



ISTRAŽIVANJE  
BRODOLOMA  
KOD OTOČIĆA  
GNALIĆA

*(Gagliana grossa, 1583.)*

Research of the  
shipwreck near  
the islet of Gnalić  
*(Gagliana grossa, 1583)*



Istraživanje brodoloma kod otočića Gnalića započelo je krajem šezdesetih godina prošlog stoljeća, pod vodstvom Ive Petricioli i Ksenije Radulić, u suradnji sa Sofijom Petricioli i Božidarom Vilharom, zaduženima za prihvatanje i konzervaciju izvađenih nalaza (Petricioli, Uranija 1970). U vremenu od 1967. do 1973. godine realizirano je pet zaštitnih istraživačkih kampanja (Petricioli 1981), a 1996. godine Zdenko Brusić pokušao je ponovno pokrenuti istraživanje, nažalost bez trajnijih rezultata. Nakon višegodišnjih nastojanja u tom smjeru, istraživanje je nastavljeno u sustavnom obliku 2012. godine, pod vodstvom Odjela za arheologiju Sveučilišta u Zadru. Tijekom proteklih godina utvrđeno je da se na morskom dnu nalaze ostatci velikog trgovačkog broda koji je prilikom potonuća legao na desni bok, s pramcem okrenutim u smjeru istoka, a krmom u smjeru zapada. Detaljno istraživanje u Državnom arhivu u Veneciji rezultiralo je pronalaskom više desetaka dokumenata dostatnih za identifikaciju broda koji je u trenutku potonuća nosio ime *Gagliana grossa* (Radić Rossi, Nicolardi 2019).

Osim hrvatskih stručnjaka, studenata arheologije i ronilaca, u istraživanju provedenom u vremenu

The research of the shipwreck near the Gnalić islet began at the end of the 1960s, led by Ivo Petricioli and Ksenija Radulić, in cooperation with Sofija Petricioli and Božidar Vilhar, who were in charge of reception and conservation of the recovered finds (Petricioli, Urania 1970). Five rescue excavation campaigns were carried out between 1967 and 1973, (Petricioli 1981), and in 1996 Zdenko Brusić tried to reinstate the investigation, unfortunately without lasting results. After several years



of efforts in this direction, the excavation was continued in a systematic form in 2012, under the auspices of the Department of Archeology of the University of Zadar. Over the past years, it has been established that on the seabed are the remains of a large merchant ship which, when she sank, lay on the right side, with the bow to the east and the stern to the west. Detailed research in the State Archives in Venice resulted in the discovery of dozens of documents sufficient to identify the ship that bore the name *Gagliana grossa* at the time of sinking (Radić Rossi, Nicolardi 2019).

Members of the research team from Germany, Spain, Turkey, Oman, Iran, Japan, the United States of America and Canada participated in the exca-



Istraživačka ekipa tijekom prvog dijela istraživanja 2022. godine (foto: D. Kurtin)  
Research team during the first part of excavations in 2022 (photo: D. Kurtin)



Glave malih drvenih bačava s pečatima trgovaca olovnim bjelilom (foto: I. Radić Rossi)  
Heads of small wooden barrels with seals of merchants trading in lead white (photo: I. Radić Rossi)

od 5. srpnja do 5. kolovoza 2022. godine sudjelovali su članovi istraživačkog tima iz Njemačke, Španjolske, Turske, Omana, Irana, Japana, Sjedinjenih Američkih Država i Kanade. Istraživačku kampanju financirali su Hrvatska zaklada za znanost (Projekt *NEREAS – Numerical Reconstruction in the Archaeology of Seafaring*, IP-2020-02-3420), njemačka udruga za promidžbu podvodne arheologije FUWA e.V. iz Koblenza, Sveučilište u Zadru i Institut za pomorsku baštinu ARS NAUTICA iz Pašmana.

Podmorskim istraživanjem bio je zahvaćen dio duž brodske kobilice, od sredine broda u smjeru pramca te središnji dio broda, u razini prve palube. U tom dijelu nalazi se niz malih bačava ispunjenih ingotima olovnog bjelila, od kojih je šest izvađeno i pohranjeno na desalinizaciju. Na trima glavama bačava očuvali su se pečati trgovaca. Iskopom u smjeru istoka potvrđeno je kako se niz malih bačava nastavlja, odlično očuvan, pod šljunkom iskorištenim u funkciji brodske balasta. U smjeru istoka

conducted between July 5 and August 5, 2022, in addition to Croatian experts, students of archaeology and divers. The research campaign was funded by the Croatian Science Foundation (Project *NEREAS – Numerical Reconstruction in the Archaeology of Seafaring*, IP-2020-02-3420), the German association for the promotion of underwater archeology FUWA e.V. from Koblenz, the University of Zadar and the Institute for Maritime Heritage ARS NAUTICA from Pašman.

The underwater excavation encompassed the part along the ship's keel, from the middle of the ship in the direction of the bow, and the central part of the ship, at the level of the first deck. That part yielded a number of small barrels filled with ingots of lead white, six of which were removed and stored for desalination. Merchants' seals have been preserved on three barrel heads. Excavation in the eastward direction confirmed that the series of small barrels continues, well preserved, under the gravel used as ship's ballast. The beams of the first deck





Izvadak iz virtualnog 3D modela dijela nalazišta s gredama prve palube (model: K. Yamafune)  
Segment of the virtual 3D model of the part of the site with beams of the first deck (model: K. Yamafune)

nastavilo se također pratiti grede prve palube nad kojima se pronalaze nizovi ravnih prozorskih stakala i stakala za ogledala.

Tijekom 2021. godine oslobođen je pristup glavnom brodskom rebru koje se nalazilo u sredini broda. Ove godine nastavilo se s otkrivanjem površine pod kojom se nalaze rebreni nastavci koji pripadaju glavnom rebru, kako bi se utvrdio osnovni oblik broda. Krajem istraživanja, u jednom od kvadrata u središnjem dijelu broda otkriven je olovni pečat s natpisom na objema stranama. Natpis je u trenutku pronalaska djelovao potpuno nečitko, ali su preliminarno čišćenje i konzervacija omogućili njegovu daljnju analizu, koja je još uvijek u tijeku. Iako je zbog velike količine brodskog balasta istraživanje relativno sporo napredovalo, ove je godine središnji dio broda pripremljen za detaljno čišćenje tijekom sljedeće istraživačke kampanje.

Arheološko i arhivsko istraživanje brodoloma broda *Gagliana grossa* rezultirali su pokušajem usporedbe veličine broda s veličinom



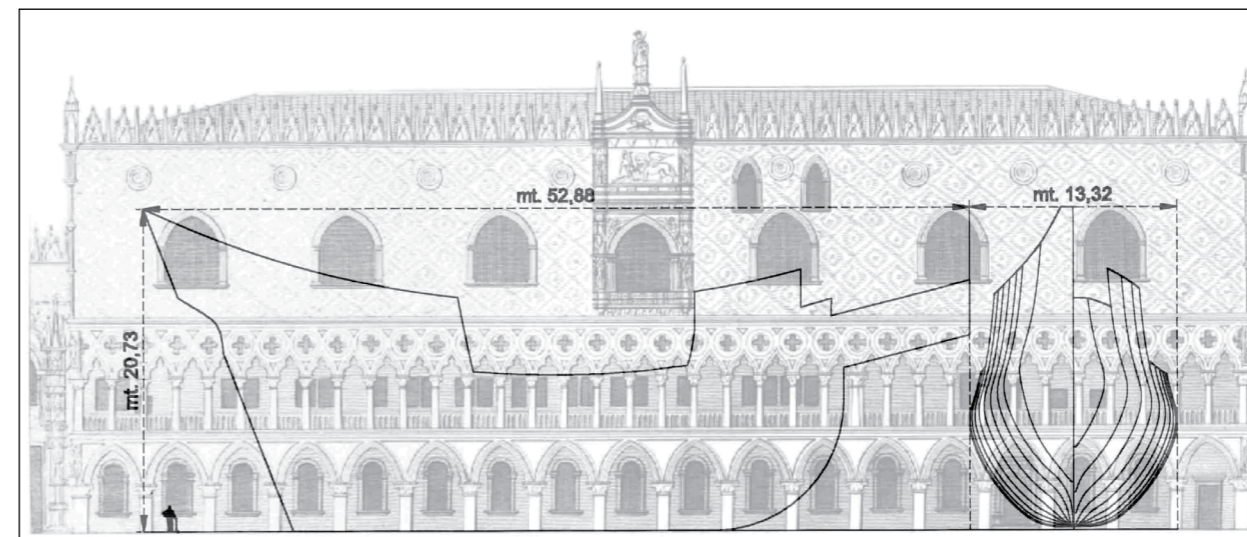
Olovni pečat (foto: N. Lete)  
Lead seal (photo: N. Lete)

continued spreading in the east direction, topped by rows of flat window panes and mirror glass.

Access to the main frame, located in the middle of the ship, was cleared in 2021. This year was also marked by continuation of the works on the surface under which the futtocks belonging to the main frame are located, in order to determine the basic shape of the ship. At the end of the research, a lead seal with an inscription on both sides was discovered in one of the squares in the central part of the ship. The inscription seemed completely

illegible at the time of the discovery, but preliminary cleaning and conservation enabled its further analysis, which is still ongoing. Although the excavation progressed relatively slowly due to the large amount of ship ballast, this year the central part of the ship was prepared for detailed cleaning in the next research campaign.

Archaeological and archival research of the shipwreck of the ship *Gagliano Grossa* resulted in an attempt to compare the size of the



Usporedba veličine broda s veličinom Duždeve palače u Veneciji (crtež: M. Bondioli)  
Comparison of the size of the ship with the size of the Doge's Palace in Venice (drawing by M. Bondioli)

Duždeve palače u Veneciji. Na manifestaciji *Europski dani arheologije*, održanoj od 17. do 19. lipnja 2022. godine, u Arheološkom muzeju u Zagrebu prikazan je dokumentarni film *The Voyages of Gagliana Grossa. Exciting Story of a Late Renaissance Venetian Merchant Ship*, realiziran sredstvima projekta PIMo (*People in Motion: Entangled Histories of Displacement across the Mediterranean, 1492–1923*), financiranog u okviru europskog programa COST (Gostinski 2022: 20). Dokumentarni film dostupan je na poveznici: <https://www.youtube.com/watch?v=3WxVEDzR120>.

ship with the size of the Doge's Palace in Venice. At the *European Days of Archeology*, held from June 17 to 19, 2022, the documentary film *The Voyages of Gagliana Grossa. Exciting Story of a Late Renaissance Venetian Merchant Ship* was shown in the Archaeological Museum in Zagreb, realized with the funds of the PIMo project (*People in Motion: Entangled Histories of Displacement across the Mediterranean, 1492–1923*), financed within the European COST program (Gostinski 2022: 20). The documentary film is available at the link: <https://www.youtube.com/watch?v=3WxVEDzR120>.

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