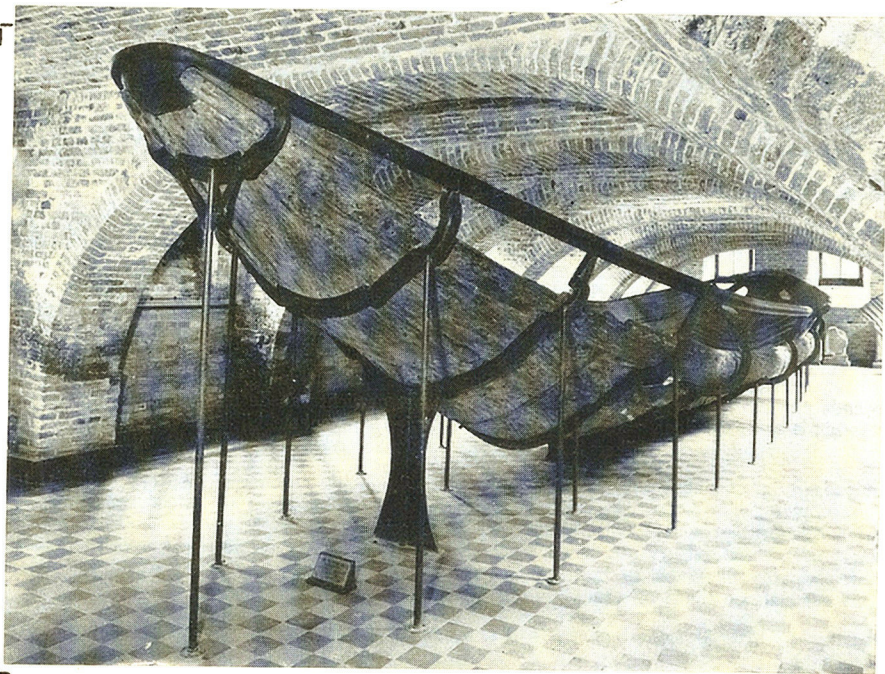


CENTRAAL MUSEUM UTRECHT



THE UTRECHT SHIP

The Utrecht ship is often wrongly considered to be either a Viking ship or a Roman one. Both qualifications are misnomers, as nowadays there is small doubt left about its being indigenous and Carolingian.

An analysis of the carbon, applying the C14 method, proved with almost complete certainty, that the timber of which it was built was felled shortly before 800 A.D.

On December 5th 1930 the ship was found during canal-digging activities at the present Van Hoornekade between Utrecht and Zuilen, at a level of 2.30 metres under N.A.P. (i.e. the present sea level at Amsterdam), the site being at a distance of about 427 metres from the present western bank of the Vecht. This now dead river carried during Carolingian times the main stream of the Rhine and as there were no dykes, it continually shifted its bed after inundations. The ship was found lying in virgin layers of sand and it had foundered from mere age and not as a result of any calamity.

We may presume this solidly built vessel will have served its purpose for a fairly long time. Only when it had become irreparably waterlogged and all the inside work its crew still had any further use for, had been removed, was the empty hull abandoned on the river bank. Here it sank further and further into the mud which accumulated as a result of ever repeated inundations.

The thick and heavy layer of earth that came to lie on it in this way had two results : it was the reason that the planks of the hull became disjointed so that they were found lying side by side but on the other hand the remains were shut off from air and water so that the hull was preserved almost completely.

It was resolved to join them again on the spot, to be transported to the Centraal Museum in a wooden encasement as a future exhibit, instead of taking the disconnected planks to the museum to be joined afterwards.

Here it was introduced by way of a temporary hole made in the wall, into a long cellar, the former kitchen of the 16th-century nunnery renovated in our times to house the museum collections. In this locality it was built up, preserved from woodworm, and only slightly restored, in order to prevent the public from getting a wrong idea which overdone restorations only too often cause.

Only a few parts of the upper edge were replaced, as this was indispensable for the solidity of the whole. Against woodworm and dry-rot a mixture of linseed-oil and creosote was applied, after a continual wetting of the planks had taken place in the meantime to prevent any cracking of the wood.

A remarkable trait is the use at so early a period, of those measures still employed in modern naval construction and adopted from the human body, such as the fathom, yard, foot, palm and inch. The ship's length e.g. is 10 fathom (17.80 metres), and the heavy and massive bottom plank has a length of 8 fathom (14.30 metres).

The vessel is joined together with wooden pegs, only the prow excepted, where a number of iron nails were found, used as we may presume, during repairs, i.e. not when the ship was being built. The seams were caulked with dried moss instead of with oakum as was customary later on. Moss is less durable, though on the other hand as it remains a spongy mass for a long time, it is to be preferred to resin, which the Germanic tribes also used, as water will rush in at the slightest widening of seams in case of caulking with resin.

A single hollowed-out oak was used for manufacturing the one piece bottom plank 14.30 metres long. This was effected by using iron axes and adzes only, and must have been quite a lengthy business, even in case many hands worked at it. The use of fire only may have speeded it up considerably.

The main point of interest is here the heightening of the

gunwhale of a dug-out, with the help of two broad planks on either side, in order to increase the loading capacity and to protect cargo from waves dashing over it.

Those planks were no longer, as was formerly the custom, lashed on to the ship's sides during foul weather with ropes, to be removed again during a calm. They had become a permanent part of the construction, and were nailed on during the building of the ship.

This makes the ship a unique example of a transition form between the dug-out being one single hollowed-out tree-trunk, and the later ships wholly constructed of separate planks.

The presence of numerous (unnecessarily) heavy floor-timbers inside, i.e. curved parallel beams strengthening the boards, suggests a Roman galley. The latter type however is for the most part an open ship provided with a keel. Instead of a true keel, i.e. a heavy beam fastened lengthwise under the ship's bottom for maintaining equilibrium, the Utrecht ship had a so-called false keel, a sheathing consisting of detachable broad and curved boards (in our case eight of them in number), which by broadening the bottom under water served the same purpose. Of this sheathing only a small particle was found. There was another difference from Roman craft besides, viz. an all-covering deck with in it behind the mast, a hatchway with at each of the vessel's sides, a gangway.

From Viking ships which also possessed a true keel, the Utrecht one differed because it lacked the high bow and stern, which are so typical for the former. A common feature on the other hand connecting our ship with Viking craft was that all of them were clinker-built, instead of having the flush seams of a later period.

Regarding Roman craft, the question of their having either already flush seams, or their being sometimes at least still clinker-built, is still unsolved.

No doubt ours was a seaworthy ship and not, as was often

assumed on the ground of similarities in form with later inland craft, a mere inland vessel exclusively. It must have been built by an able man gifted with an almost artistic feeling for line. Nowadays streamline is determined by means of tank tests with a small model. In our ship on the other hand, it was attained by mere surety of eye acquired through long experience, eventually also, by converting to scale the measures of a model possessing those beautiful lines.

The ship had at $1/3$ of its length a rectangular hole serving as a maststep in the 11th floor-timber. It was rowed with a single pair of oars and on both starboard and larboard by one pair of rowers at least, which in a vessel of such dimensions must have been a fatiguing and absolutely insufficient means of locomotion. This pair of oars was in foul weather the only help for a big and primitive steering-oar, which was fastened most peculiarly, to the ship's larboard.

The placing of the mast so far to the fore, in order to prevent the ship from turning on its course when gaining speed, was in those times a rare method, which became more common only in postmedieval times.

On the ground of this location, and of its having a deck without any traces of the fastening for more oars, it is to be concluded as a matter of course that the mast will have carried a large square sail.

Thus we may take for granted this vessel might be either poled, or towed along the banks of inland waters, though at least as soon as it came out into the open sea, it had to carry a sail as well.

The idea of its being a seaworthy ship is not at all to be wondered at, as for a long time navigation was synonymous with coasting-trade.

Our vessel, though it has the considerable width amidship in common with praams and similar inland craft, both

ancient and modern, where speed is not of importance, is at the same time of a slender and very solid build.

This kind of shape together with the position of the prow as well, which has been raised a foot above the poop, show us a vessel meant to be swift and seaworthy.

For the Netherlands this ship is unique and we can surmise that both our mediaeval sea-going vessels and those intended for the inland waters were developed from the Utrecht type but the exact manner this took place cannot be shown as yet.

Definitive elucidation of those stages will mainly depend on any future finds in the soil of the country, together with new views on naval archaeology in general.

For the study of this branch of science the Utrecht ship offers an intriguing and highly remunerative starting point.

C E N T R A A L M U S E U M U T R E C H T

Art before 1850
Agnietenstraat 1

telephone 15541/42
bus 2

Paintings Utrecht School

Sculptures

Utrecht silverware

Ceramics (a.o. Delft)

Period rooms - unique doll's house

Costumes

Utrecht ship

Archaeological finds from the Roman era

Art after 1850
Maliebaan 42

telephone 25854
bus 3

Paintings of Dutch masters

Sculptures

Period rooms

Applied art

Open : Weekdays 10 a.m. - 5 p.m.
Sundays 2 p.m. - 5 p.m.

