Coastal landscapes and shell mounds: archaeological investigations in Southeastern-Southern Brazil

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Abstract

Brazilian shell mounds (sambaquis) represent deposits of many sizes and shapes distributed along the coast, concentrated at intersections of different types of ecosystems ranging from 8000 to 500 BP. They contain thousands of cubic meters of shells, sediments with animal remains, cultural remains (lithic, flaked and polished, bone, teeth and shell artefacts), hearths, burials, postholes and habitation structures. Huge shell mounds, acting as landmarks, occur near smaller ones, other types of coastal sites and even sites with deposits containing small amounts of shells and black earth, displaying a very complex settlement pattern. Archaeological researches indicate long-term populations, specialized in exploitation of sea resources (fish and shellfish), using shells as a constructive material to build sambaquis with different sizes, deposits, geographical distribution and site functions. This paper presents and discusses ongoing projects along the coast of São Paulo and Paraná states (southeastern and southern Brazil) showing the distribution and variability of hundreds of shell mounds and their settlement patterns applying a GIS analysis. This paper also presents two case studies, focusing on site formation processes and geoarchaeological investigations in very different types of shell mounds as examples of the great diversity of their dimensions, content and functions: Mar Virado and Rio Claro. Mar Virado is a funerary site located at an island on the north coast of São Paulo State, on a fluvio-marine terrace presenting lithic artefacts, ranging from flakes to polished stone axes, bone and shell artefacts, faunal remains, hearths and burials. Radiocarbon dates place human occupation at this site between 3.465 ± 31 BP and 2.570 ± 70 BP. Rio Claro site is a huge shell mound, 20m high, located on a Pleistocene / Holocene alluvial fan associated to Cubatão river, in Guaratuba bay, Paraná State. This site is situated about 5 km from the estuary and 20 km from the current coastline and its interiorization is related to eustatic and geomorphic dynamics from at least 7000 years BP. A geoarchaeological investigation is carried out using sedimentary indicators, geochronological data and GPR to map old channels and the alluvial fan to understand the chronology and compare with the occupation of the shell mound and its substrate.

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The constitution of the alluvial fan can be explained by the effects of climatic changes on hydrographic and sediment dynamics on the Guaratuba bay and that may have influenced strategies of resilience or abandonment of the site.

**Keywords:** shell mounds, coastal landscape, sambaquis, Brazil, geoarchaeology