

ICONOGRAPHY OF THE ROMAN RAFT

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Abstract: Very few representations survived from Roman times. Five of them come from two church mosaics from Italy, and one from a relief on a sarcophagus in Germany. Two log rafts and four lumber rafts, presumably sustained by inflated animal skins, appear on these iconographical examples. It appears that the rafts using inflated skins had centones on the sides and underneath for protection.

Rezumat: Numai câteva reprezentări de plute din epoca romană au supravieţuit. Cinci dintre ele se află pe mozaicuri din două biserici din Italia şi una se află pe relieful unui sarcofag din Germania. Două plute din buşteni şi patru din scânduri, probabil susţinute de burdufuri umflate, apar pe aceste mozaicuri. Se pare că plutele susţinute pe burdufuri erau protejate pe laterale şi pe dedesubt de centones.

Rafts, made of logs and beams, called *ratiariae*¹, are the primary and the oldest form of water transport. The term *schedia* has similar meaning. It is possible that the term *ratis* derives from *remus* (paddle), probably because the paddles of a ship would appear as a raft made of beams². As a river craft, *ratis* had several different meanings. By extension, it was used to describe almost any means of navigation, from maritime ships to Charon's boat³.

With variable shapes and sizes, rafts had different applications. A raft was a quick solution for those who risked crossing streams and did not have the necessary resources, the technical knowledge or time to build boats⁴. Also, rafts were used in trade due to a triple advantage: the logs that formed the raft would be sold, a quantity of goods – and possibly passengers – was transported, and could quickly navigate areas appreciated to be dangerous for ordinary vessels⁵.

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¹ Isidor, *Origines*, XIX, 1, 9.

² DE IZARRA 1993, p. 117.

³ DE IZARRA 1993, p. 106.

⁴ DE IZARRA 1993, p. 118.

⁵ DE IZARRA 1993, p. 118.

Floors, cabins or masts could be added to increase surface area and empty containers or inflated skins to increase buoyancy⁶.

In contrast with hundreds of ship and boat representations from the Roman era, rafts are very rarely depicted⁷: only six seem to have survived.

Iconography

1. Mosaic from the ceiling of the Temple of Bacchus, today St. Constantia church, Rome⁸.

Two Eros representations appear on a raft, one of them fishing with a trident (Fig. 1). The other is fixing a stick belonging to a vertical structure that supports a fishing net or is the space where the fish was deposited. The raft is composed of seven logs lashed together near the ends. We suspect the raft had a rectangular shape, even if the artist represented it as a trapezoidal one.

2. Relief from a sarcophagus with a scene of Cupid, Psyche and Eros (Fig. 2). Unknown origin. Stored in Germany⁹.

In the lower register several characters appear on a raft made of two equal, overlapping rows of logs. The logs are fastened together by three lashings located in the middle and at both ends. One character situated on the right side uses a paddle to row while sitting.

Basilica of Aquileia mosaics

In the Constantinian basilica of Aquileia, there is a famous mosaic pavement depicting the story of Jonah.

3. The prophet is disgorged onto a convenient platform¹⁰, represented as a rectangular raft consisting of a single row of planks (Fig. 3). The way the planks were lashed together remains unclear. Underneath the raft a structure is visible and only its front is figured. This structure is composed of two horizontal parallel bands, overlapping, equal in size, separated by a light-colored line. Each of these two horizontal bands is further divided unevenly by vertical cuts, generating almost rectangular shapes, of different color.

4. Jonah is resting on a raft under a trellis¹¹ with a vine wrapped around it, bearing leaves and fruits (Fig. 4), definitely not a tree¹². This image depicts Jonah resting after he arrived near the city of Tarsus, when God made a vine grow to protect him from sunlight¹³.

This raft consists of a single row of 12 planks and has a rounded, hydrodynamical end. The way the planks were lashed together remains unclear.

⁶ GREENE 1986, p. 19.

⁷ PEKÁRY 1999, *passim*.

⁸ RICH 1860, p. 546.

⁹ PEKÁRY 1999, p. 26-27, fig. D-44.

¹⁰ LAWRENCE 1962, p. 295; GABUCCI 2000, p. 115.

¹¹ LAWRENCE 1962, p. 295.

¹² GABUCCI 2000, p. 115.

¹³ Jonah 4, 5.

Under this raft is also a horizontal band, unevenly divided by vertical cuts, generating almost rectangular shapes, of different color. Unlike the raft no. 1, the structure provides some technical details, namely four black lines, approximately vertical, situated outside (over) the coloured band, in the front and corners. Most likely those are pieces of wood (perhaps branches), applied at approximately regular intervals, blackened due to the action of the water. It must be noticed that the waves indicate the structure is partially submerged into the water.

5. A *putto*¹⁴ or a *cupid*¹⁵ fishing on a square-shaped raft (Fig. 5). On the raft, there is a basket with small fishes and a single large one. The raft is formed of at least four planks and the structure underneath is similar to the ones mentioned above. Here also, two or three vertical black lines representing blackened pieces of wood are outside (over) the colored structure and appear at regular intervals (in the middle and at the corners). The structure is partially submerged into the water.

6. A *putto*¹⁶ or a *cupid*¹⁷ fishing on a square-shaped raft (Fig. 6). The raft is formed of 4-5 planks and has underneath a structure similar to the ones mentioned above. The structure is visible not only from the front but also from the side. Here also curved black lines appear outside (over) the mentioned band, in the middle and corners. The structure is partially submerged into the water.

Analysis

There are only a few representations of rafts from Roman times. Their study led us to the following conclusions:

First, the iconography shows that the rafts can be classified into two main groups according to the way the wood is worked: carved and squared (beams, planks) versus uncarved round (logs), corresponding to what has been ethnographically observed as well¹⁸. Thus, rafts made of logs are represented on the mosaic from the temple of Bacchus and on the relief from the sarcophagus in Germany (Figs. 1-2). According to the available representations, there were rafts made of a single row of logs and rafts made of two, overlapping rows. The simplest method of extending a raft is to add another deck of logs above the main logs which provides the raft with more „freeboard“ structure above the waterline so that perishable cargo may be kept secure and dry, as well as confinig animals and children¹⁹.

The shape of the rafts allow for a second classification. While some are rectangular or square-shaped, one has a rounded end, probably indicating a specific purpose – transport or leisure.

¹⁴ GOUGH 1973, p. 75, fig. 66.

¹⁵ TOYNBEE 1969, p. 188-9, fig. 30.

¹⁶ GOUGH 1973, p. 75, fig. 66.

¹⁷ TOYNBEE 1969, p. 188-9, fig. 30.

¹⁸ MARC 2005, p. 270.

¹⁹ MCGRAIL 1987, p. 50.

Unfortunately, the degree of the representations does not allow us to identify any metal bindings used to ensure the components of the rafts, such as those three items found in the early 60s in the large deposit of iron artifacts in the Roman camp of Heilbronn - Böckingen, situated on the Neckar River²⁰.

Besides the rafts from the mosaic in the temple of Bacchus and the relief on the sarcophagus from Germany, all the other rafts have structures located underneath. Most likely, inflated animal skins were used to increase buoyancy. The associated framework is found in all the representations from the Aquileia mosaic. But what are those elements of the structure that appear underneath all four rafts from Aquileia, respectively the horizontal bands made up of vertical cuts, sometimes rectangular in shape, of different colour ?.

It appears that the submerged part of the craft, especially if composed of animal skins, needed protection. In addition to rocks, stones, pieces of wood extruding from the riverbed, water carried moving branches and other objects all of which could have perforated the inflated skins. In various parts of the world where rafts on inflated skins are still used, the structure underneath is protected by wattlework. But, in this case, no wattlework is involved.

In inscriptions, *centonarii* were mentioned frequently. Etymologically, their name comes from *cento*, a blanket made from old rags²¹. *Centio/centunculum* can refer to the rags used to patch up torn clothes. It can also be used to refer to old, torn or dirty garments²². *Centones* were used by the Romans as clothing for slaves, bed coverings or for other purposes²³. In ancient Rome, where this cheap merchandise was largely used for fighting fire and for protecting army tents and war machines against enemy projectiles, trade of *centones* was an important and lucrative business²⁴. In fact, the analysis of the inscriptions dispersion shows that *collegia centonariorum* clustered in northern and central Italy as well as southern Gaul²⁵.

It also seems that in antiquity rags were cut into squares or rectangles of some 10 to 15 cm²⁶. We believe this is the explanation for the unusual detail underneath the four rafts. Colored stripes, made of small rectangles colored differently are *centones*, cheap coverings made from recycled pieces of rags, used for the protection of the inflated skins on the sides and underneath.

Therefore, the rafts also fall in two clearly defined categories: buoyed rafts and simple rafts²⁷. As such, it was wrongly stated that no ancient representations exist of rafts sustained by inflated skins beside the one that appears on an Assyrian relief²⁸.

²⁰ ELLMERS 1974, 142-3; JOHNSTONE 1980, p. 161.

²¹ SMITH 1853, p. 143.

²² LIU 2009, p. 63-64.

²³ SMITH 1853, p. 143.

²⁴ SMITH 1853, p. 144.

²⁵ LIU 2009, p. 30.

²⁶ MANNERING 2000, p. 283.

²⁷ HORNEILL 1946, p. 20.

²⁸ SCHLIPPSCHUH 1974, p. 103.

Archaeological evidence

Due to simplicity of the construction, raft elements are far less distinct than timber belonging to other types of crafts and thus are not as easily recognisable when found²⁹.

A raft was found in 1938 or 1939 near Strasbourg (départ. Bas-Rhin/F), in the riverbed of the Bruch tributary. The craft was nearly 14 metres long and about two metres wide, consisting of three square beams of approximately equal width (Fig. 7). Overall dimensions were of 13.95 x 1.96 metres. The central beam had 12.35 x 0.7 metres³⁰. The raft presented a rounded end which also was hydrodynamic flattened. Unlike the other two beams, the one in the middle was shorter at the other end and had a hole which did not exist on the other two beams.

Towards the „bow“, the three beams had, on the side, horizontal pegs to fasten them together. The rounded end and the pegs would indicate that beams were missing on each side. It was assumed that the raft was used to transport construction stone because a jetty used for that purpose was discovered in the area³¹.

It should be noted that the Strasbourg raft and the raft no. 2 on the Aquileia mosaic are very similar. Not only they both have a rounded end, but also in the „stern“ area of the Strasbourg raft, a vertical pole was fixed in the square perforation in the beam and another one was probably fixed (nailed) outside the „bow“, as it is shown on the mosaic as well. The two vertical poles would sustain a horizontal pole, thus forming a trellis on which a climbing plant (or any other shading device) could be installed. Therefore, the raft from Strasbourg was a leisure craft and is missing one, maybe two planks on both sides. According to the rounded shape of the „bow“, this raft could not have been formed of 12 planks, as the raft from the mosaic was. The analogy with the mosaic shows that this craft was definitely supported by inflated animal skins, covered with cloth for protection and the beams were fastened with horizontal pegs the same way the planks of the rafts from the mosaic were held together.

The Strasbourg raft was not the only one built in this fashion. Another raft made of lumber was found at Mainz – Löhrrasse, made of three beams, with a square section (Fig. 8). Their length varied between 9 and 10 metres and the width varied between 10 and 30 centimetres. Two had a hydrodynamic flattened end. One of the beams has a horizontal and a vertical hole near the flattened end. Each of the other two beams has a horizontal hole near the end³². Obviously, the holes indicate that the beams were attached with horizontal pegs, similar to the Strasbourg raft³³. One of the three beams found in Löhrrasse could be dated. The last identified growth ring indicates the year 246. If we consider the absent external rings, the log from which the beam originates was probably cut around

²⁹ GREENE 1986, p. 19.

³⁰ MCGRAIL 1987, p. 54.

³¹ AUDIN 1985, p. 61.

³² BAUER 2001, p. 33.

³³ BAUER 2001, p. 33-34.

275³⁴.

To give the raft a measure of directional stability, it must be longer than broad, a shape which naturally arises when logs are placed longitudinally side by side³⁵. That is why the rafts were represented correctly on the mosaics – the square ones are stationary fishing platforms and the rectangular ones are designed for transport and leisure.

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³⁴ BAUER 2001, p. 34.

³⁵ MCGRAIL 1987, p. 44.



Fig. 1 - Raft from a mosaic in the Temple of Bacchus, today St. Constantia church, Rome. (After Rich 1860, 546).



Fig. 2 - Raft in a relief from a sarcophagus stored in Germany. (After Pekáry 1999, 26-27, fig. D-44).



Fig. 3 - Raft on a mosaic pavement in the basilica of Aquileia.
(After Gabucci 2000, 115).



Fig. 4 - Raft on a mosaic pavement in the basilica of Aquileia.
(After Gabucci 2000, 115).



Fig. 5 - Raft on a mosaic pavement in the basilica of Aquileia.
(After Gough 1973, 75, fig. 66).



Fig. 6 - Raft on a mosaic pavement in the basilica of Aquileia.
(After Gough 1973, 75, fig. 66).

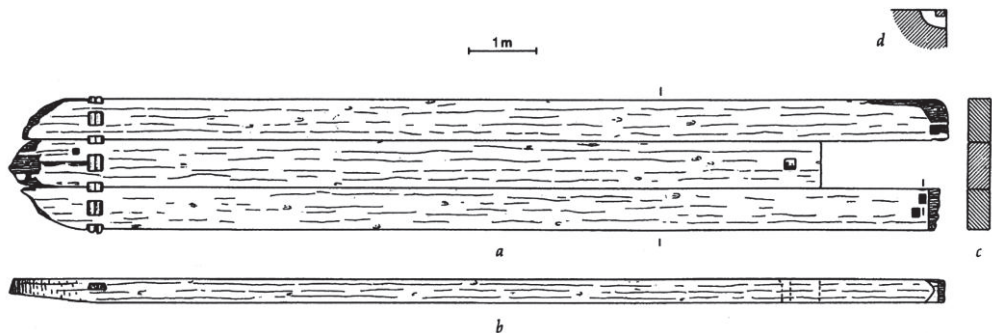


Fig. 7 - A raft found near Strasbourg, in the riverbed of Bruch tributary.
(After McGrail 1987, 54).

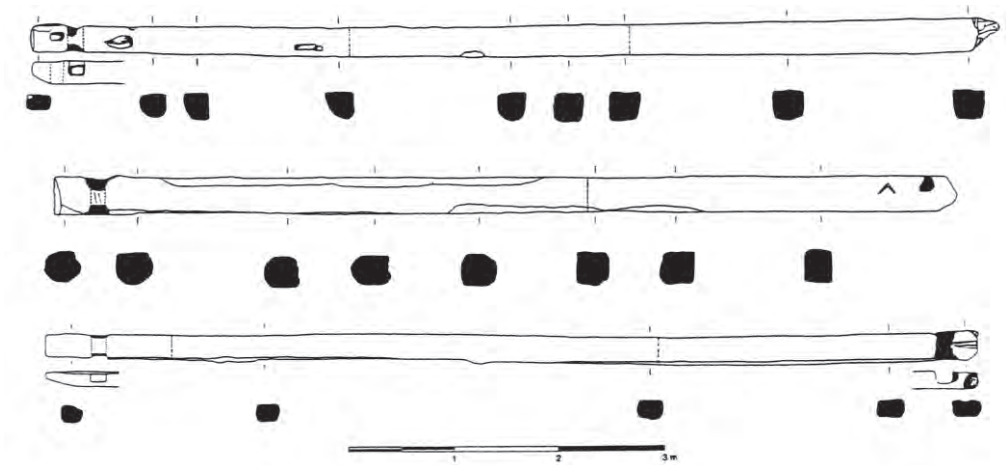


Fig. 8 - A raft found at Mainz – Löhrstrasse. (After Bauer 2001, 33).