

The Pepper Wreck: Nossa Senhora dos Mártires, Lisbon, Portugal

FILIPE CASTRO

Those on shore, awaiting the return of their loved ones, must have watched in horror at what they saw unfolding in the fury of the storm blowing from the south. The day before, although within sight of Lisbon, Captain Manuel Barreto Rolim had not risked sailing into the Tagus River, but had dropped anchor at Cascais Bay, 33 km (20 miles) to the north. Now, on 14 September 1606, he was willing to try the narrow entry. He almost made it through. But the wind must have fallen for a moment, allowing his ship to be dragged by violent tidal currents running in the channel. And there, at the entrance of the Tagus River mouth, in full view of wives and children, the Portuguese Indiaman *Nossa Senhora dos Mártires*, returning from India, struck a submerged rock and sank.

Witnesses said that within two hours there was such an enormous amount of debris floating around the shipwreck site that it looked more like the loss of an entire fleet than of a single ship. In the fierce storm many did not make it to land, in spite of the scarce 200 m (660 ft) that separated the sinking hull from the fortress of São Julião da Barra. On that very day more than 50 bodies washed ashore on the nearby beaches, and the body count rose to over 200 in the days that followed.



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Pepper Wreck Factfile

Sunk 14 September 1606
Place Tagus River mouth, Portugal
Archaeological site area 2,500 sq. m
Hull remains area 7 x 12 m
Ship size (reconstructed) 1,200 tons displacement
Length (reconstructed) about 40 m
Crew and passengers 600 estimated
Casualties over 200



The enormous amount of peppercorns stored in the holds of the *Nossa Senhora dos Mártires* floated to the surface, forming a black tide that drifted up and down the river for many days after the shipwreck. In spite of the dreadful weather the population made it to sea in small boats to salvage as much pepper as they could, and to recover all the boxes, bales and barrels that washed ashore, as the soldiers patrolling the beaches were unable to stop them.

Arrangements were made in the fortress of São Julião da Barra to accommodate all the peppercorns that were recovered by the king's officers; the pepper was put out to dry, to be sold afterwards, although at a reduced price. The arduous bureaucratic process of identifying bodies and merchandise began immediately.

A Portuguese Indiamen

Indiamen were enormous by early 17th-century standards. Measuring more than 40 m (132 ft) from bow to stern, they sailed annually from Lisbon to Goa or Cochin, on the Indian subcontinent, and returned with heavy loads of rich merchandise from Asia: peppercorns, ginger, and white cotton cloth from India; cinnamon from Ceylon; clove, nutmeg and mace from the Moluccas in today's Indonesia; as well as many exotic goods such as precious woods, drugs, gold, diamonds, jewels, exotic animals, and pearls from the Red Sea; furniture, silks, many types of pottery, and stoneware jars from Pegu, in today's Burma; and highly prized Chinese porcelain.

Manned by crews of over 150 sailors and officers, these *naus da India*, as they were called, transported hundreds of soldiers and passengers, sometimes carrying as many as 800 people. It was said that, in spite of the small space, weeks went by after leaving port before first-day acquaintances encountered one another on the crowded decks.

When all went well, these trips lasted six months each way, but the *Nossa Senhora dos Mártires* arrived in Lisbon nine months after leaving Cochin, India, after a stop

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over in the Azores. Aires de Saldanha, a former Portuguese viceroy in India returning home on this ship, died during the voyage and the *Nossa Senhora dos Mártires* put up in the Azores to bury him.

We do not know more about the shipwreck or, for that matter, much about these ships and most of their voyages. In 1755 Lisbon was destroyed by an earthquake and its archives and libraries burned for weeks afterwards. A detailed account of this shipwreck was mentioned in an 18th century inventory of books and documents of Portuguese libraries, but it must have been lost before the second half of the 19th century, since it was not mentioned in a later inventory of Portuguese literature dating from 1860.

A handful of names associated with the voyage survived in Portuguese and Spanish archives. Manuel Barreto Rolim, the captain of the ship, for example, had left Lisbon the previous year, seeking his fortune in the India trade after being disinherited by his father following an unapproved marriage.

Another name we know is that of Francisco Rodrigues, a Jesuit priest from the Japanese mission who was coming to Europe in the company of a young Japanese Catholic called Miguel. Father Rodrigues refused a place in the ship's boat and lost his life when the *Mártires* wrecked. Miguel survived and is known to have sailed back to Asia, dying in China years later, without ever returning to Japan.

A third name related to this voyage is that of cabin boy Cristóvão de Abreu, whose life illustrates well the lives of the adventurers who sailed on such ships as the *Mártires*. He survived another shipwreck a few miles from this one four years later, in 1610, on the way to India aboard the *Nossa Senhora da Oliveira*. Pursuing his career as an apprentice on the India Route he engaged in many other voyages, survived the shipwreck of the *Nossa Senhora de Belém* on the coast of South Africa in 1635, and the 800 km (480 mile) march that followed to the nearest Portuguese trade post in Mozambique. After surviving his fourth shipwreck, on the ship *S. Bento*, in 1642, Cristóvão de Abreu died at sea in 1645, returning from India as boatswain of the *nau S. Lourenço*.

In the summers that followed the shipwreck much of the artillery, anchors, cables, and rigging were salvaged by the king's officers. The shipwreck of the *Nossa Senhora dos Mártires* was forgotten soon afterwards and its remains covered by a layer of white sand. Large rocks found their way over the hull remains, possibly carried by the tidal waves that followed the earthquake of 1755, or by some other storm of which we have no record.

Archaeology of the Wreck

In 1994 the remains of the hull were found, during a survey conducted by a team from Lisbon's National Museum of Archaeology. Nobody had ever excavated a *nau da Índia*, and the "Pepper Wreck" presented itself as a great opportunity for both archaeologists and naval historians. Although we have several texts, descriptions, and images of these ships, based on the historical data alone it is very difficult to form a good idea of their actual size, how they performed on the sea, and most importantly to nautical archaeologists, how they were designed and built.

In 1996 Francisco Alves, director of the Centro Nacional de Arqueologia Náutica e Subaquática, and I began the archaeological excavation of the site, which we

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continued through 1998. Soon an impressive collection of artifacts was uncovered, including three astrolabes, nautical dividers, and sounding leads. Gaming pieces, pewter plates and personal jewels illustrated daily life aboard. Most impressive was the collection of artifacts related with trade, the main reason for these voyages. Exotic wood, red coral, a gold bead, and pots from Burma, China and Japan, gave an idea of the geographical span of commerce in which the Portuguese merchants were involved. Chinaware, a luxury only possessed by a few, was also found among an extensive layer of peppercorns that marked in the strata the historic moment in which the shipwreck occurred.

But the most interesting item in the artifact collection was the ship's hull, which I excavated between 1999 and 2001 for the Portuguese authorities and the Institute of Nautical Archaeology. We know so little about these large floating cities, described by their Asian trading partners as tall, black, smelly, and swarming with the activity of its pale, fierce, and long-nosed sailors, soldiers and passengers!

A small portion of the hull survived four centuries of currents and swells, resting between two rocky outcrops, under a layer of peppercorns that was often as much as 35 cm (about 1 ft) thick. It was solidly built of stone pine planks nailed to frames of cork oak with long iron spikes. Using some of its critical dimensions, and applying sets of proportions described in three Portuguese treatises on shipbuilding from the late 16th and early 17th centuries, we tentatively reconstructed the hull. Computer simulation techniques will allow us to test the performance of this hull model under sail, and for different conditions of weather and cargo loads, providing a better understanding of a largely unknown ship type's sailing abilities.

Our archaeological study provides a wonderful opportunity to learn firsthand about the size, strength and performance of Portuguese Indiamen, and how they offered a living environment for an enormous crowd of sailors, soldiers, merchants and adventurers – and even to speculate on the hopes and dreams of the inhabitants of "these dark wandering places," as Joseph Conrad describes large oceanic ships, as they saw for the first time the Indian Ocean and the exotic realms of Asia.



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