

SANTÍSSIMO SACRAMENTO, 1668

Rodrigo Torres and Maria João Santos

Country: Brazil

Place: In front of Vermelho River, Brazil (two miles away from the coast).

Coordinates: 13°2'33.586"S / 38°29'56.906"W (WGS84)

Type: Galleon

Identified: *Santíssimo Sacramento*

Dated: Built: c. 1650 (Esparteiro 1976). Sank: 5/5/1668 (Neto 1979: 214). Relative dating from coins, cannons and pottery, together with archival research (Neto 1979).

Beam: Estimated 15 m (based on 1979 site plan)

Length Overall: Estimated 60 m; gundeck: 50 m (based on 1979 site plan)

Number of Masts: Unknown, possibly three plus bowsprit.

History of the shipwreck

In the year 1668, the *Sacramento* left the Tagus River as the flagship of the convoy fleet under the command of the General Francisco Correa da Silva, escorting more than 50 merchantmen to the Portuguese colony in South America. On board there were some 1000 people, of which 800 were military personnel, many from distinguished families, and almost 200 passengers, including clergy, friars of the Franciscan Order and Ministers of Justice, so to be referred by a contemporary source as a 'Portable Republic' (Pitta, 1730: 376-380).

Attempting to enter the Baía de Todos os Santos entrance at dusk on May, 5 1668, during stormy southern winds, the ship collided with the crest of Santo António Bank. Due to the storm, no vessel could leave the port to assist the sinking ship, which was then firing its guns to signal the imminent danger. There were only 70 survivors.

The *Santíssimo Sacramento* (c. 500 tons) was built between 1650 and 1651 for the Companhia Geral do Comércio do Brasil at the city of Oporto, northern Portugal, probably designed from the plans by Francisco Bento (Neto, 1979: 215).

The site was found in 1973 by sport divers following a fisherman's lead to the 'capitania' fishing ground off Rio Vermelho, state of Bahia, northeast Brazil (Figure 1). After some looting by local treasure hunters, the site was officially salvaged by Brazilian Navy divers from 1976 to 1979, directed by a non-diving archaeologist, Mr. Ulysses Pernambucano de Mello. Planimetric and photographic surveys were undertaken, and a 3x3 grid was laid down

before artifacts were extracted (Figure 2).

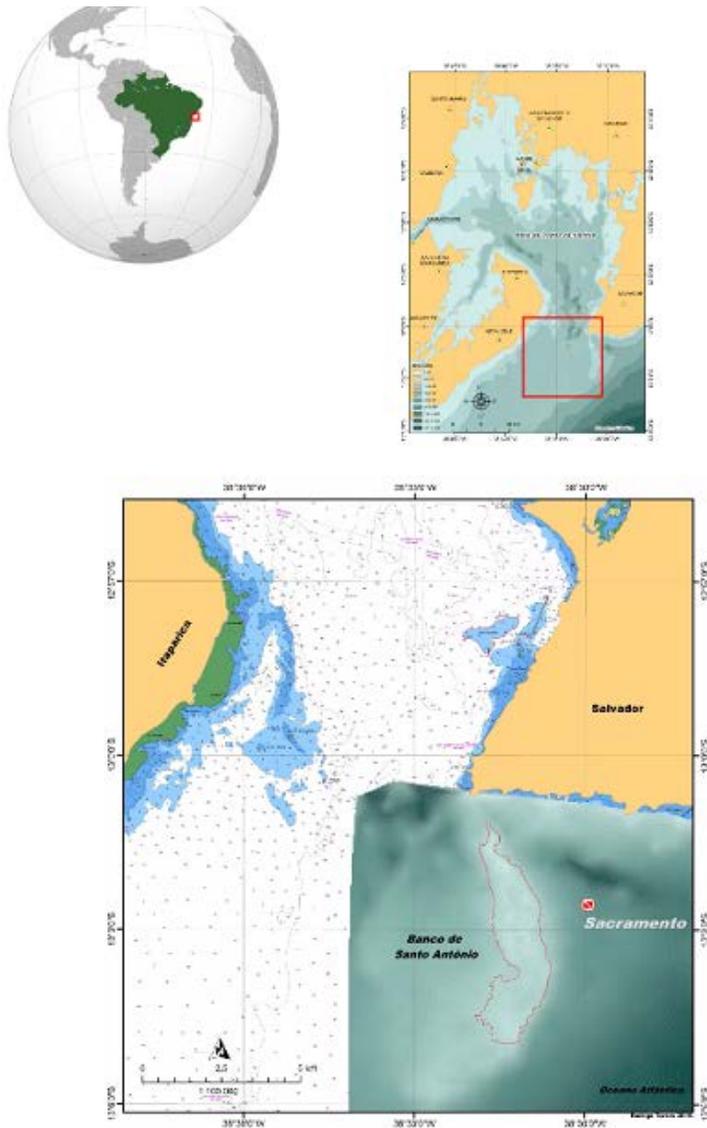


Figure 1. Site location.

Some important publications resulted from this intervention, as well as from the collaboration with experts, but no comprehensive catalogues or descriptive material regarding the excavation have ever been made available (Neto 1977, 1978, 1979; Guedes 1981; Guilmartin 1981, 1982, 1983, 2005; Brown 2005). After that, salvage licenses were still issued by Navy authorities for private exploration companies, which caused great disturbance without proper recording techniques or publications of the findings. Ammunition, artillery, objects of domestic use, navigation instruments, coins, merchant seals, lead crucifixes, decorative objects and textiles for the civil, religious and military urban

and rural communities of the growing Portuguese colony were among the artifacts recovered. Part of the collection is now in exhibition at the Museu Náutico da Bahia in Salvador, Brazil, including a few hull members, olive jars, and faience pieces, among other artifacts (Museu Náutico da Bahia 2000).

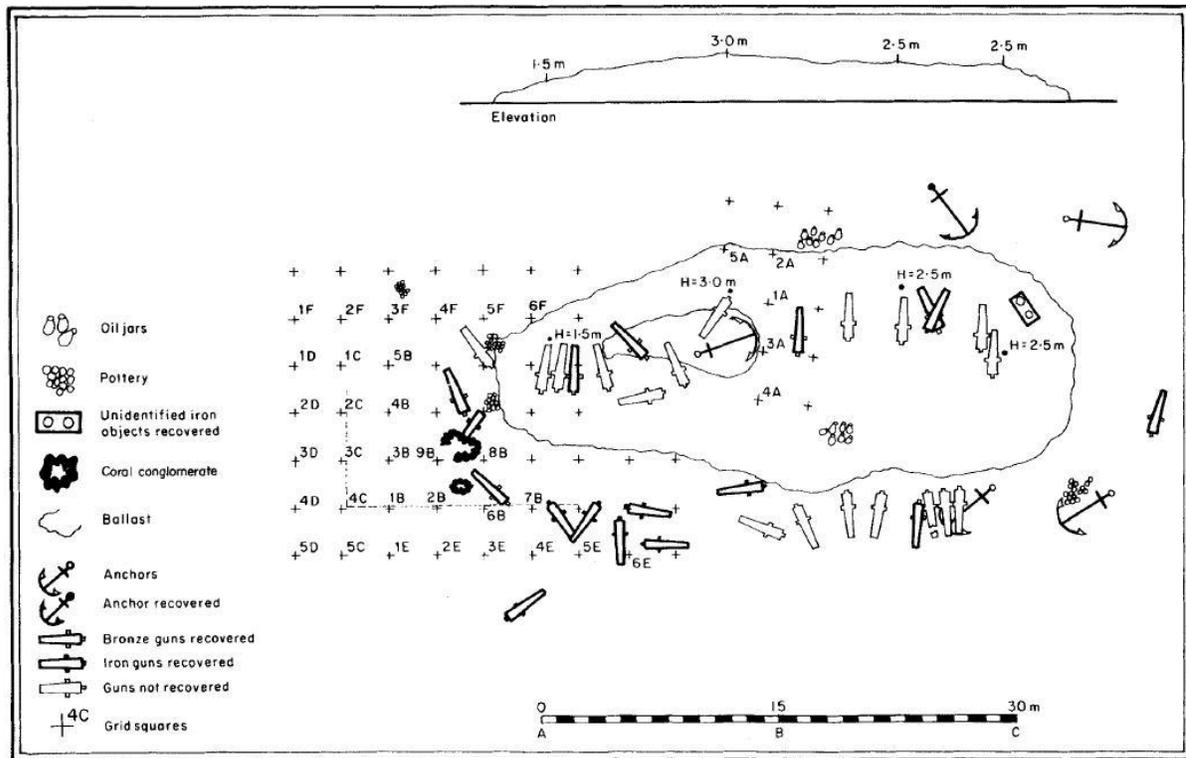


Figure 2: Site Plan produced in 1979 during Brazilian Navy salvage operations (Neto 1979: 213).

Description of the site

The shipwreck lies on a gravel bottom at 31-33 m depth, consisting of scattered ballast mounds and concretions surrounded by remaining iron cannons and anchors.

Cargo

Hundreds of brass sewing thimbles were found in packets grouped in four sizes. Also scattered around the stern were quantities of green glass bottles with square base, short neck and pewter caps.

Lead images of Christ detached from the crucifixes were found in large quantities as well. Thousands lead bullets for muskets and harquebuses. Tens of pottery Iberian olive jars were brought up which contained these lead shots.

Textiles seem to have been part of the cargo, since lead Portuguese and English seals associated with textile trade were collected in quantity (Hume 1974 *apud* Neto, 1979: 221). Horn and copper rings were also collected.

Abundant pottery was found, but since provenience and/or stratigraphy haven't been carefully recorded, it is unclear whether they were part of the cargo or for shipboard use. The material consisted of coarse earthenware, Portuguese faience, two specimens of Chinese porcelain, pewter and lead plates. The ceramics included plates, large and small jars and a few bowls.

Other finds

About 50 silver coins were recovered; most of them were Portuguese from the reign of Don João IV, but some were Spanish, of the reign of Philip IV.

An important collection of navigation instruments was found, including four brass compasses, two graduated rulers and two sounding lead weights. Two astrolabes have been declared (Neto 1979; Guedes 1981), but at least one more astrolabe is known to have been recovered from from the *Sacramento*, but it was given to the fishermen who discovered the site.

Ballast

The ballast consisted of blocks of granite whose weight varied from some grams to 50 kilos (Neto 1979).

Anchors

Five anchors were found during Navy operations. Four at where it is supposedly the bow, 2 on each side, of the ballast pile, and a fifth anchor amidships, by the base of the mainmast. One anchor was recovered, and the remaining four are still at the site according to inspections carried out on Sept, 6 2015.

Guns

26 bronze guns were recovered, being 7 seized from treasure hunters and 19 recovered during Navy operations, plus eight cast iron pieces removed by Navy divers, totaling 34 guns removed from the site. Guilmartin (2005: 21-22) mentions eight iron pieces, but the Navy's site plan indicates nine.

Considering that according to the Navy's site plan 18 cannons were left at the site, we may conclude the *Sacramento* was armed with 52 or 53 guns at the time of sinking. Guilmartin (2005: 30) suggests that *Sacramento* carried 22 guns on her lower deck, all 24-pounders or larger, and 18 guns on her middle deck, eight of which were 20-pounders and ten 11-pounders.

Of the 26 bronze guns, two are very small Dutch made 4 $\frac{1}{2}$ -pounders, 12 are 20-pounders or larger and 10 are 12-pounders or smaller. Six of them are rare 16th century pieces. See Guilmartin (2005) and Brown (2005) for a contrasting discussion on their origins and historical significance. Guilmartin (2005: 31) also suggests the *Sacramento* was carrying two bronze 14-pounders as chasers at the stern.

Of the eight iron guns recovered, according to Guilmartin (2005), four were 20-pounders or larger and four were 12-pounders or smaller.

Iron concretions

Not identified.

Hull remains

Based on inspections carried out recently (Sept, 2015), an unknown amount of hull timbers are still preserved under the sediment (Torres 2015 pers. comm.). Based on Mello Neto (1979) publication, we know that some frame timbers and planks were recovered, together with fragments of a gun carriage, which are today exposed on a diorama exhibition at the Museu Náutico da Bahia. Plans are being made to record these fragments. During the time of Navy salvage operations, part of the keel was identified, including the main mast step, and also a considerable portion of the ship's lower hull up to the first deck beams on the starboard side (Neto 1979: 216; Mr. Rocha de Oliveira pers. comm.).

Bibliography

Brown, Ruth Rhynas, 2005, "Seis Canhões do Século XVI provenientes do *Santíssimo Sacramento*: uma reestimativa." *Revista Naviagator*, 2. Marinha do Brasil: Rio de Janeiro.

Guedes, M., 1981, "A study of some nautical instruments (including two astrolabes) recovered from the *Sacramento* shipwreck (1668) at Bahia" in Howse, ed., *Five hundred years of Nautical Science 1400-1900*. Greenwich: National Maritime Museum

Guilmartin, J., 1981, "Os canhões do Santíssimo Sacramento." *Revista Navigator*. Marinha do Brasil: Rio de Janeiro, n° 17.

Guilmartin, J., 1982, "The Cannon of the Batavia and the Sacramento: early modern cannon founding reconsidered," *The International Journal of Nautical Archaeology and Underwater Exploration*, 11.2: 133-144.

Guilmartin, J., 1983, "The Guns of the *Santíssimo Sacramento*," *Technology and Culture*, 24: 559-601.

Guilmartin, J., 2005, "Exploiting the guns of the *Santíssimo Sacramento*: an analysis of early modern," in Guilmartin, ed., *Materializing the Military*. London: Bernard Finn and Bart Hacker.

Neto, U., 1977, "O Galeão *Sacramento* (1668): Um naufrágio no século XVII e os resultados

de uma pesquisa de arqueologia submarina na Bahia/Brasil.” *Revista Navigator*, 13. Marinha do Brasil: Rio de Janeiro.

Neto, U., 1978, “O Naufrágio do Galeão Português *Sacramento* – 1668,” *Revista do Instituto Geográfico e Histórico da Bahia*, Rio de Janeiro, 87.

Neto, U., 1979, “The Shipwreck of the galleon *Sacramento* - 1668 off Brazil,” *International Journal of Nautical Archaeology and Underwater Exploration* 8.3: 211-223.

Museu Náutico da Bahia, 2000. *Arqueologia Subaquática do Galeão Santíssimo Sacramento*. Salvador, Bahia: Museu Náutico da Bahia.

Pitta, S. da Rocha. *História da America Portuguesa*. Academia Real: Lisbon, 1730.

Torres, R., 2016, “Projeto Observabaía: Património Cultural Subaquático da Baía de Todos os Santos, Brasil,” in *Revista Navigator*, 24.12. Marinha do Brasil: Rio de Janeiro.