



# PROBNO ISTRAŽIVANJE TREĆEG ANTIČKOG BRODA NA TRSTENIKU U KAŠTEL SUĆURCU

## Trial excavation of the third Roman ship at Trstenik in Kaštel Sućurac

Godine 2002. Neno Rokov uočio je u plitkom moru na Trsteniku, na istočnom kraju Kaštel Sućurca, cjelovit prošupljeni keramički dolij koji je iste godine izvađen iz mora i pohranjen u Hrvatskom pomorskom muzeju. Iako je podmorski dio nalazišta tek tada uveden u službenu evidenciju, on je već otprije bio poznat lokalnom stanovništvu, o čemu svjedoči podatak objavljen u *Kaštelanskom zborniku* (Delić 1994). Na nalazištu su u isto vrijeme zamijećene i dvije skupine hispanskih globularnih amfora tipa Dressel 20, koje su dijelom istražene tijekom idućih godina. Nastavkom istraživanja potvrđeno je i postojanje linearne strukture izrađene od dasaka i drvenih pilona, koja se proteže paralelno s obalom u dužini od oko 80 metara, a u zapadnom dijelu nalazišta zaokreće prema sjeveru. Riječ je o ostatcima operativne obale iz koje je, vjerojatno, pri sredini izlazilo malo pristanište kojem

In 2002, Neno Rokov noticed in the shallow sea at Trstenik, at the eastern end of Kaštel Sućurac, a complete perforated ceramic dolium, which was taken out of the sea the same year and housed in the Croatian Maritime Museum. Although the underwater part of the site was only then entered into official records, it had already been known to the local population, as evidenced by the information published in *Kaštelanski zbornik* (Delić 1994). At the same time, two groups of Hispanic globular amphorae of the Dressel 20 type were also noticed at the site, which were partially explored in the following years. The continuation of the research confirmed the existence of a linear structure made of planks and wooden piles, which runs parallel to the coast for about 80 meters, and in the western part of the site it turns northwards. These are the remains of the operational quay, from which, probably, a small pier came out near the



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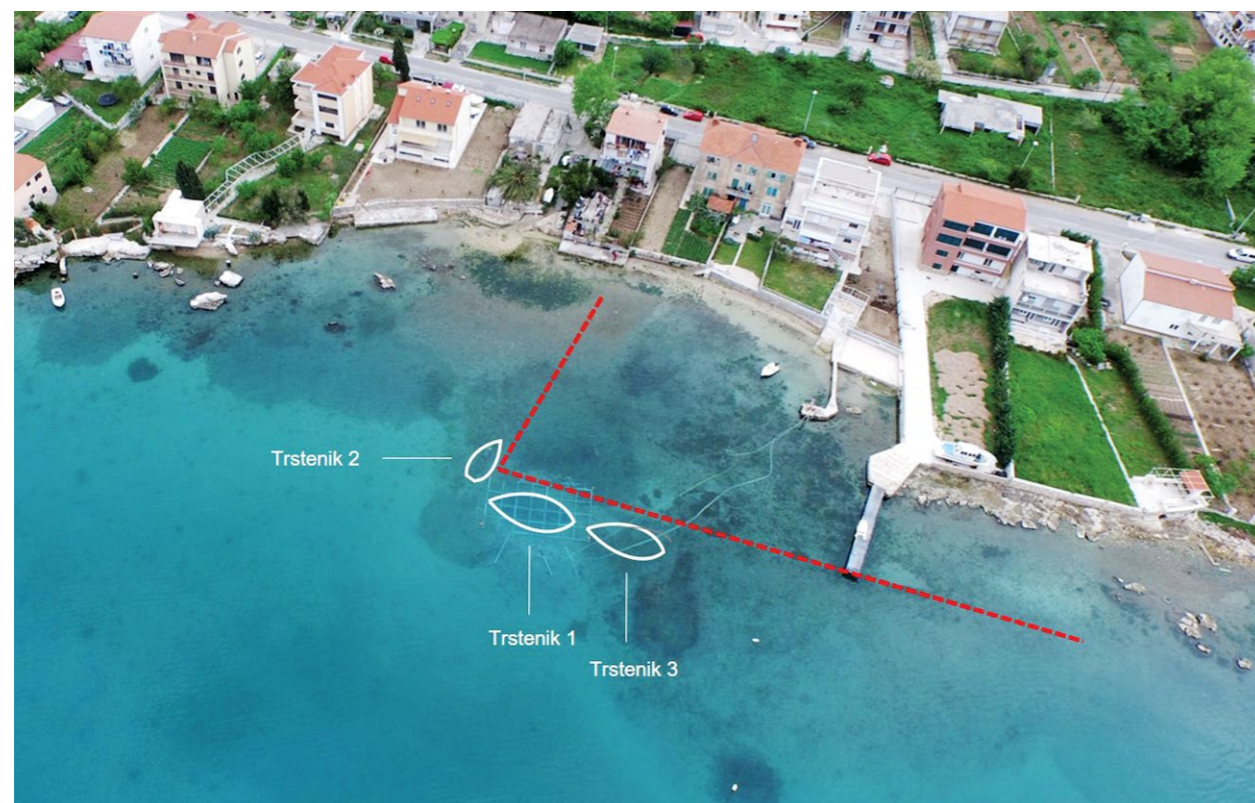


se pristupalo pomoću hodne površine položene na drvene pilone, a bilo je izrađeno pomoću nekoliko desetaka amfora tipa Dressel 20 koje su s istočne i zapadne strane također bile učvršćene drvenim pilonima.

Godine 2006. uz jugozapadni kraj linearne konstrukcije Neven Lete otkrio je ostatke broda ispunjenog velikim kamenjem i namjerno potopljenog s ciljem učvršćenja operativne obale. Godine 2007. provedeno je probno istraživanje kako bi se utvrdilo do koje je mjere brod očuvan, a sustavno istraživanje uslijedilo je 2012., 2015. i 2020. godine (Radić Rossi, Ruff 2021). Nakon toga brodska je konstrukcija omeđena kamenjem, nekad iskorištenim za ispunu broda prije potapanja, a dobivena površina ispunjena je kamenim materijalom kako bi na morskom dnu ostalo zabilježeno mjesto gdje se i dalje nalazi. Tijekom istraživanja 2020. godine Neven Lete i Vedran Dorušić otkrili su ostatke još dvaju brodova. Brod Trstenik 2, koji leži zapadno od broda Trstenik 1, istražen je 2021. godine, a ove je godine brod Trstenik 3, istočno od broda Trstenik 1, detaljno definiran i pripremljen za nastavak istraživanja. Sva tri broda bila su ispunjena velikim kamenjem i namjerno potopljena kako bi se učvrstila priobalna konstrukcija kojom je bila ograđena operativna obala velikog gospodarskog kompleksa

middle, which was accessed by means of a walking surface laid on wooden piles, and it was made using several dozen Dressel 20 amphorae, which were also fixed on the east and west sides with wooden piles.

In 2006, along the southwestern end of the linear structure, Neven Lete discovered the remains of a ship filled with large stones, and scuttled to strengthen the operational quay. In 2007, a trial excavation was conducted to determine to what extent the ship was preserved, and systematic research followed in 2012, 2015 and 2020 (Radić Rossi, Ruff 2021). After that, the ship's structure was bordered with stones, which were once used to fill the ship before sinking, and the resulting surface was filled with stone material in order to mark the place where it is still located on the seabed. During research in 2020, Neven Lete and Vedran Dorušić discovered the remains of two more ships. Ship Trstenik 2, which lies west of ship Trstenik 1, was explored in 2021. This year ship Trstenik 3, east of ship Trstenik 1, was defined in detail and prepared for continuation of the research. All three ships were filled with large rocks and scuttled in order to strengthen the coastal structure that enclosed the operational waterfront of the large economic production center that was located in this area in Roman times. Due to the construction of residential buildings and infrastructure, its remains on land were de-



Okvirni položaj antičkih brodova na nalazištu Trstenik u Kaštel Sućurcu (Arhiva projekta Trstenik)  
Approximate location of Roman-era ships at the Trstenik site in Kaštel Sućurac (Archive of the Trstenik project)



Priprema pumpi za pokretanje vodenih sisaljki (foto: J. Glamač)  
Preparation of pumps for starting water dredges (photo: J. Glamač)

koji se u rimsko doba nalazio na ovom prostoru. Izgradnjom stambenih objekata i infrastrukture njegovi su ostatci na kopnu već odavno uništeni, ali su se u plitkom moru očuvali jasni tragovi njegova postojanja.

Brod Trstenik 3 položen je u smjeru istok-zapad, s južne strane konstrukcije operativne obale izrađene od okomito postavljenih dasaka i drvenih pilona. Tijekom prvog dana istraživanja pripremljena je oprema za podmorske radove. Iznad nalazišta postavljeno je pomoćno metalno mrežište koje se sastojalo od 2 x 5 kvadrata, sveukupnih dimezija 4 x 10 m. Nakon postavljanja mrežišta uslijedio je podmorski iskop kojim je brodska konstrukcija u cijelosti definirana sa sjeverne i južne strane. Sa sjeverne strane iskopa bovom je označeno mjesto za privremeno odlaganje uklonjenog kamenja. Kao i u slučaju broda Trstenik 1, sa sjeverne je strane brodska konstrukcija odlično očuvana do visine konstrukcije operativne oba-

stroyed long ago, but clear traces of its existence have been preserved in the shallow sea.

Ship Trstenik 3 was laid in the east-west direction, on the south side of the structure of the operational quay made of vertically placed planks and wooden piles. On day one of the excavation, equipment for underwater work was prepared. Above the site, an auxiliary metal grid was placed, consisting of 2 x 5 squares, with overall dimensions of 4 x 10 m. After the grid was installed, underwater excavation followed, which completely defined the ship's structure on the north and south sides. On the north side of the excavation, a place for temporary disposal of the removed stones was marked with a buoy. As in the case of ship Trstenik 1, on the north side the ship's structure was well preserved up to the height of the operational quay structure, while on the south side it gave way under the pressure of the stones. Therefore, it is not clear whether its southern part has been completely recovered or if it is only a part of the



Iskop na prostoru broda Trstenik 3 (foto: I. Radić Rossi)  
Excavation in the area of ship Trstenik 3 (photo: L. Bogdanić)





... Krajnji pramčani ili krmeni dio broda Trstenik 3 (foto: M. Martinčak)  
 ... The end bow or stern part of ship Trstenik 3 (photo: M. Martinčak)

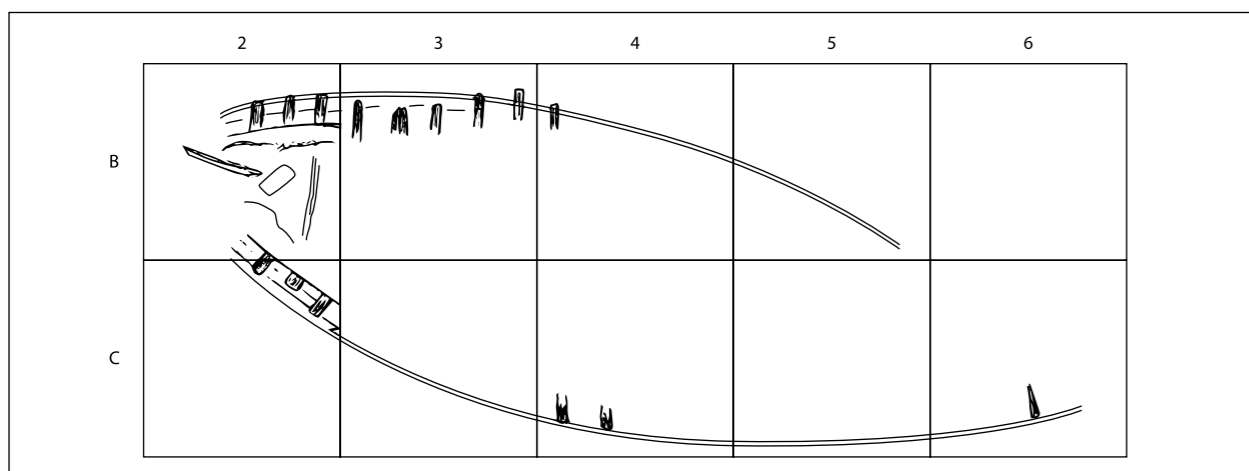
le, dok je s južne strane popustila pod pritiskom kamenja. Nije, stoga, jasno je li njezin južni dio u potpunosti otkriven ili je riječ samo o dijelu broda pod kamenim nabačajem, koji se zapravo proteže i dalje prema jugu.

Gledajući od zapada prema istoku, na brodu je sa sjeverne strane zamiječeno deset rebara, dok se s južne strane raspoznaje njih šest, od kojih su prva tri vjerojatno dijelovi sjevernih rebara. Za potrebe dokumentiranja situacije na morskom dnu sa središnjeg je dijela broda uklonjeno kamenje obraslo travom, tako da je na većini površine preo-

ship under the stone fill, which actually extends further to the south.

Looking from west to east, ten frames of the ship can be noticed on the northern side, while six can be discerned on the southern side, the first three of which are probably parts of the northern frames. For the purposes of documenting the situation on the seabed, rocks overgrown with grass were removed from the central part of the ship, so that only a layer of cleaner stones and accumulated sediment remained on most of the surface.

Simultaneously with the excavation in the area



... Skica otkrivenih obrisa broda Trstenik 3 u odnosu na pomoćno metalno mrežište (crtež: N. Čuk)  
 ... Sketch of the uncovered contours of ship Trstenik 3 in relation to the auxiliary metal grid (drawing: N. Čuk)



... Priprema za snimanje referentnih točaka na nalazištu pomoću totalne stanice (foto: N. Čuk)  
 ... Preparation for recording reference points at the site using a total station (photo: N. Čuk)

stao samo sloj čisteg kamenja i akumuliranog sedimenta.

Istovremeno s iskopom na prostoru broda Trstenik 3 nastavila se pratiti konstrukcija operativne obale u smjeru sjevera. Otkrivanje okomito zabijene daske na mjestu gdje je zaustavljen prošlogodišnji iskop pokazalo se izrazito zahtjevnim jer je obližnji potok nanio 20 do 30 cm sedimenta nad geotekstil postavljen preko tog dijela nalazišta. Konstrukcija je očišćena u dužini od desetak metara, ali se proteže i dalje prema obali. S njezine istočne strane uočena su još četiri drvena pilona. Iskop se odvijao u izrazito plitkom moru (oko 1 m dubine), što je znatno otežavalo i usporavalo radove. Tijekom posljednjeg dana istraživanja obavljeno je geodetsko pozicioniranje nalaza, brodska je konstrukcija zaštićena geotekstilom koji je potom prekriven slojem kamenja i sedimentom, a geotekstil i kamenje postavljeni su i na konstrukciju operativne obale.

of ship Trstenik 3, the structure of the operational quay in the north direction continued to be monitored. The discovery of the vertically driven board at the place where last year's excavation was stopped turned out to be extremely demanding because the nearby stream deposited 20 to 30 cm of sediment over the geotextile placed over that part of the site. The structure has been cleared in a length of about ten meters, but it still extends further towards the coast. On its eastern side, four more wooden piles were noticed. The excavation took place in an extremely shallow sea (about 1 m deep), which made the work considerably more difficult and slower. During the last day of the excavation, the geodetic positioning of the finds was carried out, the ship's structure was protected with geotextile, which was then covered with a layer of stones and sediment, and geotextile and stones were also placed on the structure of the operational quay.

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