

MEDIEVAL SHIPWRECK FROM RÁCKEVE

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Medieval written sources leave no doubt that river navigation played a key role in the period's traffic and transportation. At the same time, we know very little about what type of boats were used on the Danube and how they were built. Underwater archaeological research and a few recently discovered auspicious finds have considerably enriched our knowledge.

The remains of a ship came to light in December 2011 at Ráckeve (Besnyő) in front of the Waterworks on the bank of the main Danube channel. The remains became visible owing to the river's low water level. Collectors of driftwood dismantled the remains and sawed them up. Locals from Ráckeve notified the museum authorities who immediately made the necessary provisions and the remains were taken to the museum.

The remains of the wreck formed a roughly 1.5 m long and 1 m high pile when we inspected them. After documenting the finds, we immersed them in water to conserve the wood.

The first step in the digital documentation was a 3D laser scan of each plank, followed by the preparation of detailed photos. Next, we refitted the sawed-up elements, based on the width of the planks, their veining and the holes for the treenails for fastening the ribs. After refitting the planks, we found that the remains came from an 11 m long and 3 m wide flat-bottomed ship with V shaped bow and aft.

We were able to observe several details with relevance for how ships were built. The flat bottom was constructed from oak strakes (originally eight in all). The strakes were connected by L shaped ribs that were attached to the strakes with wooden treenails that were 19–20 cm long and had a diameter of 2.5–3 cm. The number of perforations for the treenails and their spacing indicated that the ribs were set 80–90 cm apart on the strakes (there had been eleven ribs in all). Each strake was attached to the ribs with two treenails, the single exception being the prow end of one strake that was attached with three treenails/holes.

The prow was V shaped. The end of the strakes was sawed off obliquely and the vertical strakes of the prow were set on the end of the sawed strake of the bottom. The ship's bottom and side were joined with



Fig. 1: The shipwreck on the occasion of the visit
(photo: Attila J. Tóth, Argonauta Research Team)



Fig. 2: Immersing of the wooden remains in water
(photo: Attila J. Tóth, Argonauta Research Team)

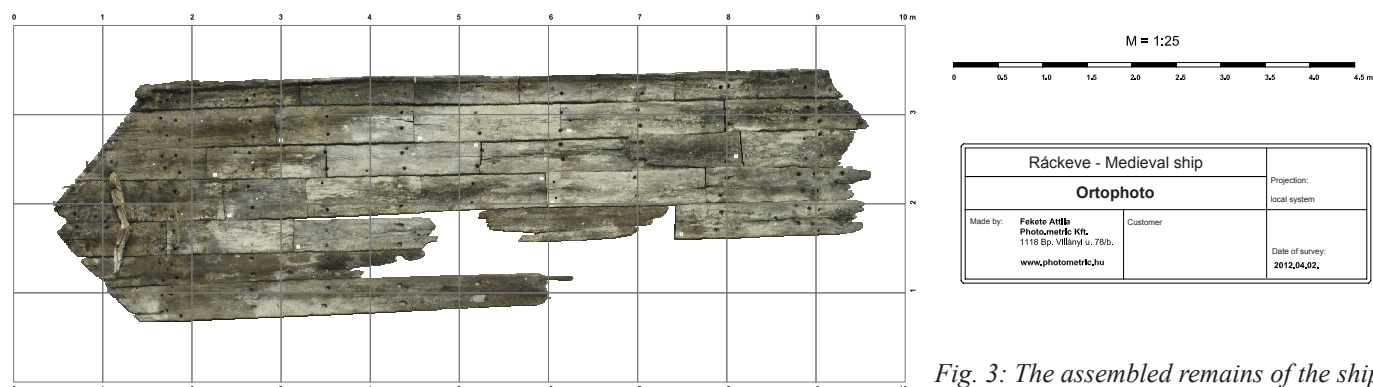


Fig. 3: The assembled remains of the ship

iron nails at this place. The caulking was reinforced with iron sintels (most of these perished when the ship was dismantled, but their corroded imprint survived on the edge of the strakes). The negative outline of the stempost can be made out on the strakes of the ship's bottom.

The most important structural element is the junction of the ship's bottom and side, which was carved from a single oak element with an L shaped section (so-called monoxyl technique). The ship can be assigned to the category of medieval extended-monoxyl ships in view of the flat bottom, the use of the monoxyl element, the use of wooden treenails for attaching the ribs, the limited use of iron nails and the use of sintels. Only two other similar ships have been recovered from the Danube to date: both were discovered in winter 2011, one near Dunaföldvár, the other in the Tahitótfalu/Dunabogdány area. The latter site still awaits a more detailed investigation. The wreck found near Dunaföldvár can be dated to the 1320s and was probably part of a ship-mill. Comparable finds from Poland date from between the early 13th and the mid–15th century. Even though several samples from the shipwreck were submitted to dendrochronological analyses, the Ráckeve samples could not be fitted into any of the series known from Hungary, Austria or Germany. It is possible that the ship was constructed in a shipyard on the lower reaches of the Danube, an area for which tree-ring series are not available.

No iron nails were found among the remains of the ship from Dunaföldvár. In contrast, iron nails were used for attaching the ribs on the ship dating from after 1615 found at Solt, and it is therefore possible that the wreck from Ráckeve, representing a rare and important relic of medieval shipping, was used in the period between the two. It is our hope that the conserved wood remains can eventually be removed from the water and presented to the public.¹

FURTHER READING

TÓTH, JÁNOS ATTILA

[Adatok a kora újkori közép-Duna-medencei hajók régészetéhez. In: A középkor és a kora újkor régészete Magyarországon, szerk. Benkő Elek – Kovács Gyöngyi, 871–884. Budapest: MTA Régészeti Intézete, 2010.](#)

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