks collection, burial and rituals (*cf.* CARDIM, 1939[1584]; MADRE DEUS, 1920[1797]). However, the researches in institutional level began only two centuries later.

The revival of interest for sambaquis can be attested in Rath's (1856) initiatives<sup>2</sup> that when studying the formation of the current coast of São Paulo State mentions the presence of sambaquis in the area, attributing antediluvians dates to it. Decades later, the question of the origin of the sambaquis is central to the archaeological studies, now at the institutional level. This era became known (e.g. Souza, 1991) as the period of Brazilian archeology patronage, having D. Pedro II as the main supporter. His self-interest led him to witness the exhumation of burials in the sambaquis of Sant'ana River, in São Vicente.

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<sup>2</sup> The study was conducted at Rath's own expenses in 1845. He was an engineer by profession and he was stimulated by personal interest. Years later, Orville Derby undertakes a similar work, producing the outstanding synthesis by Krone (1914) on the sambaquis of the lower valley of the Ribeira de Iguape river.

That period is marked by the rise of an intense debate about the origins of the sambaquis. Opinions were divided into three streams of thought, as follows: 1) naturalist, represented mainly by Hermann von Ihering, who advocated the natural origin of sambaquis as a result of sea fluctuations and epirogenic movements dating back to the Tertiary, 2) artificialist, mainly represented by Ladislau Netto, that considered the sambaquis as a result of prehistoric human activities, and 3) mixed, stream of conciliatory character that became hegemonic from the early decades of the 20th century and consider the existence of large original shellmounds and the presence of archaeological sites formed by artificial accumulations, which could occur overlapping the first (COSTA, 1934; LEONARDOS, 1938; SOUZA, 1991; LIMA, 1999-2000)<sup>3</sup>.

In the years around the turn of the century the issue mobilized the public opinion, with developments even outside research institutions<sup>4</sup>. In the same period, the participation of experts with different backgrounds such as medicine and geology were multiplied. On the one hand, the approaches used supported the hypotheses raised, but on the other hand, they introduce new theories, leading to the segmentation of the issue, systematized in the following pages as "racial" e sociocultural implications. Since then, the theme has appeared in the archeology of sambaquis, polarizing opinions, the sites being understood sometimes as the result of populations originating from the coast, or as the result of groups from the country inlands that, from a given time, began to explore the productivity of coastal environments.

### RACIAL IMPLICATIONS

In the nineteenth century the participation of medical professionals directed approaches to craniometric studies, from which the origins of the coastal settlements was sought through the identification of the "race" responsible for the formation of sambaquis. As a result the opposition between the "race of Lagoa Santa", inhabitant of the interior highlands and the "race of the sambaquis," inhabitant of the coast was created<sup>5</sup> (LACERDA and PEIXOTO, 1976; LACERDA, 1885).

Lacerda and Peixoto (1876) established the relationship between Botocudos skulls and the skulls found by Lund in Lagoa Santa. The high dolichocephaly observed in the skulls series lead them to propose a link between the "race of Lagoa Santa," the Patagonian and Eskimos, characterizing them as an original race (and indigenous) in America. Lacerda (1885) is responsible for coining the term "man of the sambaquis." The expression is clearly an idea that supports the existence of a racial unity in the Brazilian coast. He

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<sup>3</sup> The questions concerning to the geological implications of the origins of the sambaquis are present in detail in Wagner (2012, in press).

<sup>4</sup> Koseritz contributed to the issue founding and managing journals in Pelotas and Porto Alegre such as "O Noticiador" (1852-1856), "Gazeta de Porto Alegre" (1875-1888), "Jornal do Comércio" (1868) and "Neue Deutsch Zeitung "(1864-1940) (see Koseritz, 1884). Ihering (1895) refers to the publications in the newspaper in São Paulo in 1889. In fact, individuals connected to the arts ended up stating an opinion on the subject, such as the painter Benedicto Calixto (1904).

<sup>5</sup> Initial synthesis of the issue can be found in Costa (1934), Mattos (1941) and Empepaire; Laming (1956) and, for a recent review, see Okumura (2008).

characterized it as an invading race that was distributed along the coast, and at a certain point, disappeared. However, he establishes biological relationships between Botocudos from central Brazil and the man of the sambaquis. Thus, the coast occupation is connected to the ancient inland settlement, attributing a "paleo-American" origin to the "man of the sambaquis". Years later Ihering (1904) suggests the existence of two types of people associated with the south and southeast sambaquis, with one associated to the Botocudo type and the other related to the type known then as Tupi, but not exactly the same as the latter.

Imbelloni (1936), (see SAUER, 1944; WILLEY, 1966), proposes racial unity to the shell mounds sites in South America, with their living descendants of the Botocudo type in the interior of Brazil, uniting them under the fuegoid type and laquid type. Years later, from the point of view of a cultural adaptation to the coastal environment, Emperaire; Laming (1958) suggest that the shell mounds sites would constitute a "fringe" of settlement along the entire coast of the South American Continent. In southern Brazil, Mello-Alvim (1978) reinforced this hypothesis advocating biological proximity between the occupants of the sambaquis and the shell mounds of Patagonia, Argentina and southern Chile. Since the decades of 1980-1990 Rivera; Rothhammer (1990) propose a close relationship between the southern coast of Brazil and northern Chile shell mounds builders when comparing the former occupants of the *Camarones 14* to the fisher-gatherers of the Morro 1 de Cabeçada.

Two decades later Neves (1988) criticizes the alleged biological uniformity suggested to the shell mounds sites along the Brazilian coast and highlights the need for proper segregation between sambaquis specifically, pre-ceramic shell mounds settlements and ceramic shell mounds settlements. It demonstrates the biological diversity associated with the formation of these different types of sites, but stands in favor of the genetic homogeneity among the builders of sambaquis, noting a movement in population from north to south along the coast, with the introduction of different genetic material in three stages: 1) hunter-gatherer occupation in the central coast of Santa Catarina, 2) ceramist occupation in Itararé in northern Santa Catarina, and 3) Tupiguarani occupation in the same region.

However, it is only in Neves; Okumura (2005) that the hypothesis of an inland origin to sambaquis groups is assumed, settling it in the Ribeira River valley, south of São Paulo. Based on skeletal analysis they show a biological link between the sets from the fluvial sambaquis, the series from south-central coast of São Paulo as well as from the Paraná coast, placing the key to the origin of fluvial sambaquis in the Moraes site<sup>6</sup>.

Okumura (2008) undertook extensive research of cranial morphology in samples from coastal and inland populations in South and Southeast regions of Brazil. When comparing the populations of the interior to the populations of the coast, the results suggested the independent development of both areas. We

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<sup>6</sup> It is noteworthy that Neves (1988) detected the existence of a "pocket" of genetic material between northern Santa Catarina and northern Paraná and Neves; Okumura (2005) relate the fluvial sambaquis to the sambaquis in south-central São Paulo and Paraná, it expresses the suggestion that the Ribeira Valley represents the original location of the dispersion of sambaquis, at least in the Middle Holocene. It should be noted, however, the existence of higher dates than the sixth millennium in the coast, but the respective chronological regional contexts restrict them.

highlight here the presence of samples from two inland sites: Cerrito Dalpiaz, settlement that defined the Umbu Tradition with chronology between  $5950 \pm 190$  BP and  $4280 \pm 180$  BP and Capelinha 1 with burial dates in  $8860 \pm 60$  BP. Masi (2001, p. 113) in a study focused on the central region of Santa Catarina had already shown in detail, through analysis of collagen in individuals from the coast, a clear distinction between the dietary patterns of gatherer coastal fishermen and inland hunter-gatherers, "... who did not migrate to the coast as it was traditionally thought". And Filippini; Eggers (2005-2006) quoted the biological distance between shell mound coastal builders and the shell mound inland builders from sites of São Paulo State.

### SOCIOCULTURAL IMPLICATIONS

What is discussed here under the title sociocultural implications refers to attempts to clarify the origins of the sambaquis starting exclusively from the material culture contained in sites, the settlement patterns and use of space, the stratigraphic composition and regional established chronologies.

In a letter addressed to Wiener (1876), Netto (1976, p. 2) is the first to formulate the hypothesis that sambaquis groups builders have originated from the inland populations of the continent. "[...] It seems to have been these deposits accumulated during the winter of each year by the tribes of the interior [...] ". Years later, Netto (1885) located the origin of the sambaquis in the valley of the Rio Paraná, Paraguay, from where migratory waves would have migrated to the valleys of the Amazon and Prata, making a semicircle in eastern South America, reaching the coast. Despite the imaginary nature, the hypothesis predicts the involvement of various indigenous cultures in the construction of the sambaquis (Aymara, Quechua, and other originating from Goiás and Mato Grosso).

Hartt (1885) suggests a Peruvian origin for the Marajó coastal occupations and coast of Salgado and Ihering (1904) linked the Amazon sambaquis to the "developed cultures of the Andes" located between northern Argentina and Mexico. Likewise, he excludes Sambaqui of Porto Santo described by Rathbun (1878) in Itaparica, Bahia, and other sites of the Northeast from the "sambaquiiana province", located strictly between São Paulo and Rio Grande do Sul.

Serrano (1937)<sup>7</sup> emphasizes the cultural differences at the regional level, in proposing the division of the Brazilian coast in two cultural *facies*: southern marked by the presence of zoolithes and northern where zoolithes were nonexistent. In the following decade, he explains the issue and extends the classification grouping the Brazilian sites in four categories: 1 - archaic, formed by *Azara prisca*, the oldest, circumscribed to São Paulo and originating from the "culture of Lagoa Santa," 2 - southern, including the sites of Rio Grande do Sul, Santa Catarina, Paraná and south of São Paulo, containing zoólitos from Guayaná and subsequently occupied and/or acculturated by the Guarani, 3 - middle stage, limited to the states of Rio de

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<sup>7</sup> Actually, the hypothesis of Serrano (1937, 1946) owe much to the ideas of Ihering (1895, 1904).

Janeiro and Espírito Santo, and 4 - amazon (Serrano, 1946). Except for the Amazon, he considers all sambaquis in southern Brazil belonging to *laguid e fueguid* racial types, according to the classification by Imbelloni (1936), connecting them, thus, to *conchales* from Tierra del Fuego and the southern archipelago of Chile.

Between the publications of Serrano (1937, 1946), Leonardos (1938) performs a synthesis that covers the entire coast of the country and incorporates all the shell mounds sites from the Amazon coast to Rio Grande do Sul, in the sambaquis category.

In the years before the establishment of the National Archaeological Research Program (PRONAPA)<sup>8</sup>, the studies have been intensified in the South and Southeast, highlighting the work of Bigarella (1950-1951); Emperaire, Laming (1956), Hurt, Blasi (1960), Tiburtius, Bigarella (1960), Rohr (1962), Rauth (1962), Salles-Cunha (1963), to name just a few examples, all sites being brought together under the term sambaqui. In the North, Hilbert (1959) excavated the Sambaqui of Ponta do Jauarí and in the Northeast Calderón (1964) excavated the Sambaqui da Pedra Oca, demonstrating the wide and free usage of the term.

With the arrival of the National Program for Archaeological Research (PRONAPA) and the diversification of sites dated by C<sup>14</sup>, it became possible to suggest the original region of the sambaquis on the Brazilian coast. With the incorporation of Rauth to the Program, the research about the sambaquis continued, keeping methodologically marginal in view of the existence of an already structured research orientation, and the sites of Bahia and other states of South and Southeast remained united under the same category.

Since then the archaeological culture of the sambaquis itself has been present in the national syntheses as a phenomenon confined to the south and southeast, following an established tradition of research in the 1950s (EMPERAIRE and LAMING, 1956; SCHMITZ, 1984, 1998; NEVES, 1988; PROUS, 1992; LIMA, 1999-2000; MASI, 2001; TENÓRIO, 2003, 2004; OKUMURA, 2008; WAGNER *et al.*, 2011). Only Simões (1981), Roosevelt (1991), Perota and Botelho (1993) insisted on researching sites in northern Brazil<sup>9</sup>, and the presence of ceramic associated to remote chronologies led to the distinction between the north and south sites of the country, and the boundary was set in the *Todos os Santos* bay, Bahia State.

Uchôa (2007 [1973], p. 21) stated that it was impossible at that stage of the research, to specify the moment of arrival of the sambaquis builders on the coast, however, "[...] About 6.000 years ago, these people began to move across the Atlantic coast [...]". A group of researchers recently considered that there is a cultural unity implied to all coastal sites, whether it is regarding the variability of their size, composition of the layers, archaeological structures, material culture or functionality of the site (DEBLASIS *et al.*, 1998;

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<sup>8</sup> Research program of national character funded by the Brazilian National Research Council (CNPq) and the Smithsonian Institution with the participation of 12 Brazilian archaeologists under the general coordination of Betty Meggers and Clifford Evans.

<sup>9</sup> Researches in North and Northeast regions of the Country are developed in the current work of Silva-Santana (2000), Martinelli (2007) and Bandeira (2006).

GASPAR *et al.*, 2008). Gaspar (1991, 1996) already argued for the existence of a sociocultural pan-Brazilian unity: "[...] It regards the vestige of a sociocultural system whose remarkable feature is to associate, in the same space, the location for living<sup>10</sup>, burying the dead and disposing of assets and food leftovers." (GASPAR, 1996, p. 82).

Lima (1991, 1999-2000) suggests that the origin of the sambaquis would be related to different archaeological cultures or to different socio-cultural systems from the countryside, asserting that "[...] these piles must be analyzed from the perspective of diversity [...]" (Lima, 1999-2000, p. 314). In that same study she presents a comprehensive chronological framework and clearly limits the archaeological culture of the sambaquis to the south and southeast regions.

It is noteworthy that Tenório (2003, 2004) has a conciliatory proposal between the hypotheses proposed by Lima (1991, 1999-2000) and Gaspar (1991, 1996). Tenório (2004) argues that an ancient culture of fisher-gatherer already adapted to coastal zone already existed alongshore maybe since the beginning of Holocene. So she suggests that a variety of archaeological cultures, probably originating from the Continent inland, would be associated with the construction of the sites and that the absence of the typically inland evidence in the sambaquis would be the result of the rapid incorporation of new migrants to a pre-existing culture on the coast.

## DISCUSSION AND FINAL REMARKS

Combining the hypotheses suggested for the settlement of fisher-gatherers in Brazilian sambaquis in the last two centuries, there are, somewhat surprisingly, only two trends, although each one has its own implications and internal developments: 1) the populations who built the sambaquis came from the interior of the continent, or 2) they originated from the coast.

The first hypothesis appears as hegemonic in the archeology of sambaquis since the nineteenth century. However, it requires the resolution of a pending issue. Is there a specific spot in the interior of Brazil from where the people who originated the coastal sambaquis would have migrated, or the development of archaeological culture of the sambaquis would have occurred in parallel through different axes inland-coast? The second hypothesis involves the consideration of the origin of the coastal culture. Would it be indigenous or a result of expansion of a coastal culture by the Atlantic route?

Based on the expressive available literature and the synthesis already systematized in Serrano (1946), Emperaire and Laming (1956), Schmitz (1984, 1998), Neves (1988), Prous (1992), DeBlasis *et al.* (1998), Lima (1999-2000), Tenório (2003), Gaspar *et al.* (2008) and Wagner *et al.* (2011), it seems

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<sup>10</sup> It should be noted, however, that Gaspar *et al.* (2008, p. 320) redirected part of this particular issue, stating "[...] It is clear that the sambaquis do not represent ordinary occupations, but instead, they are specialized elements of systems of settlements of which very little is known about other types of sites.[...]"

indisputable that there are regional specificities in both the material culture associated to sambaquis and in the biology of human populations buried in them.

Schmitz (1984) situates the first region of dispersion of this archaeological culture between the northern Paraná and southern São Paulo which would have originated from the hunter-gatherers inland (Humaitá Tradition). Neves (1988) points out the valleys of the Ribeira River, São Paulo, and Itajaí, Santa Catarina, as probable original access routes to the coast. Lima (1999-2000) reiterates the proposal and adds Jacuí valley of Rio Grande do Sul. Tenório (2004) suggests three ways: 1) the north of Rio de Janeiro, 2) São Paulo, and 3) the south, coming from Uruguay. Simões (1981) incorporates the ceramic sambaquis of the North and Northeast (Tradition Mina) to the Caribbean ceramic complex. In Rio Grande do Sul, Miller (1969, p. 102) stated that the lithic industries of the sambaquis "fit almost entirely in the collection of Cerrito Dalpiaz, however, the collection of the latter, much more complex, fits only partially in the first [...]".

It seems likely, at the current stage of research, to assume the cultural diversity associated with the construction of coastal sambaquis. The most likely is that the origins have occurred in parallel through various axes inland-coast. It is noteworthy that the practice of intensive exploitation and accumulation of mollusks began in the highlands of the countryside<sup>11</sup>, as shown by the occupation of Capelinha 1 dated of 9250 ± 50 BP. (FIGUTI *et al.*, 2004).

After settling on the south and southeastern coast of Brazil, the sambaquis builders probably established a series of interactions with one another, along the coast, giving relative uniformity to the material culture identified in the sites. Furthermore, they continued to receive cultural influences and genetic material from both hunter-gatherer populations and the ceramists populations of the countryside. It is perfectly possible to have even been influenced by different groups in the Prata region and in the Amazonian coastline. It should be noted that the shellmounds of North and Northeast regions of the Country correspond to other archaeological culture and should be considered apart from the settlement of the sambaquis of southern shores of Brazil.

Despite several attempts to resolve the issues highlighted above, there is not, at the current stage of research, a consensus to define a more probable link for the archaeological culture of sambaquis. There seems to be in some respects, overlapping marks of occupations in the "fringe" of coastal settlements, such as the Itaipu Tradition, in Rio de Janeiro, with inland origins, the central portion of Santa Catarina (cf. already mentioned in NEVES, 1988) and part of the coast of Rio Grande do Sul. However, the elucidation of these questions depends on an intense research effort and many excavations need to be made so that we can understand its implications in the origin of sambaquis in southern Brazil.

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<sup>11</sup> This hypothesis was already supported by Hurt (1983-1984) and Lynch (1998).



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