

CORPO SANTO, c. 1400

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Country: Portugal

Place: Lisbon, Largo do Corpo Santo, northern edge of a subway ventilation shaft.

Coordinates: *Lat.* 38°42'25.80"N; *Long.* 9° 8'28.05"W

Type: Unknown

Identified: No

Dated: Circa 1400 (C14)

Beam: Estimated 5 m, based on the probable height of the runs, which was probably 1.5 m.

Keel Length: Estimated 10 m

Length Overall: Estimated 15 m

Number of Masts: Unknown

History of the shipwreck

Found in 1996, during the excavation for a subway ventilation shaft. It was carbon dated to c. 1400, perhaps sometime before (1 sigma: 1302-1401 cal AD; for 2 sigma: 1292-1412 cal AD). The remaining hull is probably still buried, lying outside the ventilation shaft. The identity, size, and type of this ship are unknown. It may have been built in Portugal, since its scantlings suggest a relatively small vessel. It was removed, disassembled, studied, published, and conserved.

Description of the site

Probably a derelict, since it was found lying on a sandy beach, 1 m above the sea level, at a depth of around 4.5 m below the city pavement. No artifacts were associated with these hull remains. The archaeological layers above this shipwreck were littered with 15th and 16th ceramic materials (Alves et al. 2001).

Cargo

No artifacts were associated with these hull remains.

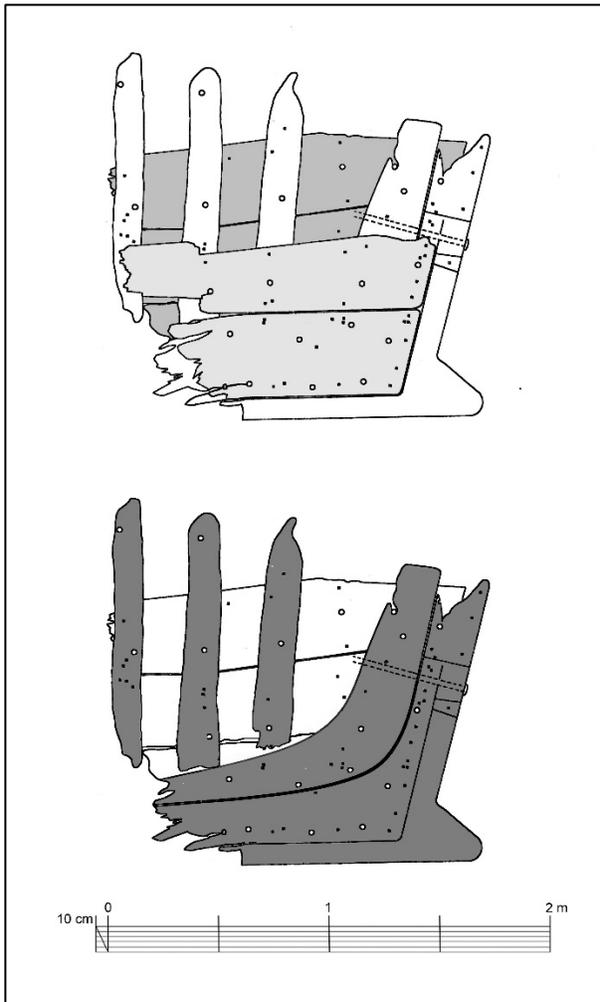


Figure 1. Hull remains (after Alves et al. 2001).

molded) can be inferred from the dimensions of the stern heel. This timber, designated in Portuguese as *couce de popa*, is characteristic in Portuguese ships and represented in a c. 1600 shipbuilding treatise titled *Livro primeiro de arquitetura naval* (Lavanha 1996). An equally characteristic stern knee, in Portuguese *coral*, was preserved assembled to the stern heel's upper portion with an iron bolt and a number of iron nails diagonally inserted. The forward portion of this timber was not preserved, and therefore it is impossible to say how it was fastened to the stern heel.

Keel

No keel proper was preserved, although the keel dimensions (11 cm sided and 13 cm molded) can be inferred from the dimensions of the stern heel.

Ballast

If preserved, the central remains of the ship are still buried, outside the excavated shaft.

Anchors

No anchors were found associated with the hull remains.

Guns

No guns were found associated with the hull remains.

Iron Concretions

No iron concretions guns were found associated with the hull remains.

Hull remains

The hull remains consisted of a stern heel, a stern knee, three y-frames and five hull planks. The keel was not preserved but its dimensions (11 cm sided and 13 cm

Stern heel (*couce*)

A characteristic stern heel (*couce de popa*) was preserved, connecting the keel with the sternpost, which were both lost.

Stern knee (*coral*)

An inner knee stood on top of the stern heel, connected to it by a large bolt on the upper portion. The lower portion was not enough preserved. The stern heel presented a characteristic skeg and was preserved 1.4 m along the longitudinal axis, and 1.25 m high, counting from the base of the keel. The sternpost rake was 31°.

Frames

Three y-frames were preserved, sitting on the stern knee (*coral*) and fastened with one nail inserted on a countersink recess on the forward face. These y-frames were 16 cm sided (fore-and-aft) and 12.5-14.5 cm molded (transversal). The room and space is around 32 cm.

Planking

Three rows of planking were preserved on the starboard side and two on the port side. The planks were around 4 cm thick, with widths between 30 and 47 cm. All preserved planks were sawn, almost certainly by hand as suggested by the irregularity of the tool marks, and fastened to the frames and stern timbers with iron nails and trenails.

Table 1. Scantling of the timber remains of the Corpo Santo Shipwreck

Timber	Sided [cm]	Molded [cm]
Keel	11	13
Sternpost	11	13
Floor timbers	16	13.5
Room-and-space	32	-
Planking	34	4

Caulking

Not reported.

Fasteners

All spikes have $\square = 1$ cm sections, trenails $\text{Ø} = 2.5$ cm, and the iron bold preserved is $\text{Ø} = 2$ cm. The stern heel was bolted to the stern knee with an iron bold and nailed with a series of iron nails

diagonally inserted. The floor timbers are fastened to the stern keel with one iron nail. The planking is fastened to the frames with octagonal treenails and iron nails. Being so close to the sternpost, it is impossible to discern a clear pattern.

Size and scantlings

The height of the runs seems to be around 1.5 m, suggesting that the height of the transom might be around 4.5 m, and the ship's length overall around 15 m.

The only clue to estimate the size of this ship is the height of the runs, which seems to have been around 1.5 m, suggesting that the height of the transom might be around 4.5 m, and the ship's length overall around 15 m.

Wood

All timbers analyzed were identified as oak (*Quercus sp.*).

References

Alves, F. and Rodrigues, P. and Rieth, E., 2001. "The remains of a 14th-century shipwreck at Corpo Santo and of a shipyard at Praça do Município, Lisbon, Portugal." in Alves, F., ed. *Proceedings of the International Symposium 'Archaeology of Medieval and Modern Ships of Iberian-Atlantic Tradition'*, Lisbon, September 1998, Lisbon: IPA.

Lavanha, J., 1996. *Livro Primeiro de Architectura Naval*, circa 1600. Fac-simile, transcription and translation into English, Lisboa: Academia de Marinha.