

# The 1999 Excavation Season at the Presumable *Nossa Senhora dos Mártires* Site

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On September 14, 1606, after a nine month voyage from Cochim, India, and a three month stop in the Azores, the Portuguese East Indiaman *Nossa Senhora dos Mártires* arrived in sight of Lisbon. A heavy storm forced Captain Manuel Barreto Rolim to drop anchor off Cascais, a small village a few miles from Lisbon. Here the Indiaman *Salvação*, another returning *nau* from the 1605 fleet, was already struggling with the southerly gale. Dangerously dragging her anchors in the direction of the beach, *Salvação* was too heavy to be towed against the wind by the galley that was sent to help. The next day, after seeing *Salvação* run aground on the Cascais beach, Rolim decided to head for the mouth of the Tagus River hoping to escape the tempest in the calmer waters of the estuary (fig. 1).

However, getting past the sandbars was not easy. Two large sandbanks narrowed the entrances, making the waters run dangerously fast in both the northern and the southern channel. Rolim headed for the northern canal. By the early seventeenth century, this was already considered too narrow and shallow for laying anchor, and too crooked for any galley to tow a large vessel. In the middle of the passage, *Mártires* lost her headway and the *nau* was dragged to a submerged rock. She sank in front of the São Julião da Barra fortress in a matter of hours; soon afterwards she was broken up into such small pieces that witnesses commented it looked as if she had sunk long ago.



Photo: J. Pessoa

Fig. 2. Chinese glazed earthenware jar from the late sixteenth or early seventeenth century.

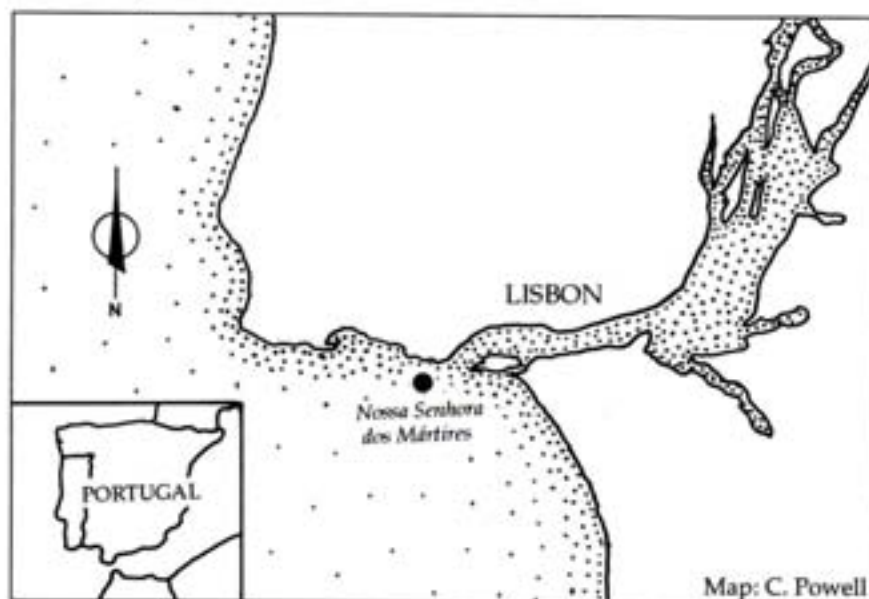


Fig. 1. The Tagus mouth and the location of the fortress of São Julião da Barra.

Her main cargo of pepper, which had been stored loose in small holds, spilled out upon wrecking, forming a black tide that extended for leagues along the coast and the Tagus estuary. A large amount of pepper was saved and put to dry by the king's officers. The population also salvaged a notable quantity, as it was impossible for the soldiers to stop the locals who, despite the dreadful weather conditions, went to sea every night in small craft to salvage what they could.

During the subsequent summers, the officers of King Felipe III of Spain—who was also King Felipe II of Portugal—may have salvaged a great part of the cargo from the shallow waters, and they certainly rescued cables, anchors, and guns.

Just as with many other wrecks that occurred at this dangerous channel, *Nossa Senhora dos Mártires* was soon forgotten. The tsunami that followed the earthquake of 1755 probably rolled heavy rocks over its remains. A codfish trawler wrecked near the site in 1966, covering a large area with other debris.

Stories of treasure around the fortress of São Julião da Barra were certainly transmitted through generations, and the spread of scuba diving from the early 1950s heightened interest in the area. In the late 1970s, archaeological surveys were carried out by avocational archaeologists, but no governmental action was taken to protect the site. As a result, the area was heavily looted by sports divers during the 1980s.

In 1993, the Museu Nacional de Arqueologia sponsored a survey of the site under the direction of Dr. Francisco Alves and identified two main areas of archaeological interest. One—designated as SJB2—consisted of

the remains of a wooden hull with shards of Ming porcelain and Chinese earthenware dating from the late sixteenth or early seventeenth centuries (fig. 2). Based on information from the Museu Nacional de Arqueologia's shipwreck archives, *Nossa Senhora dos Mártires* seemed the most likely identity for this wreck.

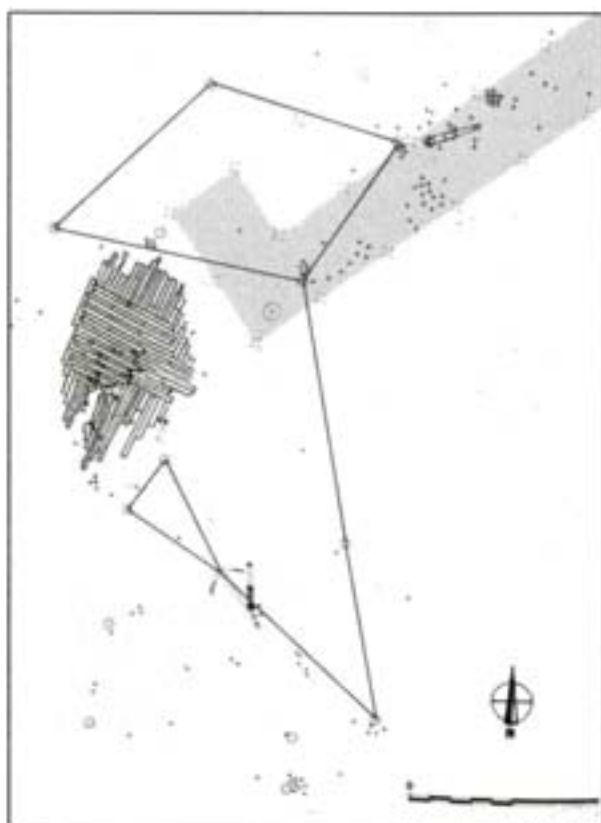
In 1996 and 1997, excavations were conducted on the SJB2 site under the direction of Dr. Alves and myself. The wooden hull was recorded, and an area of approximately 100 square meters was excavated (fig. 3). We recovered many artifacts from directly below a ubiquitous layer of peppercorns. These items included three astrolabes and two dividers, several sounding leads, as well as porcelain, stoneware, earthenware, brass, copper, pewter, and silver and gold objects. Among the organic materials, many peach pits were recovered along with ropes, fabrics, leather, and straw, this later found between seven stacked porcelain dishes. Several of these artifacts were exhibited in the Portuguese pavilion at EXPO '98, the World Exposition held in Lisbon during the summer of 1998.

A historical investigation led by the team of the Portuguese Pavilion at EXPO '98 brought to light information about the lives of some of *Mártires'* crew and passengers. Among them were Aires de Saldanha, seventeenth vice-regent in India (1600-1605), who died just before reaching the Azores on his return trip to

the regency, and Manuel Barreto Rolim, who was trying to make a fortune in the India trade after

being disinherited by his father because of an unwanted marriage. Another was the cabin boy Cristóvão de Abreu, who survived this shipwreck and the wrecks of several other *naus* namely *Nossa Senhora da Oliveira* in 1610, *Nossa Senhora de Belém* in 1635, and *S. Bento* in 1642. He then died at sea in 1645 while returning from India as boatswain of the *nau S. Lourenço*. No less interesting is the story of Father Francisco Rodrigues, a Jesuit priest who lost his life while coming from Japan to see the Pope on matters concerning the future of the whole Japanese Jesuit mission. These and other stories have been published in the catalogue of the Portuguese pavilion at EXPO '98: *Nossa Senhora dos Mártires, The last voyage*.

In the summer of 1999, INA and the Instituto Português de Arqueologia through its Centro Nacional de Arqueologia Náutica e Subaquática sponsored an excavation season on the SJB2 site, aiming at what is perhaps the most exciting part of this wreck: its hull remains (fig. 4). A section of the bottom immediately before the midship frames was preserved, including a section of the keel, eleven frames, and some of the planking. Construction marks carved on the surfaces of the floor timbers allowed us not only to understand the method used by the shipwright to conceive the hull shape, but even to reconstruct some of the hull dimensions with a high degree of certainty. It was a large *nau* with a keel close to 27.72 m in length (91 ft or 18 *rumos*, the unit then used in Portugal), and an overall length of about 38.25 m). The hull structure had been built with cork



Drawing: CNANS

Fig. 3. Site plan of the preserved portions of *Nossa Senhora dos Mártires* after the 1996/7 field season.



Photo: G. Garcia

Fig. 4. Armando Sousa and Paulão Camargo raising garboard T1W.



Photo: F. Castro

Fig. 5 (above). Futtock B8E showing the filler piece spiked to the side of the timber. Most contemporary written sources mention the lack of suitable timber for the construction of such large ships.

Fig. 6 (right). The keel begins its ascent from Nossa Senhora dos Mártires, guided by two archaeologists.



Photo: G. Garcia

Fig. 7 (below). An archaeologist brings the keel section to the surface.

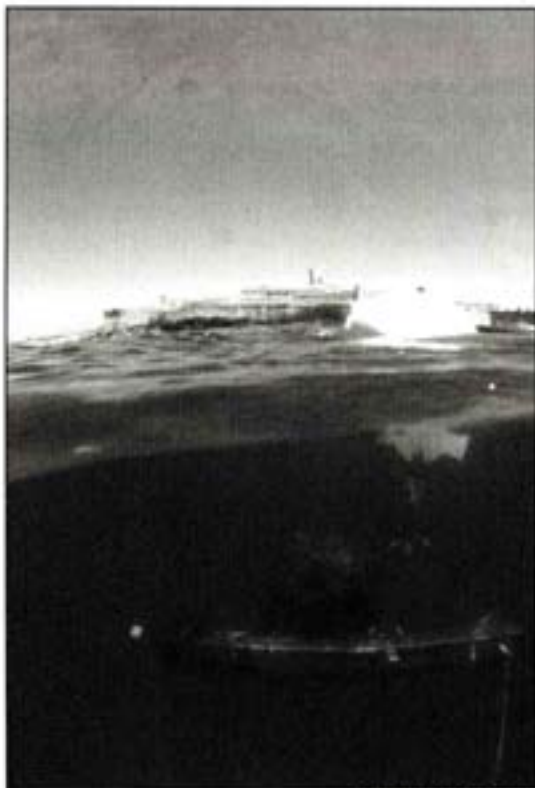


Photo: G. Garcia

oak (*Quercus suber*), and the small size of the trees that were used forced the shipwrights to assemble large structural pieces from several small timbers (fig. 5). The hull planking was cut from umbrella pine (*Pinus pinaster*), with strakes almost 11 cm thick. These were caulked with a string of lead, which was inserted between the planks during construction. Two thick layers of oakum were pressed into the seam, against the lead string, and were then protected from the outside with a strip of lead. This protective strip was nailed to the outer surface of the planks using short tacks with wide circular heads.

The 1999 excavation season lasted two months. The first month entailed intense underwater work to record some important construction details and to raise most of the remaining structure (figs. 6 and 7). Unfortunately, the wood remains had been heavily damaged by the rough sea conditions since the 1997 excavation season. Most of the second month of the 1999 season was spent recording the timbers and preparing an exhibition of the artifact collection for Lisbon's Naval Museum (figs. 8 and 9).

The extent of future work on this wreck site will depend on the results of the ongoing study of the information recovered this season. We hope that the data will allow the reconstruction of part of the mid-ship section and the hull's overall length. We also hope to reconstruct the rules that were used to narrow and raise the bottom of the ship in the direction of its extremities. The hull reconstruction, the analyses being performed on the artifacts, and the historical information assembled will hopefully shed more light on the history of this wreck and the Portuguese East India trade.

*Acknowledgements.* The author wants to express his gratitude for the support of the Portuguese Navy, especially the Direcção de Faróis, without which none of the field seasons would have been possible. ☞

#### Suggested Readings

Castro, Filipe  
1998 "Underwater Archaeology in Portugal: Policies, Budgets, and Results." *INA Quarterly* 25.4, 16-18.

Luz Alfonso, Simonetta, Ed.  
1998 *Nossa Senhora dos Mártires, the Last Voyage.* Lisbon: Verbo.

Phillips, Carla Rahn  
1986 *Six Galleons for the King of Spain; Imperial Defence in the Early Seventeenth Century.* Baltimore: John Hopkins University Press.



Photo: E. Castro

Fig. 8. Mikkel Thomsen draws the east side of floor C5 in the CNANS warehouse.

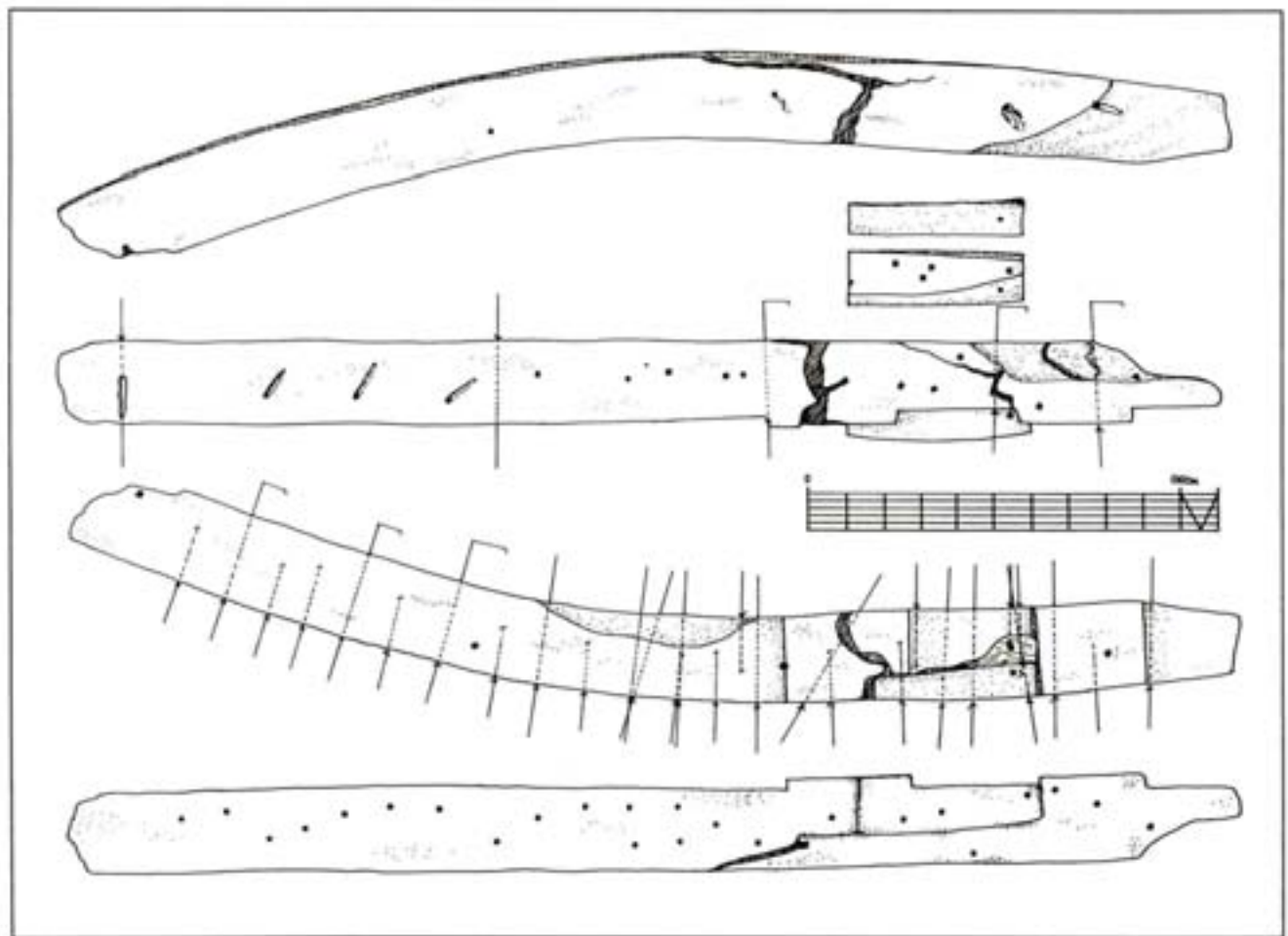


Fig. 9. Futtock C5 was carefully drawn to preserve its diagnostic features.

# THE INA QUARTERLY



Winter 1999

Volume 26 • No. 4

