ANCIENT SHIPS FROM CISSA (island of Pag, Croatia) in their cultural and historical context

Giulia Boetto
Aix-Marseille University, CNRS, Centre Camille Julio, Aix en Provence, France
boetto.msh-aix.inria.fr

Irena Radic Rossi
University of Zadar, Department of Archaeology, Zadar, Croatia
irradicross@gmail.com

The international interdisciplinary research project Cissa Antiqua focuses on the study of the coastal, partly submerged site of Cissa (island of Pag, Croatia), and its historical and geographical context. The project is supported by the Ministry of Culture of the Republic of Croatia, the Croatian Science Foundation, the University of Zadar and the Municipality of Novigrad, and the French Ministry of Foreign Affairs (MAEFD), the Aix-Marseille University and the French National Centre for the National Research (CNRS).

GEOGRAPHICAL AND HISTORICAL CONTEXT

During the time of the Roman conquest a Liburnian population inhabited the island of Pag. In the 1st c. AD, Pliny the Elder mentioned it under the name of Cissa pontina (Hist. Nat. 3, 146). The island was called Cissa until the 14th century, when the centre of power moved to the town of Pag. Linguistic research confirms that the name Cissa is preserved in the modern toponym Ciska, referring to the bay which absorbs in numerous traces of life from the Roman period. The local legends talk about the mysterious city of Cissa that, punished by God, sunk into the sea due to the evanescence of its inhabitants. According to the results of the recent research campaigns, it is evident that the bay of Cissa preserves remarkable remains of a multi-structured settlement, whose important phase seems to be identifiable with a large and well-organized maritime villa property of the senatorial family Galbaezi; for this reason we prefer the toponym Cissa Antiqua, the systematic topographic documentation and study of the coastal and underwater structures continue to reveal interesting archaeological features.

THE HARBOUR STRUCTURES

The harbour zone is situated in the shallow waters along the NE edge of the bay of Cissa. In front of an impressive terrace wall that belongs to the remains of a monumental Roman marine facade related to the coastal imperial phases of the site, in order to facilitate the description of work in progress, the area was divided into four zones (A, B, C, D). In the zones A, B excavated between 2009 and 2012, the first shipwreck, named Ciska 1, was found. It was removed, after being filled with stones, to fortify the same pier-like wooden coastal structure, composed mainly of wooden planks and raw stone material.

Moving to the west, zone C was excavated in 2012 and 2013, revealing the presence of an impressive wooden structure forming the base of a second pier-like structure. It is composed of rectangular caissons, made of horizontal logs kept in place by vertical poles driven through rectangular openings, then filled with stones. Further westwards, zone D excavated from 2012 to 2013, lay at the southern extremity of a breakwater protecting a mooring area from the southern winds. In the rich cultural layer of this area, a Roman wooden anchor was discovered in 2005. In this zone, the remains of a second reved ship, Ciska 2, were found. This ship was filled with stone blocks and sunk on purpose, forming the fundament of a jetty.

CASKA 1

The remains of the beached boat Ciska 1 are 8 m long and 1.60 m wide. The transverse section at the main frame has a flat frame with a round turn of the bilge. The longitudinal section is flat. A keel, six strakes on each side and seven floor-timbers were found in situ. Several loose pieces belonging to the boat structure were found displaced around the shipwreck. Due to the lack of some indicative elements, it was not possible to establish the position of stem and stern.

The keel was made of evergreen oak (Quercus ilex L.). It was scarfed on the extremities, in order to accommodate the stem and the stem linters. The 3.5 cm thick garboards were laced to the keel.

Two planks connected by an oblique scarf composed each garboard strake. Planks were 1.5-2 cm thick, with a maximum width of 16 cm. Eleven planks connected by oblique scarf comprised the five strakes of the west side.

A repair was observed on the east side. Planks were all made of beech (Fagus sylvatica L.) and were laced to each other. The stitching pattern was similar to that observed on the shipwreck found at Nin/Zaton and Pula. The seams were blocked by small tapered pegs, mostly made of fir (Picea abies Mill). The pegs were driven from the inner side of the hull at an average space of 2.4 cm. The lacing channels were perpendicular cut through the thickness of the planks. The outer internal edges of the planks bear the traces of small rectangular recesses for protecting the lacing cords. A wadding pad was placed at the top of the junctions between planks, inside the hull, and held tightly by the lacing cords. A thick layer of pitch completed the watertight system.

Seven floor-timbers survived in place, and traces of an additional seven were identified. The general framing pattern was a sequence of floor-timbers with probable half frames on the extremities. These frames were made of deciduous oak (Quercus sp) rectangular in section, they were spaced 39.5 cm.

The frames were connected to the planking by tapered treenails driven from the outer side of the hull. The lower section of the frames was modelled with a series of openings above the seams, in order to avoid crushing of the wadding pad. The openings at the level of the bottom were quadrangular in shape and covered, having the additional function of timber holes. From the turn of the bilge and along the sides, the openings were rounded or triangular in shape, and rested tight on the wadding pad. The most interesting pieces among the displaced frames were the three sculpted fustics, which can be compared to the similar features on the Helsinki- neum boat (Italy, 1st c. AD). These fustics rested on the gunwale, while their lateral grooves housed washboards. Hypothetically, we can assume that these sculpted fustics were placed in the room-and-space between the floor timbers.

The hull structure was based on a shaft-first concept, and its shape was based on a longitudinal stove concept. The boat was probably propelled using both oars and sail, although no trace of propulsion or steering devices has been discovered on the shipwreck. The construction of the boat Ciska 1 has been dated between 42 AD and 102 AD (AMS Radiocarbon dates Lr 5267 to Lr 9270).