

EMANUEL POINT I SHIPWRECK, 1559

Charles Bendig

Country: United States

Place: Florida, Pensacola Bay.

Coordinates: *Lat.* 30°24'50.44"N; *Long.* 87°10'51.88"W

Type: Unknown

Identified: No

Dated: Probably 1559 (historical event)

Beam: Estimated 10.73 m

Keel Length: Estimated 23.6 m

Length Overall: Estimated 45.06 m (Ratio 1:4.2)

Number of Masts: Probably 3

History of the wreck

Presumably one of Tristán de Luna y Arellano's ships from the colonizing expedition to Florida in 1559. Seven ships were lost at Pensacola Bay during a storm on the 19th of September. The Emanuel Point I Shipwreck was found in 1992 by the Florida Bureau of Archaeological Research and excavated between 1993 and 1996 under the direction of Dr. Roger Smith.

Description of the site

Located 0.8 km away from the coastline in Pensacola Bay, the wreck sits in 4 m of water along the outer edge of a submerged sandbar. The ballast mound is 16 x 8 m and covered only part of the extensive remains of the ship scattered over a 30 x 10 m area. Conditions on site include poor visibility and a continual flow of sedimentation from local river deltas.

Hull Remains

An extensive portion of the bottom of the hull was preserved.

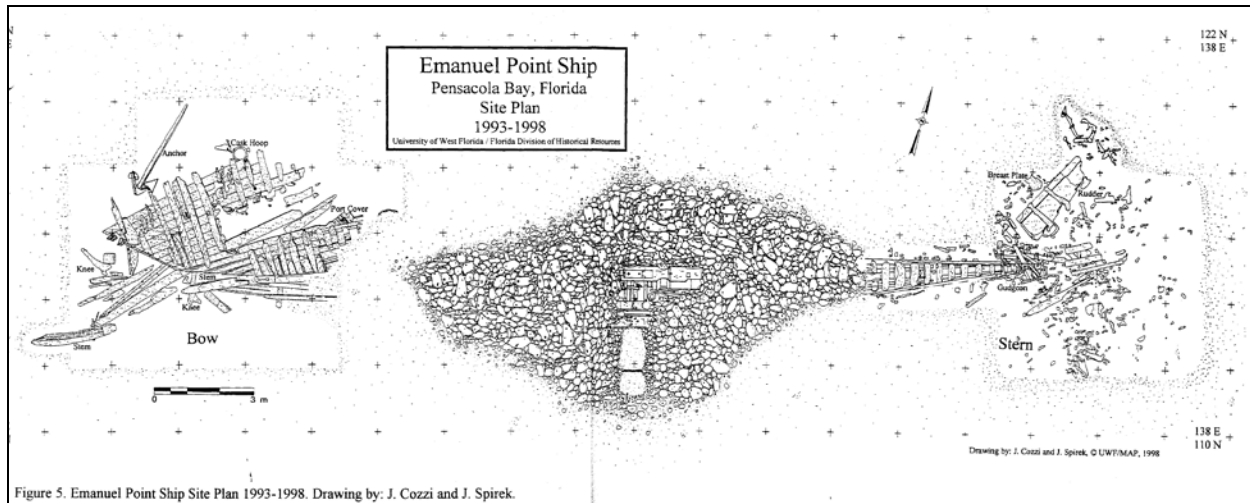


Figure 5. Emanuel Point Ship Site Plan 1993-1998. Drawing by: J. Cozzi and J. Spirek.

Figure 1. Site Plan (Smith et al. 1998).

Keel, keelson, maststep and posts

The keel is estimated to be 23.6 m long, although only the forward end was exposed. Aft of the forward scarf the keel is roughly square (28 cm sided by 29 molded) and tapers down to 22 cm sided at amidships, and approximately 20 cm beneath the stern knee. Around the forward stem scarf the keel is rounded, which prevented any form of a protective shoe from being attached. It is not known if there is a heel (*couce*) linking the keel with the sternpost, because the excavation did reach the keel level on the stern extremity.

Directly above the keel and frames is an estimated 19.2 m long keelson. The keelson is attached with a 60 cm long horizontal scarf to the stemson and ends before the first Y-frame, 10th from the sternpost. Near the bow, the keelson is 22 cm sided and 34 cm molded, expanding for 1.42 m in length at amidships to 47 cm by 39 cm and terminating aft at 22.5 cm wide and 29 cm in height. The mast step complex, which includes the expanded keelson section, has a 94 cm long mainmast mortise, 22 cm sided and 20 cm deep. On either side are 4 pairs of buttresses notched into the foot wale providing lateral support to this segment of the keelson.

Although the lowest section of the sternpost was not excavated, the remains that could be observed were 35 cm sided and 25 cm molded, with an estimated raking 60° aft. On either side were 10 cm deep rabbets 5 cm wide to allow in the hood-ends of the outer hull planking.

The stem is comprised of two separate pieces, the upper section is preserved for 2.56 m and is 30 cm sided by 31 cm molded. It has evidence for lead sheathing and caulking along the rabbet lines. On the aft end is a 41-cm-long vertical scarf that joins to the lower section of the stem. The second lower stem is preserved for 2.07 m and is square (28 cm) in dimensions. These dimensions indicate that the stem slowly tapered to match the forward end of the keel at the scarf. It is not known if the stem curve is tangent to the keel at its lower end or if it starts at an angle. The lower stem section has 4 cm rabbets that are cut 13 cm deep.

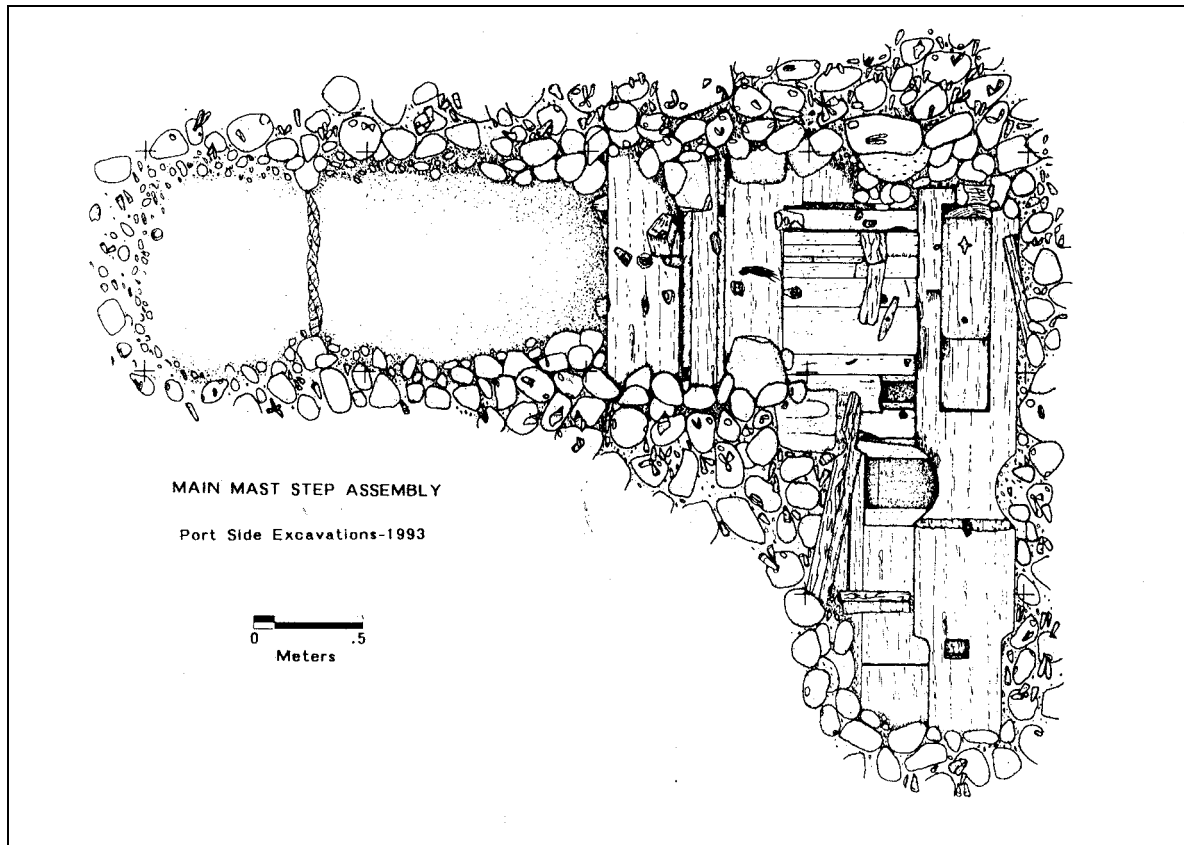


Figure 2. Maststep (Smith et al. 1998).

Frames

Many aspects of the framing features remain unanswered due to the wreck not being fully excavated or disassembled. Investigators were able to reveal the forward end of the hull to where true square frames would occur, but only recorded that the lower-bow frames were all cant slightly forward. Remind me: were these half frames? - There is no evidence or mention of half frames; all of the bow frames in the 1997 site plan are whole under the keelson or missing their portside from ripping away during the hurricane.

Four floor timbers were uncovered amidships, including the master frame, positioned exactly below and forward of the mainmast mortise in the keelson. Ceiling planking and the foot wale prevented confirmation on whether the first futtocks were connected to the floor timber with dovetail joints. Where it could be observed, there was a single treenail driven horizontally with the wrong heads recessed to allow nailing. Frames were 18-20 cm sided and 18 cm molded at the extremities. The 1993 report mentions that the floors were 25 cm molded over the keel, but since these dimensions vary between frames it probably only refers to frames measured at the portside pump sump. Room and space was 36-38 cm. The eroded first futtock ends are c. 65 cm from the center of the keel and 16-18 cm sided by 19 cm molded.

Excavations in the stern uncovered 11 frames. The first 10 from the sternpost are Y-frames, while the 11th floor is V-shaped and incorporates a 5 cm notch for the end of the keelson. Each component is 18-30 cm sided and varies from 70 cm to 90 cm molded depending on where the last seven Y-frames sit on the stern knee. Room and space here varies around 32-44 cm and all the frames are raked aft, except the sixth frame from the sternpost, which rakes forward. On either side of the Y-frames are 6 cm long tabs to fasten to the keel or stern knee. All of the frames, except the closest frame to the sternpost, have an elliptical limber hole 3-7 cm sided and 3-6 cm molded either centered or toward port.

Planking

Surviving outer hull planking found near amidships beneath the broken floor timbers was 7.5 cm thick and the garboard recorded at the bottom of the pump well was 28.5 cm wide. Further planking recorded at the bow was 5.5-6 cm thick and varied in width between 21 cm and 31 cm with an average of 25 cm.

Ceiling, thick stuff and wales

The starboard bow includes two ceiling planks against the keelson, a stringer, another ceiling plank, and a sill on the outboard edge. Ceiling is 6 cm thick and 19 cm sided, while the stringer is 12 cm wide and 12-13 cm thick. Three filler pieces were identified between first futtocks, resting on the sill, and another three were found elsewhere. Filler pieces are 5 cm thick, beveled at both ends, and 40 cm long with varying widths (20-27 cm) averaging 21 cm. Each filler piece is held in place with a 1 cm square iron fastener toe-nailed into adjoining frame or outer hull.

Four strakes of ceiling were uncovered amidships, three separating the keelson from the foot wale, and the fourth on the outboard edge. Each plank varies in thickness (5-7 cm) and is 31-34 cm wide. The pronounced foot wale is 18.5 cm wide and 15-16 cm molded with beveled edges.

Fastenings

There are at least seven different types of iron nails and spikes. Treenails are 2.6-3.5 cm in diameter and include three with wooden wedges on the inside frames. Lead sheathing includes square but rounded edge tack head impressions 1.8-2.05 cm wide. Recovered tack concretions are 2.5-3.5 cm long with 2.7-3.9 cm square shanks. Spikes vary from 3.12 cm to 21.5 cm and all have L-head typology, except one with a square head centered on the shank. Several bolts recovered near the mast step and sternpost assembly vary between 9.9 and 37 cm in length. Hull planking is attached at each frame by a single treenail for every two iron fasteners.

Caulking

Lead sheathing seems to have covered most of the key points between planking seams and on the sternpost/stem assemblies. Most of the lead sheaths were 1-3 mm thick (it said cm) -see page 60 on original 1995 report it says mm, varying between 6 and 21 cm side and 7 to 75 cm long. All of the 35 diagnostic samples collected have three distinct rows of tack holes, usually positioned on the edges and center. The edge tack holes attached the sheathing to the hull, while the center

row was driven into the seams to keep the caulking in place. Multiple pieces of the sheathing have fabric impressions on the inboard faces. Caulking materials are either plant based, wool, or cotton.

Ballast

Is consistent with the Caribbean basin or the Mediterranean region. Waits for further analysis.

Size and scantlings

Original investigations estimate the keel is 23.6 m with an estimated overall length of 34.6 m, a beam of 9.48 m, and a depth in hold of 4.55m. These values suggest a capacity of 418-441 tons.

Timber	Sided (cm)	Molded (cm)
Keel	28-31-22-20	29
Stem post	31-28	30-28
Sternpost	35	25
Keelson	22-34-22.5	34-29
Maststep	47	39
Floors	18-22	14-25
Futtocks	16-19	19
Room-and-space	36-38	-
Planking	14-33	5-7.5
Ceiling	31-34	5-7

Wood

One piece of the stem was raised for study and found to be made from the heartwood of an oak tree. Further wood identification was undertaken on key features from the stern assembly, indicating the entire ship was built with white oak. Only Y-frames 6-8 were identified as being fashioned from live oak.

Bibliography

Smith, Roger C., Spirek, James, Bratten, John & Scott-Ireton, Della, *The Emanuel Point Ship: Archaeological Investigations, 1992-1995*, Preliminary Report, Florida Bureau of Archaeological Research, 1995.

Smith, Roger C., Bratten, John R., Cozzi, J. & Plaskett, Keith *The Emanuel Point Ship: Archaeological Investigations, 1997-1998*, Preliminary Report, Florida Bureau of Archaeological Research, 1998.