

An 18th century Dutch East Indiaman, found at Cape Town, 1971

Robert Allan Lightley

“The Spyglass”, 72 Springbok Road, Three Anchor Bay, Cape Town, South Africa

Mr Lightley, a Senior Building Inspector with the Council of the City of Cape Town, directed the excavation

Introduction

The construction of the Civic Centre Building on the foreshore in Cape Town provided the opportunity to examine in detail the timbers and artefacts belonging to an 18th century sailing vessel. The object of the excavation was to try and determine the nationality, the type of vessel and the probable date of its existence and subsequent wreck. In the absence of a name it became known as the ‘Civic Centre Ship’.

The site, discovery and excavation

The foreshore, upon which the Civic Centre is being built is reclaimed from the sea (Fig. 1) and occupies a large area of former mooring ground for sailing ships in Table Bay. The building required deep foundations and this necessitated the exposure of the former seabed in places.

The first indication of a wreck came in December 1970, when, although the information was passed to the proper quarters, no action was taken. The timbers which had been exposed, and later were thought to be the bow section, were ripped out and mostly dispersed. On 18 April 1971, further remains of the ship comprising the heavy timbers of the hull and also ballast in the form of hundreds of cannon balls and bar-shot were brought to light in a second hole nearby.

Perhaps because no real interest had followed the first discovery, these timbers were also forcibly removed by means of a mechanical grab. An examination of the timbers removed was made but it was considered essential to make a more detailed survey of the section lying between the two holes. Representations

were made to the Cape Town City Council who own the site.

The City Engineer’s Department immediately requested the assistance of the builders who granted every facility for the work which followed.

In all, three separate excavations were carried out:

- i. A section towards the north end of the vessel.
- ii. Near the middle of the ship.
- iii. On the north-west side of the same position.

The timbers which were exposed were photographed, measured and recorded *in situ* (Fig. 2). They were then removed by means of a site crane and taken away to safety. The south-west end of the ship beyond the boundary of the site and under a roadway still lies unexcavated.

The ship

The preliminary examination of the severed ends of the keel revealed that the vessel was lying in a north-easterly direction which would indicate that it had sunk or been beached roughly at right angles to the old shore line of Table Bay. As the present low-water line is approximately 4.26 m below the present ground level it seems that the ship came to rest in about 2.74 m of water.

There is no evidence of masts, deck beams or any timbers above those of the floors, which suggests that they were removed at the time of grounding, to be covered with sand and later, rubble when the first reclamation took place during the early part of this century. The second part of the reclamation in 1938 pushed back the sea to the line of Duncan Dock, almost a kilometre away (Fig. 1).

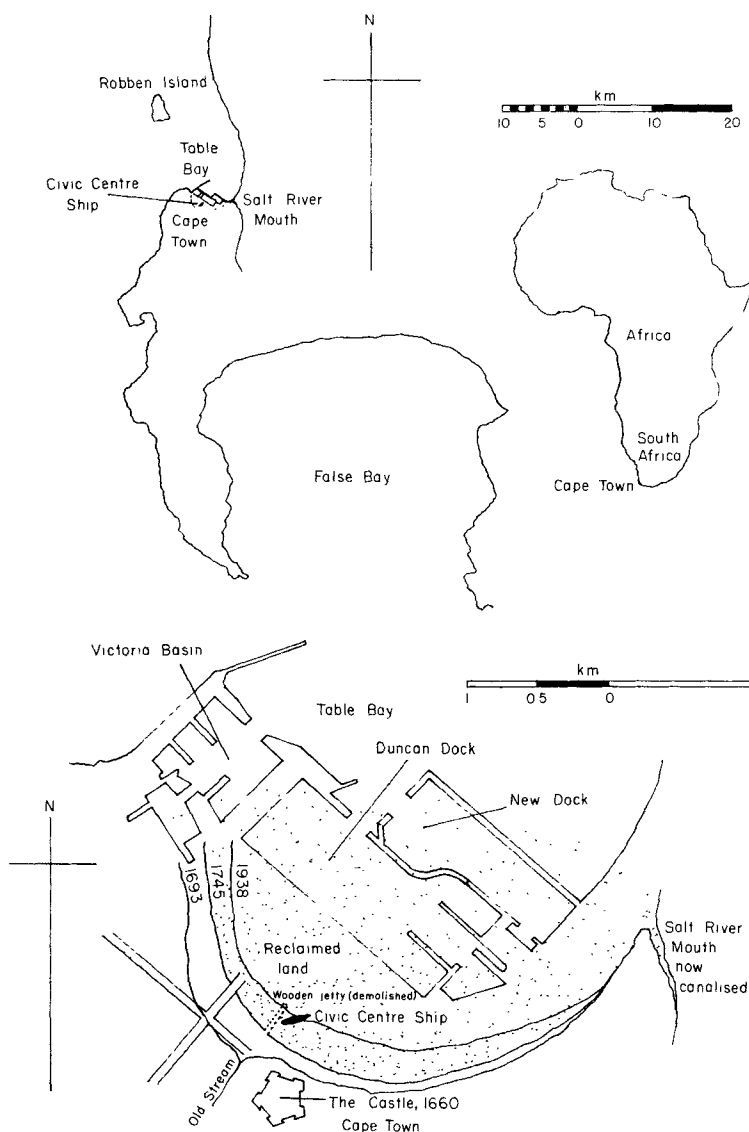


Figure 1. Map showing location of ship. Stippling represents sea area c. 1745.

The keel oak (Quercus robur)

A very good cross section of the keel *in situ* with all attendant features was found at the southernmost part of the ship which was available for examination (Fig. 3). It measured 0.558 m broad by 0.457 m deep. Although the sections of keel removed show rust marks suggesting fastenings, no sign of a false keel exists. In the section of keel found between frames 1 and 14, a length of 4.87 m was taken out from under the floors. It was in two pieces

and tapered from 0.558 m to 0.228 m in depth. There were no signs of a scarf or false keel beneath and it is suggested the ship lost its false keel very shortly before finally coming to rest. The floors lay flat upon the keel without being checked, or otherwise let into it (Fig. 3). It is interesting to find inserts of timbers in the sides of the keel. They were of 'Anchor stock' shape, one of which was about 2.13 m long. These inserts were possibly pieces to replace badly scarred sections, or where the keel during

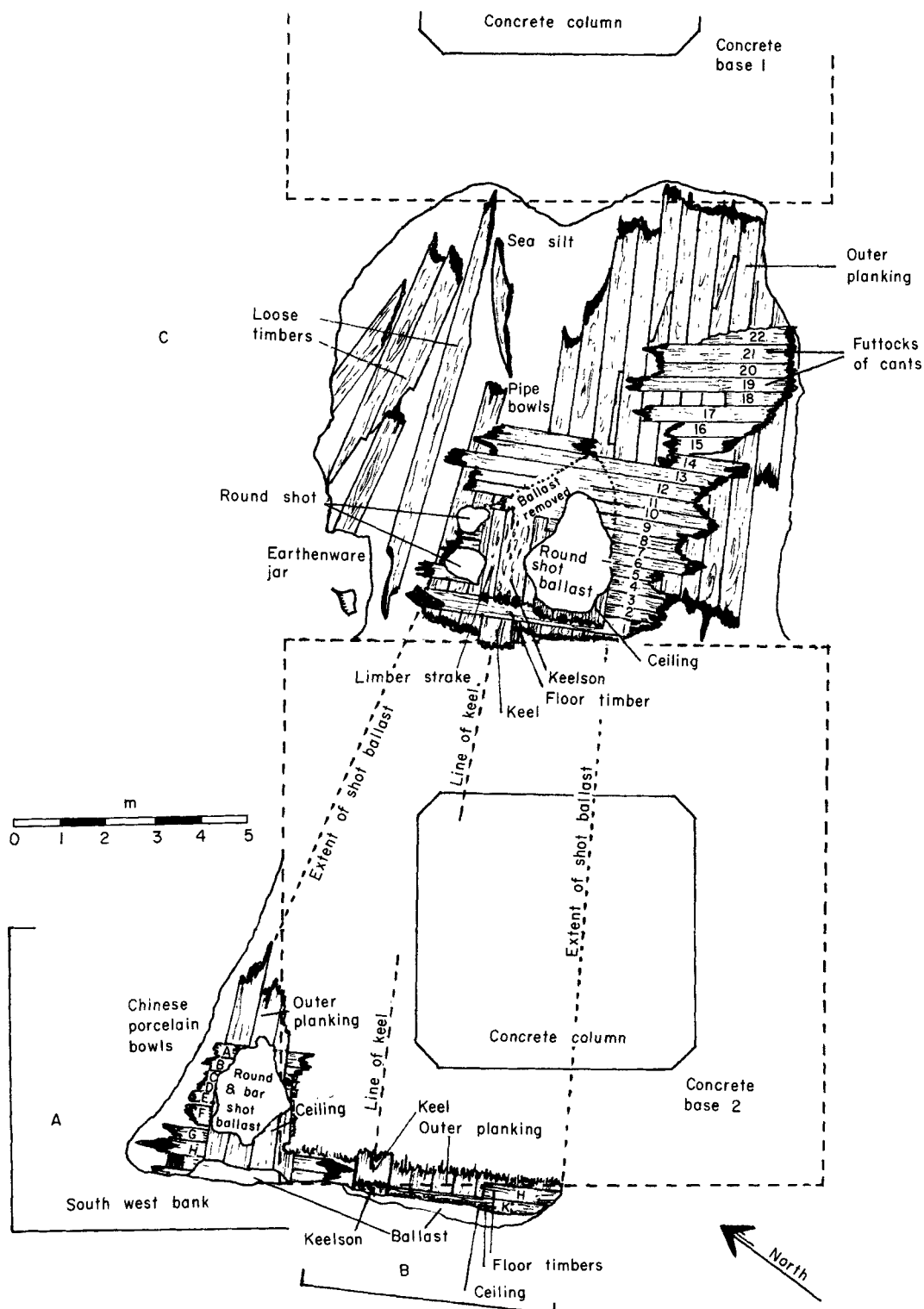


Figure 2. Plan of ship. A. Portion excavated 1, 2 May 1971. B. Portion excavated 18 April 1971. C. Portion excavated 9-12 April 1971.

construction was found to have wavy edges. When the two sections of the wreck were examined after the removal of the centre portion it was found that the two ends of the keel facing each other did not in fact form a straight line. It is an obvious possibility that the keel was fractured near the centre, and this would appear to be consistent with the conclusion which follows later in this report.

The keelson

Only very short pieces of this member also

of oak have been found and these are rotten and badly infested by the Teredo worm (Figs 3 and 4). It seems that this is the only timber covered by the ballast thus affected, and as the sections are so short no recognisable scarf jointing has been found. Large corroded bolts of iron, which seem to have had a diameter of 0.03 m, pass through the floors to the keel.

The floors

It is unfortunate that nothing above the oak floor timbers remained. The only positive joint

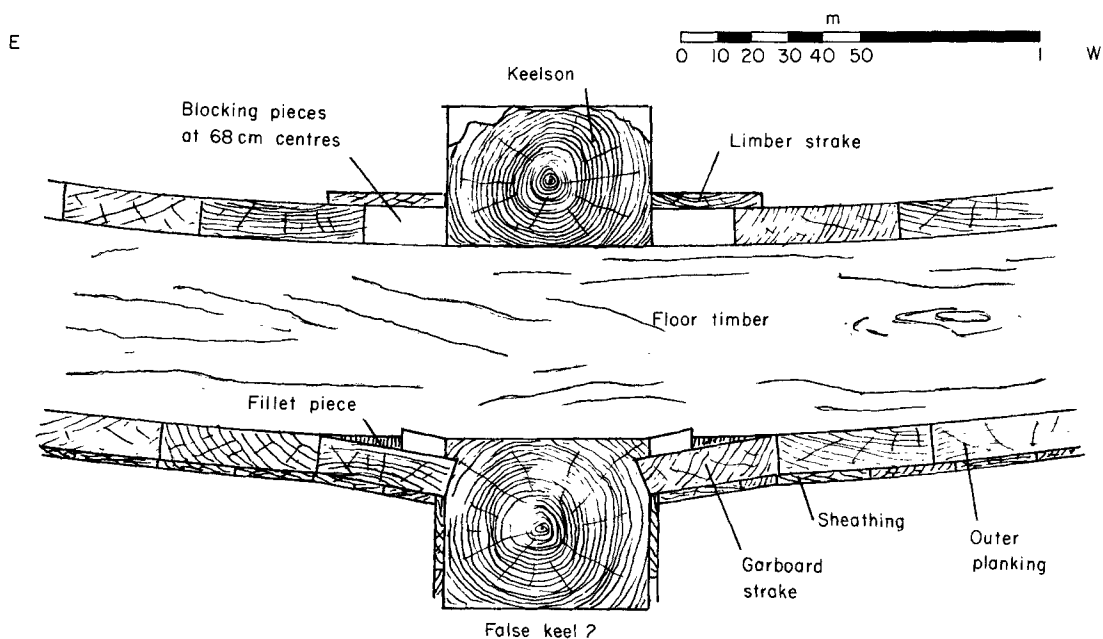


Figure 3. Section at frame H, looking south-west.

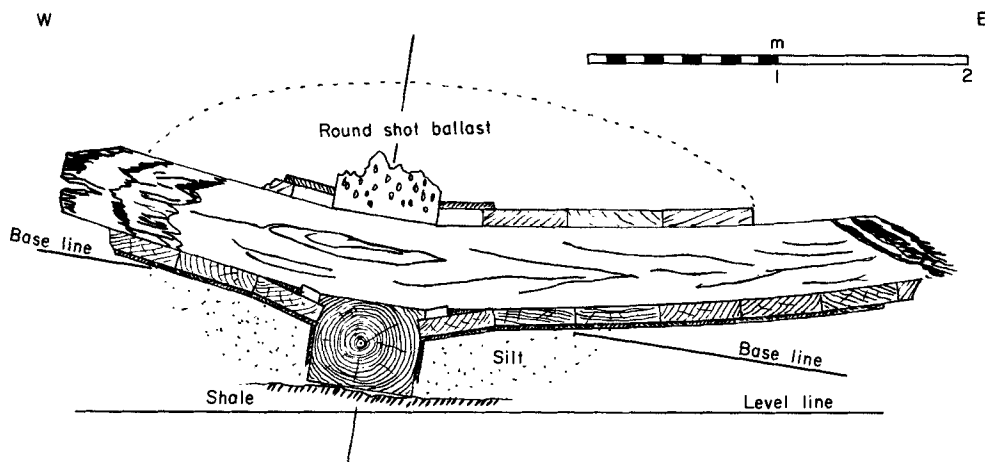


Figure 4. Elevation of frame I, looking north-east.

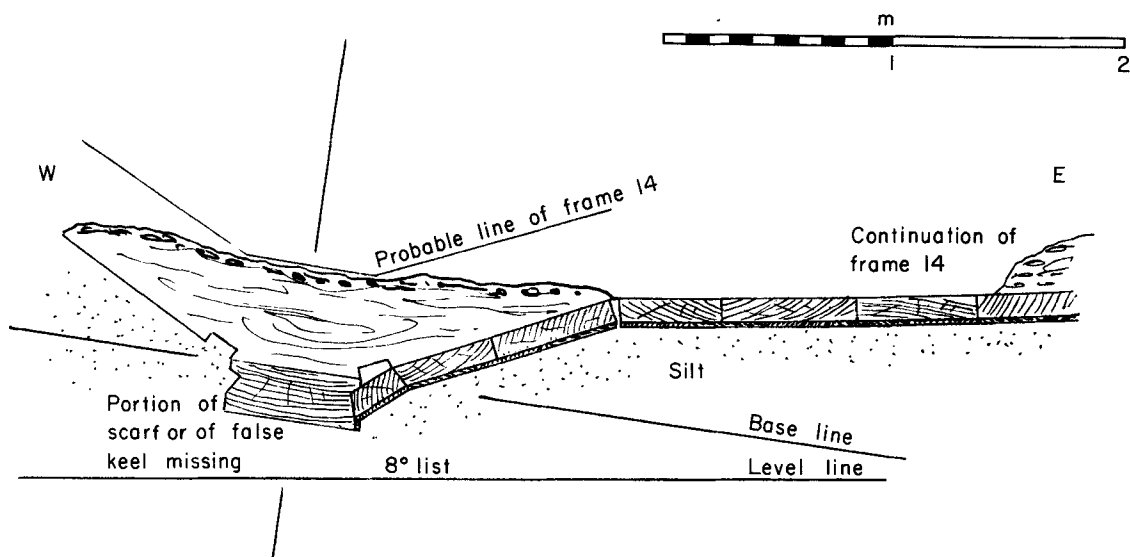


Figure 5. Elevation of frame 14, looking north-east.

found *in situ* with two partners was in frame G (Fig. 5). There were other hints at H and K. The lack of upper futtocks suggests that the ship, being a hazard to navigation in shallow water, had the middle futtocks and top timbers broken away from the floors. It can be seen in Fig. 2 that the floors tightly abutted each neighbour with little space between, apart from one of 0.076 m between E and F. They were seen to taper towards the ends indicating that as the frames rose, they were reduced, providing larger spaces higher up. One such loose floor tapered 0.050 m in 0.152 m in its siding. The floors varied from 0.407 m to 0.203 m in siding. Frame no. 14 (Fig. 6) appears to be the last floor crossing the keel. Thereafter the cants of the end of the ship begin (see nos. 15–22, Fig. 2). The rise of the underwater body towards the north end is illustrated by the difference in shape between frame no 1 and no. 14 (Figs 4 and 6).

Some distortion has also possibly taken place, as is indicated in the floors still *in situ* in the south-west bank (Fig. 6). It would seem that the weight of shot, aided by tons of earth above, has combined to flatten the frames somewhat. The upward curves at the ends of the frames on the south-west side, however, are still evident while forward of this limit the timbers are greatly dispersed suggesting that the ship owes its continuous existence to the ballast (Fig. 2).

Mention should be made at this stage of severe infestation by Teredo worm which has occurred in the exposed timbers not covered by the ballast. The planking, however, shows absolutely no signs of infestation.

The planking

The outer oak planks were found to be in a remarkable state of preservation, possibly due to the method used for the prevention of infestation by marine borers. The external surfaces of the planks had first been coated with pitch and a layer of hair of bovine origin, 0.003 m thick, upon which pine sheathing, 0.025 m thick and between 0.228 m and 0.254 m wide, was nailed over the entire underwater surface of the ship, including the keel, using thousands of iron nails.

Whenever the outer planking was lifted from its situation the sheathing was found underneath. All nails had corroded completely and there was, therefore, no adherence. The nails were spaced at between 0.025 m and 0.038 m over the entire surface. The shank of the nail was approximately 0.063 m long and 0.006 m square and tapered.

An interesting fact came to light when it was found that no previous nail holes were seen in the planking under the sheathing, suggesting that this was the first sheathing fitted to the ship. The widths of the planks vary between 0.330 m and 0.483 m and are 0.102 m thick.

They were secured to the frames by means of ash (*Fraxinus excelsior*) treenails, 0.038 m in diameter. No square butt joints were found but everywhere were scarfed butt joints (Figs 7 and 13). A very clear and interesting example of the limbers is seen in Fig. 3. The garboard strake with a decided tilt is helped in this by means of a feather-edged fillet made of pine, which is a strange choice of timber when it is considered that this limber would be continually under water and the threat of rot ever present. The ceiling and outer skin planking was of the same width and thickness and fixed in the same way, by means of treenails. The strake covering the limber was intact, but when a portion of the ballast was removed, and the board was lifted it revealed blocking pieces at a distance of roughly 0.680 m from each other. On this ship it is puzzling to know why the board was there at all, because when removed the clearing of the bilges could not be easily carried out, as the floors were hard up against each other.

The finds

Wood

Lengths of wood or branches of unknown origin red in colour were found in great numbers on top, between and under the ship. The wood was very hard and measured 1 m long and averaged in diameter 0.038 m. The bark had been removed by means of an axe or knife and the ends were wedge-shape. Various theories have been put forward to account for these poles, from their being part of the actual cargo, to their use in keeping apart certain portions (barrels or bales) of the cargo in layers, or sections of the ship.

The shot and peppercorns

When the builders' excavating machinery exposed the upper surface of the wreck, it encountered a solid layer of iron, a conglomerate of round shot, bar-shot, marine concretion and spice (peppercorns, *Piper nigrum*) in an iron corrosion. This mass covered

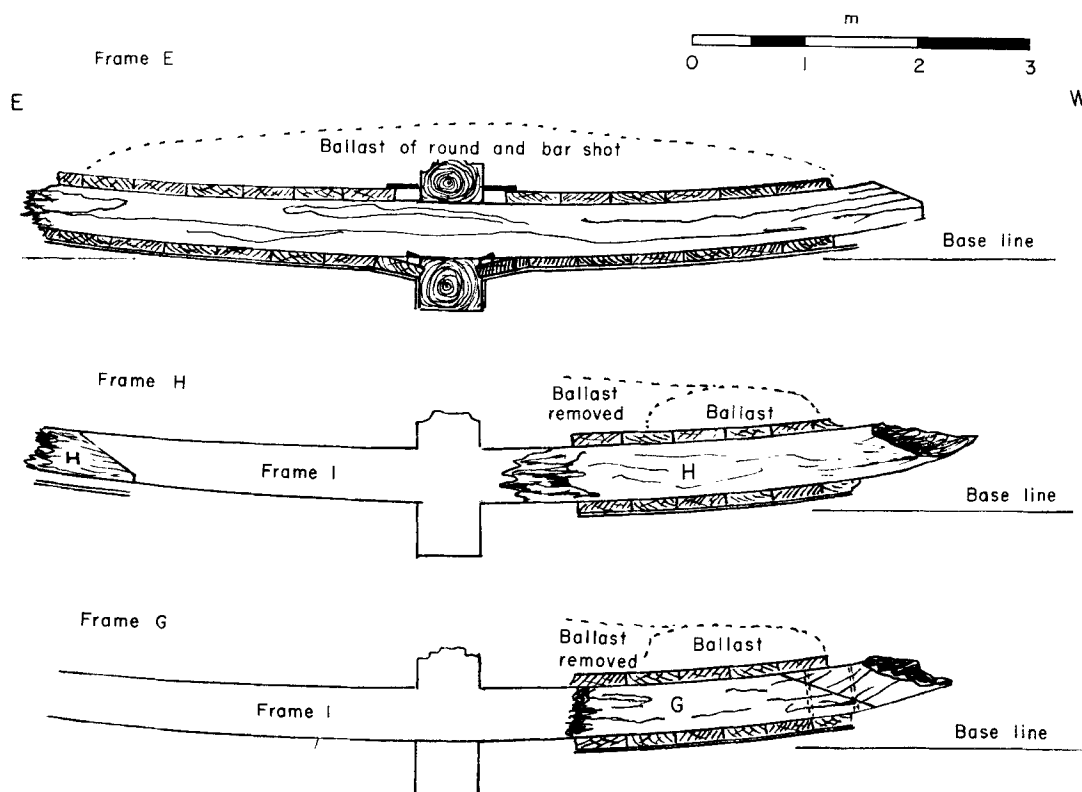


Figure 6. Elevation of frames G, H, and K, looking south-west.

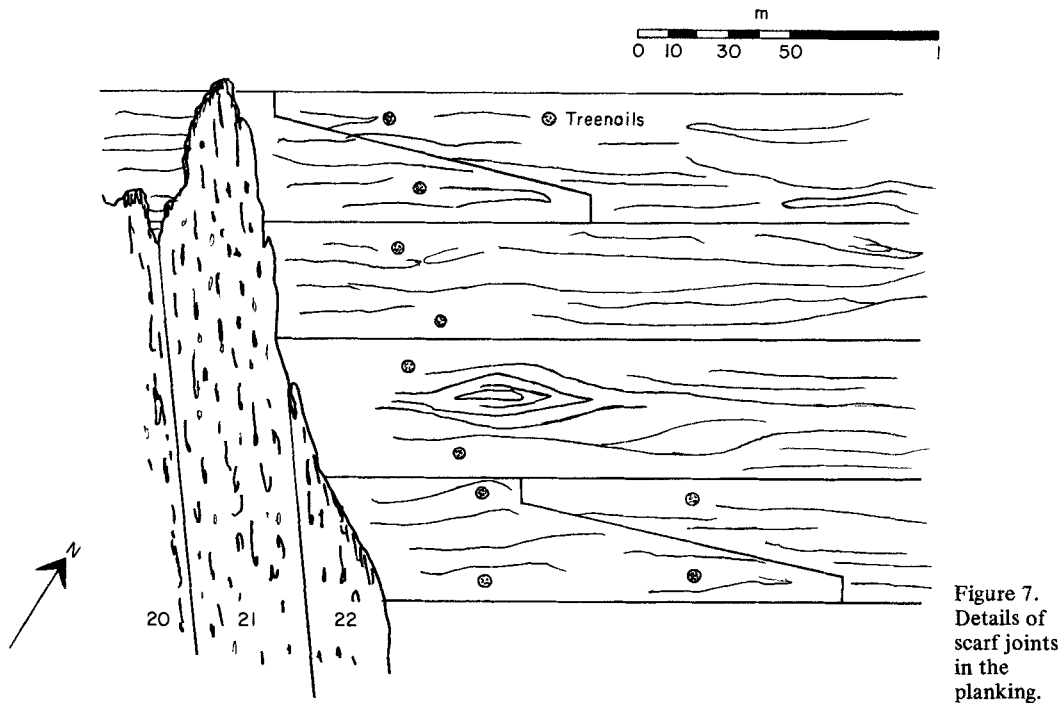


Figure 7.
Details of
scarf joints
in the
planking.

almost the entire area of the remaining timbers *in situ*.

When broken up, the cluster was found to contain a mixture of round-shot and several varieties of bar-shot. Their condition ranged from good to poor, depending upon the amount of corrosion. Later, when a more detailed survey was made of the remaining clusters the north-eastern extent of the area was found to contain round-shot only; south-west of this was a mixture of everything. The central mass was unfortunately removed and dumped before a proper control over the remains could be implemented. The deposit on the south-west side was carefully removed and sorted, revealing a varied selection which differed considerably in bore, size and shape. There was spherical-ended, disc-ended and hemispherically-ended shot (Fig. 14).

The shot had to be taken from the solid mass which lay upon the timbers and it is thought that the continued existence of the ship is owed to the wide area, weight and volume of the shot which held the timbers together against disturbance under the sea.

An interesting feature was the impregnation of spice, identified as black peppers, between

the shot. It seems likely that during the removal of the cargo the peppercorns burst from their containers and dropped onto the shot where they filtered through to the bottom and later became fused into a solid mass with this material. The calibre of the round-shot appeared to be suitable only for 18-pounders with small variations allowing for varying degrees of corrosion.

The bar-shot on the other hand, varied considerably in diameter, in calibre but also in length of bar. The bar-shot with discs was found to have one disc at right-angles, while the other was tilted slightly perhaps to facilitate a spinning action when the shot left the gun. This phenomenon was not confined to one or two, but was found in each and every specimen. The discs and spheres were cast, but the bars were wrought and were taken through the discs and rivetted over. In the spheres, they were welded into the holes formed in the casting.

The problem of preservation was one for concern, for during wet or humid weather, a large proportion of the shot was found to 'sweat' and in some cases to disintegrate completely, though it should be noted, that not all the specimens behaved in this way.

Some were free from 'sweat', and it is thought that these originated from some other source where different iron and foundry techniques were employed.

Clay pipes (Fig. 8)

Clay pipe bowls and pieces of stem were found under the timbers in the north-east part of the ship. They were burnt internally suggesting that they had belonged to the crew and were not part of a cargo. I am most grateful to Mr G. D. van der Heide of the Rijksdienst Voor De Ijsselmeerpolders for the identification of these bowls. He states that from the marks on the clay pipes from the Gouda pipe factories, the following information can be extracted:

- Mark no. 50 with crown was used by
Adriaan de Bruyn in 1768
- no. 53 with crown by Jan van Leeuwe
1725–1730
by Pieter van der
Want 1749

- no. 64 with crown by Jacob van der
Want 1782–1803
by Andries de
Vries
- no. 35 with crown by Ary Verbanck
1730–1759
- Mark V was used by Barent van Bakel
1730–1746
B B by Bernadus
Bruynvis
1803
- no. 83 with crown called de Sjees
by Jan van
Klaveren 1733
by Adriaan Berger
1759–1768 and
1782–1803
by Jan Druysheer
1814–1849.

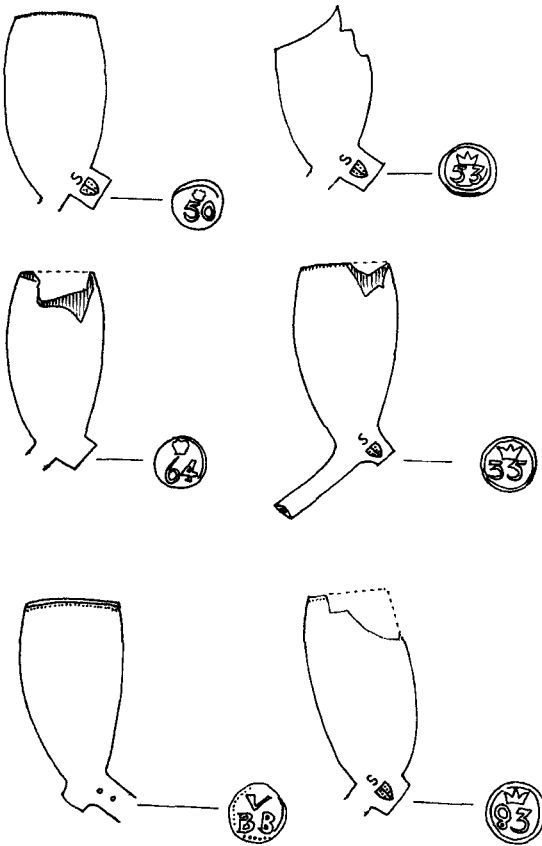


Figure 8. Clay pipe bowls. Scale: 1:2?

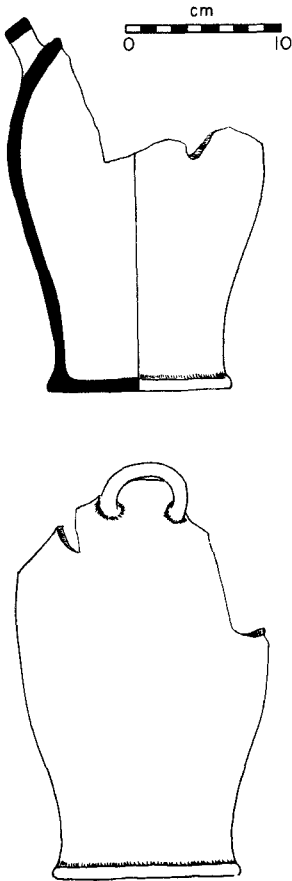
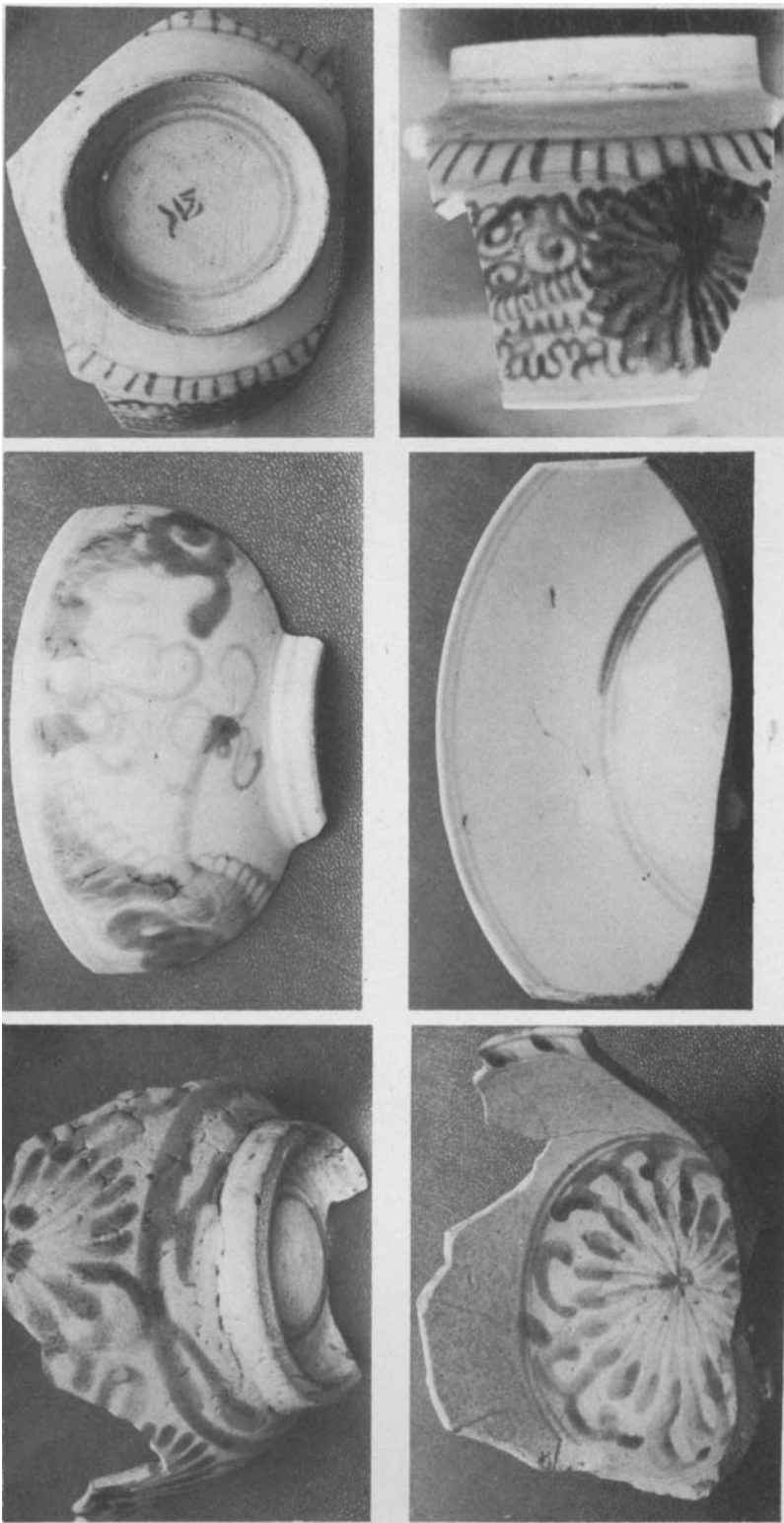


Figure 9. Jar ht. 0.27 m. Exterior plain; interior glazed.



Figures 10–12. Chinese porcelain bowls; Kuangtung or provincial ware from the south-east China coast.

From this list it will be seen that the same mark was used at different times by more than one pipemaker, but none of the marks used is necessarily later than 1776. The conclusion drawn from these dates is that the ship was lost during the 18th century, though the forms of the pipes indicate an average date of between 1730 and 1760.

Pottery jar (Fig. 9)

A jar of coarse pink ware was found in fragments near the clay pipes. The interior has a red-brown glaze, and possibly the exterior but this was water worn and the original surface did not survive. An interesting pattern of lines is displayed on the underside of the base; this was presumably made by wire used to cut the pot from the potter's wheel.

Chinese porcelain bowls (Figs 10, 11 and 12)

Fragments of three bowls were found under the timbers of the central part of the ship.

I am grateful to Mr K. W. Lim of the Rijksmuseum in Amsterdam who examined the photographs and comments that they are the so-called Kuangtung or provincial Chinese porcelain of the 17th and 18th centuries,

which were exports destined for markets in Europe as well as south-east Asia. Mr J. G. Ayers, Keeper of the Far Eastern Section at the Victoria and Albert Museum in London agrees tentatively that in all probability, this ware was manufactured on the south-east China coast from the end of 17th to the end of the 18th century.

Conclusions

The Civic Centre ship was a relatively new ship when she was wrecked as is indicated by the pine sheathing below the waterline which had been once only nailed upon the underbody. During the lifetime of a ship it was likely that as many as three or four successive sheathings would be nailed onto the bottom to cover the layer of hair, sulphur and tallow used to prevent the infestation of marine borers. The age of the ship predates the time about 1780 when copper sheathing began to come into general use, at first in naval vessels and later in merchantmen.

The great quantity and variety of shot suggests that it is unlikely to have formed part of the magazine of the ship but was used as ballast. That she was a merchantman is

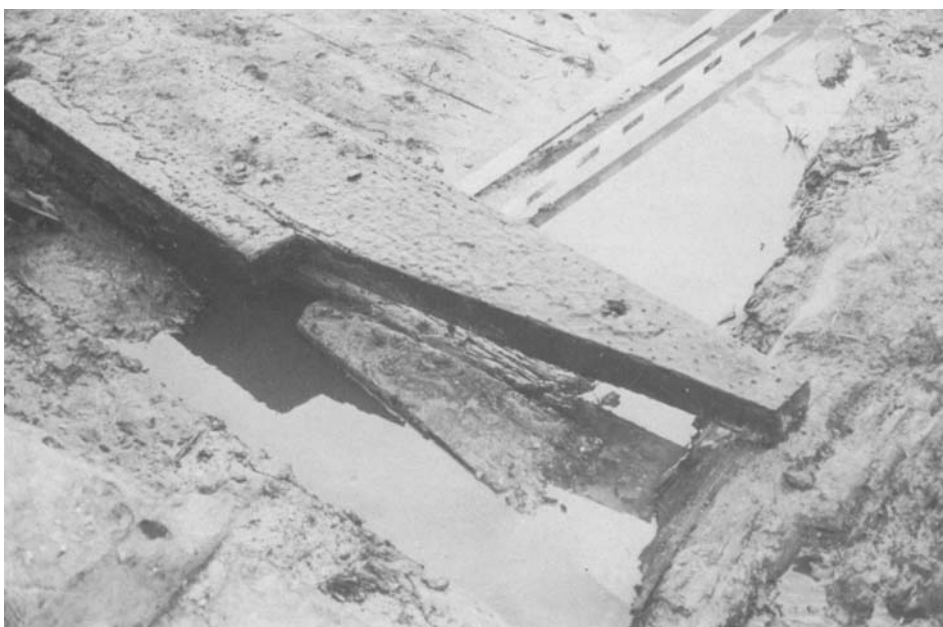


Figure 13. One of the outer skin planks (shown in Fig. 7) removed to show the scarf joint. The hair coating and sheathing nail holes can be clearly seen.

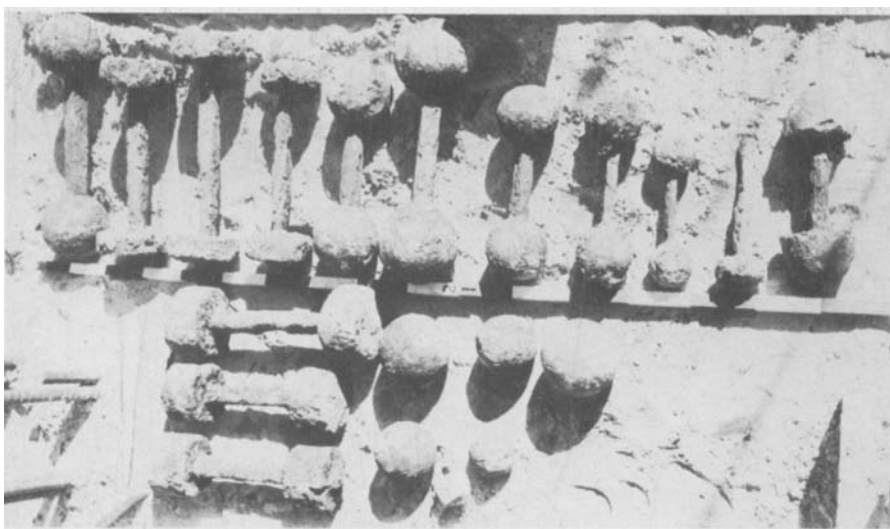


Figure 14. Varieties of bar and round shot. Scale in 0-10 m divisions.

reasonably certain as is suggested by the black peppers found concreted with the shot. An investigation of the accounts of shipwrecks in Table Bay between 1647 and 1821 reveals that 61 are recorded. Except for one or two cases, ships broken from their moorings in storms generally went aground in and around Salt River mouth (Fig. 1) as a result of the wind which drove from the north west. The position of the Civic Centre wreck however was in a relatively sheltered area of the bay near to where a jetty is recorded to have been situated.

The following is offered as a reasonable possibility.

A study of the records suggests a rather singular choice; the details of this ship's life and end, fitting the facts more than any other.

An extract from Theal's *History of the Cape*, IV: 221 reads:

'On the 31st of January, 1776 the Company's homeward bound ship *NIEUW RHOON* when attempting to enter Table Bay was driven by a violent South Easter upon a reef at Robben Island, and was badly damaged. She was got off, and was brought up to anchorage but it was found necessary to beach her by the jetty to save her cargo'.

Information supplied by the Director of the Scheepvaart Museum in Amsterdam records the movements of the Dutch East Indiaman *Nieuw Rhoon* as follows:

Built 1764 in Zeeland. Length 150 ft (Dutch). Maiden voyage to China on 15 November 1765 from the Texel. Captain Abraham Anker. Arrived at the Cape on 19 March 1766 with 54 dead. Returned to Rammenkens in Holland on 2 July 1767. Second voyage under Captain Jan Hendicks to the East. Left Holland on 21 December 1767. At the Cape on 6th April 1768 until 3 May. 18 dead from the voyage. Returned to Holland on 2 June 1769.

Third voyage was to Batavia under the same Captain and left on 12 November 1769. She was at the Cape with 48 dead on 1 April 1770. Returned to the Texel on 3 June 1771.

Left Holland on 30 December 1771 with Pieter van Prooyen as Captain. At the Cape from 10 May until 9 June 1772 with 151 dead. The voyage was to Ceylon. She returned to Rammenkens on 4 July 1773.

The last voyage was from Rammenkens on 18 September 1774 with Jacobus Coleders as Captain. She arrived at the Cape on 30 December and left on 27 January 1775 with 7 dead. Arrived in Batavia on 25 April of the same year.

When the ship was broken up on 1 March 1776 at the Cape, she was 12 years old.

The position of the wreck places it close to that of the old timber jetty which was in existence from c. 1745 until well into the 19th century. If the wreck is indeed the *Nieuw*

Rhoon she would have been towed in a sinking condition, and possibly with a broken back, into shallow water close to the jetty. Her cargo would have been removed and she would have been stripped of masts, rigging, fittings and as much upper timber as possible. As she was no doubt already on the bottom and difficult if not impossible, to move she was likely to be a troublesome obstruction.

It is contended that she was then filled with additional ballast, in this case reject cannon shot, in order to keep the vessel firmly upon the bottom.

The upper timbers would then have been broken away leaving the weighted floor over which other ships could pass freely.

Acknowledgements

I wish to thank for assistance:

The City Council of Cape Town; the builders, Messrs Murray and Stewart; The Cultural History Museum; the World Ship Society; The South African Maritime Museum Trust; the South African Library and Cape Archives and all persons who assisted in the excavation. Overseas comment from Mr B. W. Bathe of the Science Museum, London; Commander A. H. Waite of the National Maritime Museum, Greenwich; Messrs R. J. Charleston and J. G. Ayers and Mrs Madeleine Ginsberg of the Victoria and Albert Museum, London; Mr K. W. Lim of the Rijksmuseum, Amsterdam; Mr G. D. v. d. Heide of the Rijksdienst Voor de IJsselmeer Polders; the Director of the Nederlands Historisch Scheepvaartmuseum, Amsterdam; and Monsieur Jean Boudroit of 18, Ave du Bel-Air, Paris.