

Siniša Bizjak, Vinka Marinković

Antički sarkofazi s lokaliteta
Ribnjak u Solinu

The Ancient Sarcophaguses
from the Ribnjak Site in Solin

Siniša Bizjak
Sveučilište u Splitu
Umjetnička akademija
Odsjek za konzervaciju–restauraciju
Fausta Vrančića 17
HR, 21000 Split
e- mail: bizjaksinisa@gmail.com

Siniša Bizjak
University of Split
Arts Academy
Conservation and Restoration Department
Fausta Vrančića 17
CROATIA, 21000 Split
e-mail: bizjaksinisa@gmail.com

Vinka Marinković
Hrvatski restauratorski zavod
Porinova 2a
HR, 21000 Split
e-mail: vmarinkovic@h-r-z.hr

Vinka Marinković
Croatian Restoration Institute
Porinova 2a
CROATIA, 21000 Split
e-mail: vmarinkovic@h-r-z.hr

UDK: 726.829.025(497.583Solin)
Izvorni znanstveni članak
Primljeno: 13. 5. 2019.
Prihvaćeno: 31. 5. 2019.

UDC: 726.829.025(497.583Solin)
Original scientific paper
Received: 13 May 2019
Accepted: 31 May 2019

Sažetak

Tijekom zaštitnih arheoloških istraživanja godine 2007. na predjelu Ribnjak u Solinu pronađena je i definirana struktura zida građena od velikih kame-nih blokova i brojnih spolija. Odmah nakon prona-laska utvrđeno je da je dio pronađenih spolija neu-pitne arheološke, povijesne i umjetničke vrijednosti. Nedugo nakon toga uslijedila je njihova demontaža, a potom i konzervacija-restauracija. Konzervatorsko-

Abstract

During archaeological rescue excavations at the Ribnjak section of Solin in 2007, a wall struc-ture composed of large stone blocks and numerous spolia was found and defined. Immediately after its discovery, the determination was made that some of the spolia had indisputable archaeological, histori-cal and artistic value. Not long thereafter they were dismantled, followed by their conservation and

restauratorski radovi, poglavito radovi istraživanja materijala i čišćenja kamene strukture, omogućili su detaljniju i precizniju povijesnoumjetničku i stilsku analizu pronađenih ulomaka. U tekstu koji slijedi iznesen je kratak pregled pronađenog materijala, metodologije izvedenih konzervatorsko-restauratorskih radova te rezultati i zaključci povijesnoumjetničkih i fizikalno-kemijskih analiza na pojedinim primjercima.

Ključne riječi: Salona, lokalitet Ribnjak, sarkofag, pokrov sarkofaga, prokoneški mramor, pentelički mramor, konzervacija-restauracija

restoration. Conservation/restoration works, primarily involving examination of the materials and cleaning of the stone structures, facilitated a detailed and precise art-historical and stylistic analysis of these fragments. The text below provides a brief overview of the discovered materials, the methodology guiding the completed conservation and restoration works and the results and conclusions of the art-historical and physical-chemical analysis of individual samples.

Key words: Salona, Ribnjak site, sarcophagus, sarcophagus lid, Proconnesian marble, Pentelic marble, conservation/restoration

Uvod

Sredinom godine 2007. započeli su građevinski radovi na izgradnji mosta preko rijeke Jadro na predjelu Ribnjak u Solinu, u sklopu spojne ceste između Ulice dr. Franje Tuđmana i Marulićeve ulice. Na početku radova na desnoj su se obali rijeke, na dubini od otprilike 1 m ispod asfaltirane površine, pojavili pravilno obrađeni kameni blokovi i poklopac sarkofaga.¹ Djelatnici Ministarstva kulture - Konzervatorskog odjela u Splitu zaustavili su građevinske radove te njihov nastavak uvjetovali zaštitnim arheološkim istraživanjima.² Za obavljanje zaštitnih arheoloških istraživanja koje su financirali Grad Solin i *Cestar* d. o. o. odabrana je tvrtka *Geoarheo* d. o. o. iz Sesveta.³

U kratkom razdoblju trajanja zaštitnih arheoloških istraživanja pronađena je, definirana i dokumentirana struktura zida koja se protezala u smjeru istok-zapad u dužini od 26 m; izgrađena je u kasnoj antici, kao svojevrsna brana u svrhu regulacije toka rijeke Jadro.⁴ Brana je sa sjeverne strane građena od klesanih kamenih blokova, mramornih ploča te spolija različitih dimenzija, slaganih u nepravilnim horizontalnim redovima, na način da je u vlastitoj vertikali ravna, dok je južna strana građena uglavnom od kaskadno postavljenih spolija. Elementi od kojih se sastojala brana bili su vezani glinom, žbukom i željeznim spojnicama, a pod nanosom pijeska i sedre iz rijeke dodatno su se povezali u tvrdokornu kompaktnu strukturu.

Prilikom arheoloških istraživanja zaključeno je, što je prilikom demontaže⁵ i na terenu potvrđeno, da

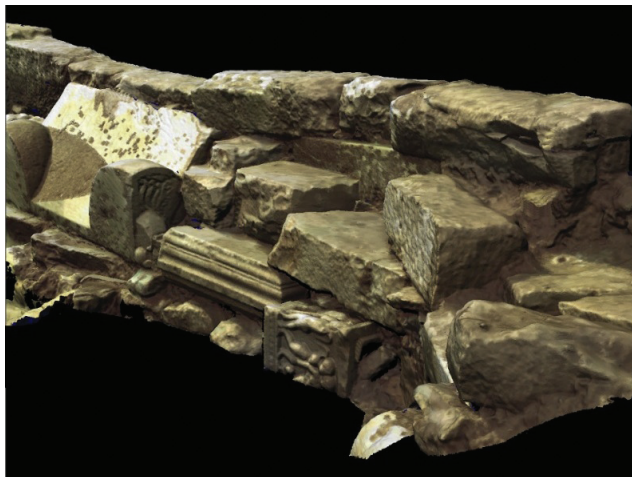
- 1 Izvještaj o zaštitnim arheološkim radovima: Solin - most na Jadru, *Geoarheo*, Zagreb, veljača 2008.
- 2 Konzervatorski nadzor: Saša Denegri, dipl. arheolog, Dubravka Čerina, dipl. arheolog.
- 3 Voditelji istraživanja bili su dipl. arheolog Goran Skelac i dipl. arheolog Ivana Milošević. Arheološki tim činili su apsolvanti arheologije Ana Grabundžija, Ranko Manojlović, Martina Rončević i Ivana Tadinac, tehničari Martina Triplat i Larisa Žagar, uz suradnike Jasminu Benetu, Nevena Letu i tvrtku *Geografica* d. o. o. Voditeljima zaštitnog arheološkog istraživanja autori teksta ovim putem iskreno zahvaljuju na ustupljenim informacijama, materijalima i pravu objavljivanja.
- 4 Rezultati su snimljeni 3D skenerom, a položaj svih struktura dokumentiran je prema apsolutnim geodetskim koordinatama. Točne okolnosti, tijekom te prve rezultate zaštitnih arheoloških istraživanja kao i analize materijala, popis stratigrafskih jedinica i kamenih spomenika iznosi dipl. arheolog Helena Nodilo u Izvještaju o zaštitnim arheološkim radovima: Solin - most na Jadru, Zagreb, veljača 2008., *Hrvatski arheološki godišnjak* 4/2007.
- 5 Zbog neupitne arheološke, povijesne i povijesno-umjetničke vrijednosti pronađenih kamenih elemenata

Introduction

In mid-2007, construction works to build a bridge over the Jadro River at the Ribnjak section in Solin began as part of a connecting road between two streets, (Ulica dr. Franje Tuđmana and Marulićeve ulica). At the onset of works on the right bank of the river, at a depth of roughly 1 m below the paved surface, regularly dressed stone blocks and a sarcophagus lid appeared.¹ Staff members of the Ministry of Culture Conservation Department in Split halted the construction works and made their continuation contingent upon the completion of archaeological rescue excavations.² The company *Geoarheo* d.o.o. of Sesvete was selected to perform the archaeological rescue excavations, which were financed by the Town of Solin and the local road management company *Cestar* d. o. o.³

In the brief duration of the archaeological rescue excavations, a wall structure was found, defined and documented; it extended in an east-west orientation over a length of 26 m. It was built in Late Antiquity, as a sort of dam to regulate the flow of the Jadro River.⁴ From the northern side, the dam is made of carved stone blocks, marble tiles and spolia of varying dimensions, laid in irregular horizontal rows, such that it is straight on its own vertical line, while the southern face is mostly made of spolia assembled in a cascading style. The elements composing the dam were

- 1 "Izvještaj o zaštitnim arheološkim radovima: Solin - most na Jadru," *Geoarheo*, Zagreb, February 2008.
- 2 Conservation oversight: Saša Denegri, archaeologist, Dubravka Čerina, archaeologist.
- 3 The research leaders were archaeologists Goran Skelac and Ivana Milošević. The archaeology team consisted of archaeology students Ana Grabundžija, Ranko Manojlović, Martina Rončević and Ivana Tadinac, technicians Martina Triplat and Larisa Žagar, with assistance by collaborators Jasmina Beneta, Neven Lete and the company *Geografica* d.o.o. The authors of this text would like to take this opportunity to whole-heartedly thank the leaders of the archaeological rescue excavations for providing information, materials and permission to publish.
- 4 The results were scanned with a 3D scanner, and the position of all structures was documented according to absolute geodetic coordinates. The precise circumstances, the course and initial results of archaeological rescue excavations as well as analysis of the materials, listing of stratigraphic units and stone monuments were specified by archaeologist Helena Nodilo in the report on archaeological rescue works in Solin at the bridge over the Jadro River ("Izvještaj o zaštitnim arheološkim radovima: Solin - most na Jadru," Zagreb, February 2008, *Hrvatski arheološki godišnjak* 4/2007).



Sl. 1. Računalni 3D prikaz dijela zatečene strukture zida na lokalitetu Ribnjak u Solinu (foto: Geoarheo d.o.o.)

Fig. 1. 3D image of the dam wall structure in the Ribnjak area in Solin (photo: Geoarheo d.o.o.)

se struktura sastoji od više vrsta arhitektonskih elemenata (od kojih su neki od iznimne arheološke, povijesne i umjetničke vrijednosti), koji se mogu razvrstati po sljedećim skupinama:⁶

- 1) Kameni blokovi - Raznih su dimenzija, pravilno obrađeni, s utorima i profilacijama, mramorni i vapnenački.
- 2) Kamene ploče - Pravilno su obrađene ili profilirane, neke s reljefnim prikazima (između kojih se ističe mramorna ploča s reljefnim prikazom krilatog lika božice Nike i glave Meduze). Ploče su uglavnom izrađene od prokoneškog mramora.
- 3) Are - Pronađene su dvije are, obje izrađene od kamena vapnenca. Jedna je u obliku kamenog bloka profiliranih rubova prednje strane s praznim središnjim poljem; druga je također u obliku kamenog bloka s profiliranim rubovima i reljefnim prikazom dvaju erota u zagrljaju.
- 4) Poklopci sarkofaga - Pronađena su tri poklopca sarkofaga u obliku krova na dvije vode: poklopac sarkofaga od prokoneškog mramora s reljefnim prikazom bračnog para, poklopac sarkofaga od prokoneškog mramora u obliku krova s reljefno

odlučeno je da se struktura neće ostaviti *in situ*, nego da će se demontirati, kako bi se materijal mogao znanstveno analizirati i obraditi te prezentirati.

6 Nodilo 2008, str. 490-492.

generally bonded with clay, plaster and iron clamps, and under a deposit of sand and tufa from the river, were additionally bound into a hard, compact structure.

A conclusion reached during archaeological excavations, and later confirmed in the field when the structure was disassembled,⁵ is that it consisted of several types of architectural elements (of which some have exceptional archaeological, historical and art-historical value) which may be classified into the following groups:⁶

- 1) Stone blocks – varying dimensions, dressed straight, with slots and moulding, marble and limestone.
- 2) Stone slabs – dressed flat or moulded, some with images in relief (among which a marble slab with a relief scene of the winged figure of the goddess Nike and the head of Medusa stands out). The slabs are generally made of Proconnesian marble.
- 3) Altars – two altars were found, both made of limestone. One is shaped like a stone block with articulated edges on the front and an empty central field; the other is shaped like a stone block with articulated edges, featuring a relief scene of two embracing Erotes.
- 4) Sarcophagus lids – three sarcophagus lids shaped like saddleback roofs were found: a sarcophagus lid made of Proconnesian marble bearing a depiction of a married couple in relief; a roof-shaped sarcophagus lid made of Proconnesian marble with relief depictions of tegulae and an image of grieving Erotes in the acroteria; and an unadorned sarcophagus lid with acroteria made of limestone.
- 5) Sarcophagus receptacles – an entirely preserved marble sarcophagus receptacle bearing a scene of Erotes and a griffins has been found. The partially preserved bottom of a sarcophagus with

5 Due to the indisputable archaeological, historical and art-historical value of the stone elements, it was decided that the structure would not be left *in situ*, but rather that it would be removed so that the materials could undergo scholarly analysis and be processed and displayed.

6 Nodilo 2008, pp. 490-492.

prikazanim tegulama i prikazom tugujućih erota u akroterijima te poklopac neukrašenog sarkofaga s akroterijima, izrađen od vapnenca.

- 5) Sanduci sarkofaga - Pronađen je u cijelosti sačuvan sanduk sarkofaga od mramora s prikazom erota i grifona. U ovu skupinu svrstamo i djelomično očuvane podnice sarkofaga s ostacima bočnih strana.
- 6) Fragmenti stupova arhitektonskih elemenata.
- 7) Niz fragmenata različitih spomenika ukrašenih reljefnim prikazima.

Nakon demontaže kamene strukture arhitektonski ulomci preneseni su na lokaciju uz Tusculum u Solinu, odakle je jedan dio fragmenata zbog konzervatorsko-restauratorske obrade prenesen u radionicu Umjetničke akademije u Splitu, dok je ostatak fragmenata zbog iznimno velikih dimenzija konzerviran i restauriran na improviziranoj radionici u dvorištu Tusculuma.⁷

U tekstu koji slijedi donosi se kratak pregled konzervatorsko-restauratorskih istraživanja, metodologija izvedenih konzervatorsko-restauratorskih radova, kataloški pregled restauriranih fragmenata i zaključci povijesnoumjetničke analize fragmenata. Ova objava obuhvaća samo malen dio pronađenih i konzerviranih fragmenata, za sada samo najcjelovitije i najveće: sanduk sarkofaga s erotskim komosom, poklopac sarkofaga od prokoneškog mramora s reljefnim prikazom bračnog para, poklopac sarkofaga s ikonografskim prikazom tugujućih erota te nekoliko profiliranih reljefnih ploča od prokoneškog mramora za koje se tijekom konzervatorsko-restauratorskih radova

the remains of the sides has also been classified in this group.

- 6) Fragments of pillars from architectural elements.
- 7) A series of fragments of various monuments adorned with relief images.

After the structure was disassembled, the architectural fragments were moved to the Tusculum locale in Solin, whence a portion was taken to the workshop of the Arts Academy in Split for conservation and restoration works, while the remaining fragments, due to their exceptionally large dimensions, were conserved and restored in an improvised workshop in the yard of the Tusculum.⁷

The text which follows provides a brief overview of the conservation/restoration works, the methodology underlying the completed works, a catalogue overview of the restored fragments and the conclusions of an art-historical analysis of the fragments. This publication encompasses just a small portion of the discovered and conserved fragments, those that are the most complete and largest thus far: a sarcophagus receptacle with a Komos of Erotes, a sarcophagus lid made of Proconnesian marble featuring an image of a married couple in relief, a sarcophagus lid with an iconographic image of grieving Erotes and several moulded relief slabs made of Proconnesian marble which during conservation/restoration works were determined to be compatible parts of a thus far unconfirmed sarcophagus.

7 Konzervaciju-restauraciju ulomaka financiralo je Ministarstvo kulture RH. Cjeloviti konzervatorsko-restauratorski zahvati obavljani su na Umjetničkoj akademiji Sveučilišta u Splitu, Odsjeku za konzervaciju-restauraciju kamena, pod vodstvom red. prof. Ive Donellija, uz suradnju doc. Siniše Bizjaka, doc. Marina Barišića i doc. Vinke Marinković. U projektu konzervacije-restauracije sudjelovali su, i velikim ga dijelom iznijeli, tadašnji studenti: Ana Doljanin, Anamarija Rupčić, Emilia Toth, Duje Ordulj, Vedran Kundić, Sanja Macanić, Ante Jureškin, Tihana Hajrić, u sklopu redovite nastave. Završetak projekta rezultirao je trima izvrsnim magistarskim radovima: Ana Doljanin, *Povijesnoumjetnička analiza antičkih sarkofaga s lokaliteta Ribnjak*, Split, 2011.; Anamarija Rupčić, *Antički kamenolomi*, Split 2011.; Emilia Toth, *Konzervatorski radovi na antičkim sarkofazima s arheološkog lokaliteta Ribnjak*, Split 2011., na čijim se istraživanjima, između ostalog, temelji velik dio ovog rada.

7 The conservation and restoration of the fragments was financed by the Croatian Ministry of Culture. The comprehensive conservation and restoration works were conducted at the Arts Academy of the University of Split, in the Stone Conservation and Restoration Department under the leadership of Prof. Ivo Donelli, in collaboration with assistant professors Siniša Bizjak, Marin Barišić and Vinka Marinković. Ana Doljanin, Anamarija Rupčić, Emilia Toth, Duje Ordulj, Vedran Kundić, Sanja Macanić, Ante Jureškin and Tihana Hajrić, students at the time, participated and largely carried out in the conservation/restoration project as a part of their course-work. The completion of the project resulted in three outstanding masters dissertations: Ana Doljanin, *Povijesnoumjetnička analiza antičkih sarkofaga s lokaliteta Ribnjak*, Split, 2011; Anamarija Rupčić, *Antički kamenolomi*, Split 2011; Emilia Toth, *Konzervatorski radovi na antičkim sarkofazima s arheološkog lokaliteta Ribnjak*, Split 2011, upon whose research, among other things, a major portion of this paper is based.



Sl. 2. Pokusno čišćenje debelih kalcitnih naslaga (foto: S. Bizjak)

Fig. 2. Thick calcite layer removal test (photo: S. Bizjak)

utvrdilo da su kompatibilni dijelovi do sada neutvrđenog sarkofaga.

Konzervatorsko-restauratorski radovi

Zbog već spomenute činjenice da su fragmenti stoljećima bili pod zemljom, pod nanosom pijeska i sedre, njihova je struktura gotovo u cijelosti bila prekrivena debelim anorganskim naslagama. Naslage su estetski degradirale kamen te onemogućile detaljnije čitanje postojećih reljefa i fine kamene plastike, što je otežavalo vizualnu petrografsku analizu materijala, a time i stilsko-ikonografsku interpretaciju. Kako bi se fragmenti mogli znanstveno obraditi i međusobno povezati u kontekst, neophodni su bili konzervatorsko-restauratorski zahvati čišćenja.

Krajem godine 2008. dio fragmenata manjih dimenzija prenesen je u prostorije Umjetničke akademije Sveučilišta u Splitu (Odsjek za konzervaciju-restauraciju kamene plastike, koji je bio nositelj konzervatorsko-restauratorskih radova), dok su veći fragmenti zbog problema smještaja ostavljeni na lokalitetu Salona ispred zgrade Tusculuma, gdje su ograđeni improviziranom skelom. Naime, veličina i težina pojedinih fragmenta uvjetovala je rad na otvorenom terenu, jer je za njihovu manipulaciju tijekom radova bilo neophodno korištenje teške mehanizacije (bageri i viličari).

U razdoblju od 2008. do 2010. na fragmentima su pod vodstvom I. Donellija obavljena dijagnostička istraživanja, konzervatorsko-restauratorski zahvati čišćenja te dokumentiranje; razmatrana je i mogućnost spajanja pojedinih elemenata u cjelinu.

Conservation and restoration works

Due to the aforementioned fact that the fragments had been under ground for centuries beneath deposits of sand and tufa, their structure was almost entirely covered with thick inorganic accumulations. The deposits aesthetically degraded the stone and precluded a more detailed reading of the existing relief-work and fine stone sculpting, which impaired the visual petrographic analysis of the materials, and thereby the stylistic-iconographic interpretation as well. If the fragments were to undergo scholarly examination and be tied together in a context, conservation and restoration activities to ensure their cleaning were essential.

At the end of 2008, a portion of the smaller fragments were taken to the premises of the Arts Academy of the University of Split (Stone Sculpture Conservation and Restoration Department, which was entrusted with the conservation/restoration works), while the larger fragments, due to the difficulty in accommodating them, were left on site in Salona in front of the Tusculum building, where they were fenced off with improvised scaffolding. Namely, the size and weight of individual fragments necessitated outdoor work, because their handling during the works required the use of heavy machinery (excavators and forklifts).

During the period from 2008 to 2010, diagnostic research, conservation/restoration works involving cleaning and documentation were conducted vis-à-vis these fragments under Ivo Donelli's leadership, while the possibility of connecting individual elements into a whole was also considered.

Research

The commencement of conservation and restoration works required detailed laboratory research with the objective of determining the types of accumulations and their potential harmfulness and the concentration of damaging water-soluble salts in the stone, as well as obtaining information on the types and origins of the materials. The results of this analysis are quite significant, not just because they dictated the techniques for rendering conservation/restoration works but also because they may be of use in the stylistic and art-historical interpretation.

Besides laboratory research, test cleaning was also conducted on the surface of the stone for the purpose of precisely determining the techniques, methodology and tempo of conservation and restoration works.

Six reference samples were taken from the already existing damage and soiling on the sarcophagus lid which features a relief image of a married couple and the entirely preserved but fragmented marble sarcophagus receptacle. Specifically, two samples of

Istraživanja

Početak konzervatorsko-restauratorskih radova zahtijevao je detaljna laboratorijska istraživanja s ciljem određivanja vrste naslaga te njihove potencijalne štetnosti, koncentracije štetnih vodotopivih soli u kamenu i dobivanja informacija o vrsti i podrijetlu materijala. Rezultati te analize veoma su značajni, ne samo zato što određuju tehniku izvedbe konzervatorsko-restauratorskih radova, nego i zato što mogu biti od koristi u stilskoj i povijesnoumjetničkoj interpretaciji.

Uz laboratorijska istraživanja uzoraka izvedeni su pokusni zahvati čišćenja površine kamena u svrhu preciznog određivanja tehnika, metodologije i dinamike konzervatorsko-restauratorskih radova.

Uzeto je 6 referentnih uzoraka s već postojećih oštećenja i onečišćenja na pokrovu sarkofaga s reljefnim prikazom supružnika i cjelovito očuvanoga mramornog sanduka sarkofaga u fragmentima. Točnije, uzorkovana su dva uzorka anorganskih naslaga (jedan uzorak sa sanduka, drugi s pokrova, u svrhu određivanja sastava kora i njihove potencijalne štetnosti), dva uzorka patine (oba sa sanduka) i dva uzorka mramora⁸ (oba s pokrova sarkofaga, u svrhu mineraloško-petrografske analize i određivanja koncentracije štetnih vodotopivih soli).

Uzorci su zaliveni u poliestersku smolu, a nakon stvrdnjavanja brušeni su i polirani kako bi se dobili poprečni presjeci uzoraka (mikropresjeci), koji su zatim fotografirani digitalnim fotoaparatom na mikroskopu *Olympus BX 51* uz reflektirano svjetlo i reflektirano UV svjetlo. Naknadno je na uzorcima rađeno određivanje sastava patina i kore metodom rendgenske difrakcije na prahu te mineraloško-petrografska analiza na spomenutom mikroskopu. Sastav patine analiziran je i FT-IR spektroskopijom. Fazna analiza metodom difrakcije rendgenskih zraka na praškastim uzorcima provedena je na vertikalnom rendgenskom goniometru (tip *X-Pert*), uz upotrebu Cu-cijevi (40 kV, 40 mA), čije je zračenje monokromatizirano grafitnim monokromatorom. Za registraciju zračenja korišten je proporcionalni brojač. Snimanje je bilo kontinuirano brzinom 0,02°20/s. Uzorci su snimani na pločici Si monokristala. Uzorak kamena s poklopca sarkofaga

inorganic accumulations were taken (one sample from the receptacle, the other from the lid, for the purpose of determining the composition of the rind and their potential harmfulness), two samples of patina (both from the receptacle) and two samples of marble⁸ (both from the sarcophagus lid, for the purpose of mineralogical-petrographic analysis and determination of the concentration of harmful water-soluble salts).

The samples were cast in polyester resin, and after hardening they were abraded and polished in order obtain perpendicular cross-sections of the samples (micro-cross-sections), which were then photographed using a digital Olympus BX 51 microscope with reflected light and reflected UV light. Determination of the composition of the patina and rind on the samples was done subsequently using the X-ray diffraction method on the dust and a mineralogical-petrographic analysis under the aforementioned microscope. The patina composition was also analyzed under an FT-IR spectroscope. Phase analysis using the X-ray diffraction method on dusty samples was conducted on a vertical X-ray goniometer (*X-Pert* model), with use of Cu tubes (40 kV, 40 mA), whose radiation was monochromatized with a graphite monochromator. A proportional counter was used to register radiation. Readings were taken at a continuous speed of 0.02°20/s. The samples were recorded on to monocrystalline silicon wafers. The stone sample from the sarcophagus lid was analyzed under a microscope and by the X-ray fluorescent spectroscopy.⁹

Results of analysis

An analysis of the samples of the accumulation on the stone from the lower part of the sarcophagus lid (lab. no. 12790) and the lower part of the sarcophagus receptacle (lab. no. 12791) ascertained that they

8 Tijekom uzorkovanja na temelju vizualnog pregleda činilo se da su svi ulomci (ovdje se misli isključivo na fragmente koji su obrađeni u ovome tekstu) izrađeni od prokoneškog mramora. Stoga je uzet samo jedan referentni uzorak s postojećeg oštećenja na pokrovu sarkofaga sa supružnicima kako bi se laboratorijskim analizama potvrdila vrsta kamena.

8 Based on a visual inspection during sampling, it appeared as though all fragments (here this pertains exclusively to those covered in this text) were made of Proconnesian marble. Thus, only a single reference sample was taken from the existing damage on the sarcophagus lid with the image of marital spouses so that the type of stone could be ascertained by laboratory analysis.

9 Laboratory analysis was conducted by an expert team from the Croatian Restoration Institute led by Domagoj Mudronja, geologist. The individual analyses were conducted by: Marijana Fabečić, senior conservation technician – preparation of perpendicular cross-sections; Domagoj Mudronja – X-ray diffraction spectroscopy, microscopic analysis; Prof. Darko Tibljaš, Ph.D. – X-ray fluorescent spectroscopic analysis; Marija Bošnjak, chemical engineer – FT-IR spectroscopy.



Sl. 3. Mikropresjek sloja sedre s površine sarkofaga (foto: D. Mudronja)

Fig. 3. Microsample of the calcite tufa deposits from the sarcophagus surface (photo: D. Mudronja)

analiziran je mikroskopom te metodom rendgenske fluorescentne spektroskopije.⁹

Rezultati analize

Analizom uzoraka naslaga na kamenu s donjeg dijela pokrova sarkofaga (lab. broj 12790) i donjeg dijela sanduka sarkofaga (lab. broj 12791) utvrđeno je da se radi o naslagama vapnenačke sedre u kojoj dominira kalcit (CaCO_3) s tragovima kvarca (SiO_2). Iz toga je jasno vidljivo da je rijeka Jadro nanosila slojeve sedre tijekom duljeg vremena.

Svijetložuta patina (lab. broj 12792) uzorkovana sa sanduka sarkofaga određena je kao kalcit. Na istom je sarkofagu radi usporedbe određen i sastav crvenkaste patine (lab. broj 12793). U toj patini izdvojena su dva varijeteta: svijetložuta i tamnosmeđa patina. U prvom je jedini determinirani sastojak bio kalcit, dok su u drugom uz kalcit - CaCO_3 određeni goethit - FeO(OH) , siderit - FeCO_3 i hematit - Fe_2O_3 , nastali zbog hrđanja željeznog klina. Kako na uzorcima nisu detektirane prirodne zaštitne patine od kalcijevih oksalata, nego samo patine od različitih željeznih oksida i hidroksida nastalih bilo procesima hrđanja željeza

are accumulations of limestone tufa in which calcite (CaCO_3) with traces of quartz (SiO_2) predominates. From this it is clearly apparent that the Jadro River deposited layers of tufa over a lengthy period.

The pale yellow patina (lab. no. 12792) sampled from the sarcophagus receptacle was determined to be calcite. The composition of the reddish patina (lab. no. 12793) on the same sarcophagus was ascertained for the sake of comparison. Two varieties were distinguished in that patina: pale yellow and dark brown. In the former, the sole determined component was calcite, while the latter, besides calcite - CaCO_3 , also contained goethite - FeO(OH) , siderite - FeCO_3 and haematite - Fe_2O_3 due to the rust on the iron peg. Since a natural protective calcium oxalate patina was not detected in the samples, rather only patinas consisting of various iron oxides and hydroxides created either by rusting iron or sedimentation from the environment, their removal was recommended due to their potential deleterious impact.

Laboratory investigations have shown that there are no harmful soluble salts in the marble.

Mineralogical-petrographic analysis has confirmed that the sarcophagus lid bearing the image of spouses is made of Proconnesian marble.

Attempts at cleaning by means of pressurized water, compresses and pastes did not yield significant results. Namely, the water softened and removed the unattached particles of grime and dirt, but the accumulations remained compact and firmly bound to the surface of the marble.

Cleaning tests employing a combination of mechanical methods, i.e., use of manual sculpting tools, scalpels and pneumatic chisels, proved effective, but the process of removing the rind was long and slow, and there was some possibility of damaging the surface.

Cleaning attempts using the dry jet method on already mechanically thinned accumulations have proven quite successful.

Based on analysis of the data obtained from laboratory investigations, test conservation/restoration works and a thorough visual examination, the following conclusions were reached: the fragments were partially covered with inorganic accumulations of tufa and calcite. The accumulations have differing structures and colours, differing thicknesses and hardness, and they have multiple layers at places. The presence of harmful soluble salts was not detected either in the accumulations or in the stone, so there was no need to desalinate the stone. Besides inorganic incrustations with thicknesses of several centimetres at places, mechanical damage was also observed, caused by the installation of the fragments into the wall, expansion

9 Laboratorijske analize vodio je stručni tim Hrvatskoga restauratorskog zavoda pod vodstvom Domagoja Mudronje, prof. geologije. Analize su izradili: Marijana Fabečić, viša konzervatorica tehničarka - izrada poprečnih presjeka, Domagoj Mudronja - rendgenska difrakcijska spektroskopija, mikroskopska analiza, prof. dr. sc. Darko Tibljaš - analiza metodom rendgenske fluorescentne spektroskopije, Marija Bošnjak, dipl. ing. kemije - FT-IR spektroskopija.

bilo taloženjem iz okoline, preporučeno je njihovo uklanjanje zbog potencijalne štetnosti.

Laboratorijska su istraživanja pokazala da u mramoru nema štetnih topivih soli.

Mineraloško-petrografska analiza potvrdila je da je pokrov sarkofaga sa supružnicima izrađen od prokoneškog mramora.

Pokusi čišćenja vodom pod tlakom, oblozima i pastama nisu dali značajnijih rezultata. Naime, djelovanjem vode naslage su se smekšale i uklonjene su nevezane čestice prljavštine i zemlje, no naslage su ostale kompaktne i čvrsto vezane za površinu mramora.

Pokusi čišćenja kombinacijom mehaničkih metoda, odnosno upotrebom ručnih klesarskih alata, skalpela i pneumatskog dlijeta pokazali su se učinkovitima, no proces uklanjanja kora bio je dugotrajan i spor, a postojala je i stanovita mogućnost oštećivanja površine.

Pokusi čišćenja koji su izvedeni metodom suhog mlaznog čišćenja na prethodno mehanički stanjenim naslagama, pokazali su se veoma uspješnima.

Obradom podataka dobivenih laboratorijskim istraživanjima, pokusnim konzervatorsko-restauratorskim zahvatima i temeljitom vizualnom analizom zaključeno je sljedeće: ulomci su djelomično prekriveni anorganskim naslagama sedre i kalcita. Naslage su različite strukture i boje, različite debljine i tvrdoće, a na pojedinim mjestima su višeslojne. Prisutnost štetnih topivih soli nije detektirana ni u naslagama ni u kamenu, stoga nije bila potrebna desalinizacija kamena. Osim anorganskih inkrustacija mjestimične debljine i po nekoliko centimetara zamijećena su i mehanička oštećenja nastala prilikom ugradnje fragmenata u zid, ekspanzijom metalnih trnova te erozijom vode na područjima koja nisu bila prekrivena anorganskim naslagama.

Tijek konzervatorsko-restauratorskih radova

Ulomci su najprije oprani vodom i vodenom parom pod visokim tlakom da bi se sloj zemlje i nečistoće uklonio s površine. Korištene su sapnice s lepezastim mlazom, kuta ispiranja od 10 do 120°. Nakon ispiranja sloja nevezane prljavštine na debele anorganske inkrustacije postavljena je celulozna kaša s destiliranom vodom čija je funkcija bila da omekša naslage. Naslage su potom stanjene mehanički, kombinacijom ručnih klesarskih alata, skalpela i pneumatskog dlijeta. Zadnji sloj naslaga uklonjen je metodom suhog mlaznog čišćenja abrazivnim sredstvom.¹⁰

10 Medij (ili mješavina medija abrazivnih čestica) se kreće sustavom aparata pogonjen tlakom, velikom brzinom. Prolaskom kroz sapnicu kretanje se još više



Sl. 4. Detalj uklanjanja tvrdokornih naslaga s površine sarkofaga (foto: A. Doljanin)

Fig. 4. A detail of hard deposit calcite tufa removal (photo: A. Doljanin)

of the metal prongs and erosion due to water at places not covered by the inorganic accumulations.

Course of conservation/restoration works

The fragments were first washed with highly-pressurized water and steam to remove the layer of dirt and grime from the surface. Nozzles with fan-shaped streams were used, with a wash angle of 10 to 120°. After washing off the layer of unattached grime, a cellulose mash with distilled water was applied to the inorganic incrustation in order to soften the accumulation. The accumulations were then mechanically thinned with a combination of sculpting tools, scalpels and a pneumatic chisel.

The last layer of accumulation was removed using the dry jet cleaning method with an abrasive.¹⁰

10 The medium (or mixture of abrasive particle media) moves at high speed through the device driven by pressure. The speed increases upon passage through the nozzle, after which the particles continue to move by inertia. Outside of the system, the particle speed decreases due to resistance. This is why the particle inertia upon contact with the target surface largely depends on the distance of the nozzle from that surface. The angle at which the particles travel toward the surface varies from 20° to 90°. During vertical movement toward the surface, the bulk of the particle energy is transferred and the impact on the surface is the most significant. If the angle is lower, fewer particles repel from the surface, with a lower cleaning impact. From this it follows that using the same jet can achieve very different effects and also cause irreparable damage. During cleaning of accumulations of varying thickness and hardness, constant coordination between the



Sl. 5. Učinkovitost čišćenja suhim abrazivnim sredstvom (foto: S. Bizjak)

Fig. 5. Efficiency of the dry abrasive cleaning (photo: S. Bizjak)

Kao abraziv korišten je stakleni prah granulacije 0,09 - 0,25 mm pod tlakom od 2 do 5 bara po cm^2 .

Premda dugotrajni, konzervatorsko-restauratorski radovi čišćenja dali su izvrsne rezultate. Prikazi su postali jasniji za čitanje, a na površinu je izašlo mnoštvo detalja i fine kamene plastike, a tragovi izvornog klesarskog alata ostali su sačuvani.

ubrjava, nakon čega čestice nastavljaju kretanje zbog inercije. Izvan sustava, pod utjecajem otpora, brzina čestica opada. Zato inercija čestica prilikom dodira sa ciljanom površinom u velikoj mjeri ovisi i o udaljenosti sapnice od površine objekta. Kut pod kojim čestice putuju prema površini objekta varira od 20° do 90° . Kod okomitog kretanja prema površini prenosi se najveći dio energija čestica te je udar na površinu najizraženiji. Što je kut manji, čestice se odbijaju od površine s manjim učinkom čišćenja. Iz toga slijedi da se istim mlazom mogu postići vrlo različiti učinci i također napraviti nepopravljiva šteta. Prilikom čišćenja naslaga raznih debljina i tvrdoća neophodna je stalna koordinacija između sljedećih bitnih komponenti sustava za mlazno čišćenje: prilagodba kuta sapnice prema površini, udaljenost sapnice od objekta, količina medija koja izlazi kroz sapnicu, neprestano reguliranje tlaka zraka pod kojim čestice izlaze i odabiranje optimalnog medija kao abraziva. Tek kada su sve navedene stavke u optimalnom međusobnom odnosu, proces čišćenja daje najbolje rezultate. Optimizirati sve te važne čimbenike može jedino visokostručna osoba koja mora znati i biti svjesna zašto se čisti i do koje mjere. O mlaznim tehnikama čišćenja Fučić 2004, str. 53.

Glass dust with granulation of 0.09-0.25 mm was used as an abrasive under pressure of 2 to 5 bars per cm^2 .

Although long-lasting, conservation/restoration works yielded outstanding results. The images became clearer for interpretation, and numerous details and fine stone sculpting emerged, while traces of the original sculpting tools were preserved.

After the cleaning task, it was concluded that the marble of the sarcophagus receptacle had a considerably different structure than the marble from which the two sarcophagus lids and surface with relief-work were made. A visual inspection and comparison with the catalogue of materials ascertained that the receptacle is an isolated example of marble among the processed archaeological materials. A sample of the material from the sarcophagus receptacle was taken so that the type of marble may be scientifically determined.

Sarcophagus lid with relief image of married couple

The almost entirely preserved sarcophagus lid made of Proconnesian marble (dimensions (l) 266 x (h) 164 x (w) 120 cm) belongs to a mixed type, i.e., a combination of a saddleback lid and a kline with a depiction of the deceased lying in repose.

Similar examples of sarcophagus lids have been regularly discovered in Dalmatia, of which three examples, and perhaps four,¹¹ were found in the narrower Salona area, and one next to Benkovac, in the former territory of Asseria. The Good Shepherd sarcophagus lid (today in the Archaeological Museum in

following vital jet cleaning system components is essential: adjustment of the angle between the stream and the surface, the distance of the nozzle from the object, the quantity of the medium streaming from the nozzle, constant regulation of the air pressure under which the particles are released and selection of the ideal medium for use as an abrasive. The best results are achieved only when all of these aspects are in optimum interaction. Only a highly-qualified individual who must know and be aware of why and to which extent something is being cleaned can optimize all of these crucial factors. On jet cleaning techniques, see Fučić 2004, p. 53.

- 11 Cambi 2010, p. 63, cat. no. 88, Pl. L – the Salonitan sarcophagus lid (today in the AMS) made of Proconnesian marble is fragmented, and a cloth pattern with an ivy leaf is visible on the front of the lid, which may point to the possibility that this was a lid of mixed type.



Sl. 6a. Poklopac sarkofaga mješovitog tipa prije radova konzervacije-restauracije (foto: S. Bizjak)
Fig. 6a. Sarcophagus lid with depiction of married couple before conservation/restoration treatment (photo: S. Bizjak)

Nakon zahvata čišćenja zaključeno je da mramor sanduka sarkofaga ima znatno drukčiju strukturu od mramora od kojeg su izrađeni poklopci dvaju sarkofaga i reljefno obrađene ploče. Vizualnim pregledom i usporedbom s katalogom materijala utvrđeno je da je sanduk izolirani primjerak mramora među obrađenim arheološkim materijalom. Kako bi se vrsta mramora i znanstveno potvrdila, naknadno je uzet uzorak materijala sa sanduka sarkofaga.

Pokrov sarkofaga s reljefnim prikazom bračnog para

Gotovo u cijelosti sačuvan pokrov sarkofaga od prokoneškog mramora (dimenzija (d) 266 x (v) 164 x (š) 120 cm) pripada po obliku mješovitom tipu pokrova, odnosno kombinaciji poklopca na dvije vode i kline s ležećim prikazom pokojnika.

Srodni primjerci pokrova sarkofaga pronađeni su redom u Dalmaciji, od kojega su tri primjerka, možda i četiri,¹¹ pronađena na užem području Salone, a jedan pokraj Benkovca, odnosno na nekadašnjem području Aserije. Poklopac sarkofaga Dobrog pastira (danas u Arheološkome muzeju u Splitu),¹² pokrov sarkofaga na Manastirinama,¹³ poklopac pronađen na istočnoj



Sl. 6b. Poklopac sarkofaga mješovitog tipa nakon radova konzervacije-restauracije (foto: Z. Sunko)
Fig. 6b. Sarcophagus lid with depiction of married couple after conservation/restoration treatment (photo: Z. Sunko)

Split),¹² the sarcophagus lid from Manastirine,¹³ the lid found in the eastern necropolis (today in the Tusculum garden)¹⁴ and the lid of the Benkovac sarcophagus¹⁵ are all made of Proconnesian marble, and they date to the period spanning the early 3rd to the onset of the 4th century.

This type of sarcophagus was locally produced in Roman Dalmatia, although variants made of domestic limestone have not yet been found.¹⁶ That the Saloni-tan sarcophaguses are not an isolated case is demonstrated by the fact that one such example has also been preserved in Rome,¹⁷ while a fragment was also recently found at Prokonnesos.¹⁸ The latter discovery confirms the link between quarries there and the Dalmatian local workshops.¹⁹

In terms of their dimensions and degree of rendering and completion, the aforementioned Saloni-tan lids and the lid from Benkovac are considerably smaller and less luxurious than the lid found in 2007. The front side of the recently found and thus far unpublished sarcophagus lid bearing a depiction of spouses is truly a quality product exhibiting a high degree of completion, while the rear slope of the roof and the rear side of the lid are entirely unfinished. The deceased lean against a saddleback roof which is

11 Cambi 2010, str. 63, kat. br. 88, T. L - salonitanski pokrov sarkofaga (danas u AMS) od prokoneškog mramora je fragmentiran, a na prednjoj strani pokrova vidljiv je uzorak tkanine s bršljanovim listom, što može ukazivati na mogućnost da je riječ o pokrovu mješovitog tipa.

12 Cambi 2010, str. 63, kat. br. 156, T. XC.

13 Cambi, 2010, str. 63, kat. br. 18, T. XI.

12 Cambi 2010, p. 63, cat. no. 156, Pl. XC.

13 Cambi 2010, p. 63, cat. no. 18, Pl. XI.

14 Cambi 2010, p. 63, cat. no. 29, Pl. XVII, XIX.

15 Cambi 1993, pp. 47-49., Pl. VII; Cambi 2010, p. 63, Pl. I.

16 Cambi 2010, p. 64.

17 Cambi 2010, p. 63; Santa Maria Scrinari 1995.

18 Asgari 1992, p. 487.

19 Cambi 2010, p. 63.



Sl. 7a. Poklopac sarkofaga Dobrog pastira, Arheološki muzej Split (Cambi 1991, str. 111)

Fig. 7a. Sarcophagus lid of the Good Shepherd sarcophagus, Archaeological Museum in Split (Cambi 1991, p. 111)

nekropoli (danas u vrtu Tusculuma)¹⁴ te poklopac benkovačkog sarkofaga¹⁵ redom su izrađeni od prokoneškog mramora, a pripadaju razdoblju od ranog III. do početka IV. stoljeća.

Taj tip sarkofaga pripada sarkofazima lokalne proizvodnje rimske Dalmacije, a njegova inačica izvedena u domaćem vapnencu dosad nije pronađena.¹⁶ No da salonitanski sarkofazi nisu izoliran slučaj, pokazuje činjenica da se jedan takav primjerak očuvao u Rimu,¹⁷ a nedavno je pronađen i jedan fragment na Prokonezu.¹⁸ Potonje otkriće potvrđuje vezu tamošnjih kamenoloma s dalmatinskim lokalnim radionicama.¹⁹

Spomenuti salonitanski pokrovi i pokrov iz Benkovca dimenzijama su, ali i stupnjem obrade i dovršenosti, znatno manji i manje raskošni od pokrova pronađenog 2007. godine. Prednja strana recentno pronađenog i do sada neobjavljenog pokrova sarkofaga s prikazom supružnika uistinu je kvalitetne izrade i visokog stupnja dovršenosti, dok je stražnja kosina krova i stražnja strana pokrova u potpunosti nedovršena. Pokojnici se naslanjaju na dvoslivni krov koji je dekoriran ljuskastim crjepovima. Odjeveni su u tipičnu rimsku odjeću; žena je prikazana u tunici dugih rukava (rukav na njezinoj podignutoj lijevoj ruci), preko koje nosi palu. Muškarac je prikazan odjeven u tuniku i togu tipa *toga contabulata*.²⁰ Na zaobljenoj površini, koja je u funkciji madraca, ispod prikaza pokojnika reljefni je ornament s dekorativnim vrpčama koje sadrže biljne, životinjske i mitološke motive. Prednja



Sl. 7b. Poklopac sarkofaga u vrtu Bulićeva Tusculuma (Cambi 2010, str. 156)

Fig. 7b. Sarcophagus lid in the Bulić Tusculum (Cambi 2010, p. 156)

dekorated with scale-like tiles. They are wearing typical Roman attire; the woman is depicted in a long-sleeved tunic (the sleeve on her raised left arm), over which she wears a palla. The man is depicted wearing a tunic and *toga contabulata*.²⁰ On the rounded surface that functions as a mattress, below the depiction of the deceased there is a relief ornament with decorative ribbons that contain plant, animal and mythological motifs. The front of the lid has no acroteria, while there are large acroteria on the rear side. The lateral sides of the lid are adorned with triangularly moulded pediments which contain Medusa heads on both sides, skilfully rendered in shallow relief.

The lateral acroteria, of which only the rear acroterion on the left lateral side of the lid has been entirely preserved, are adorned with identical plant ornaments rendered in shallow relief. The heads on the figures of the married couple have not, unfortunately, been preserved, so that we lack valuable data on the sculptural portraiture involved. The man, whose figure is posed from the rear side and drawn slightly rightward, leans against the bedding with his left hand, in which he holds a scroll below which part of the kline is visible. His right hand rests on the shoulder of the female figure, whose left arm rests against a pillow. The woman holds an only partially preserved wreath in her right hand. An irregularity, inconsistency or, more accurately, a technical error was noted on the female spouse's left shoulder, made by the local carver who finished the previously sketched Proconnesian marble lid; this is a third hand, probably made due to insufficient knowledge of the human anatomy, haste and improvisation. It is interesting that a similar, perhaps much greater error can be seen on one of the four mixed-type lids in Dalmatia, the one that is today held in the garden of the Tusculum, and the error is apparent in the incorrectly carved triangular pediment.²¹

14 Cambi 2010, str. 63, kat. br. 29, T. XVII, XIX.

15 Cambi 1993, str. 47-49., T. VII; Cambi 2010, str. 63, T. I.

16 Cambi 2010, str. 64.

17 Cambi 2010, str. 63; Santa Maria Scrinari 1995.

18 Asgari 1992, str. 487.

19 Cambi 2010, str. 63.

20 Goette 1990, str. 54-59; Schönauer 2001, str. 399, sl. 26.

20 Goette 1990, pp. 54-59; Schönauer 2001, p. 399, Fig. 26.

21 Cambi 2010, pp. 102-103.



Sl. 8a. Bočna strana poklopca sarkofaga mješovitog tipa s prikazom meduze prije konzervacije-restauracije (foto: S. Bizjak)

Fig. 8a. Lateral side of the sarcophagus lid with the Medusa relief before conservation/restoration treatment (photo: S. Bizjak)

strana poklopca nema akroterija, dok su na stražnjoj strani veliki akroteriji. Bočne stranice poklopca ukrašene su trokutastim profiliranim zabatima u kojima se s obje strane nalazi glava Meduze, vješto izrađena u plitkom reljefu.

Bočni akroteriji, od kojih je u cijelosti sačuvan samo stražnji akroterij lijeve bočne strane poklopca, ukrašeni su istovjetnim biljnim ornamentima izrađenim u plitkom reljefu. Likovima bračnog para, nažalost, nisu sačuvane glave, tako da smo zakinuti za dragocjen podatak o portretnoj plastici. Muškarac, čiji je lik postavljen sa stražnje strane i malo izvučen nadesno, u lijevoj ruci, kojom se podupire o ležaj, drži svitak ispod kojeg je vidljiv dio *kline*. Desna ruka mu je položena na rame ženskog lika koji je lijevom rukom oslonjen na jastuk. Žena u desnoj ruci drži vijenac koji je samo djelomično očuvan. Na lijevom ramenu supružnice, međutim, zamijećena je jedna nepravilnost, nelogičnost ili, točnije, tehnička pogreška lokalnog klesara, umjetnika koji je dovršavao abocirani prokoneški mramorni poklopac; to je treća ruka, nastala vjerojatno u procesu klesanja zbog nedovoljnog poznavanja ljudske anatomije, zbog brzine i improvizacije. Zanimljivo je da sličnu, možda čak i mnogo veću pogrešku nalazimo na jednom od četiri pokrova mješovitog tipa u Dalmaciji, na onom danas pohranjenom u vrtu Tusculuma, a pogreška se očituje u krivo klesanom trokutnom zabatu.²¹

Ostaci *kline* i jastuci poklopcu daju značajke ležaja, kao i zaobljena površina u funkciji madraca na



Sl. 8b. Bočna strana poklopca sarkofaga mješovitog tipa s prikazom meduze nakon konzervacije-restauracije (foto: Z. Sunko)

Fig. 8b. Lateral side of the sarcophagus lid with the Medusa relief after conservation/restoration treatment (photo: Z. Sunko)

The remains of the *kline* and the pillows on the lid indicate a bed, as does the rounded surface that functions as a mattress on which the figures lie. The surface of the mattress is divided into two horizontal decorative ribbons which are bordered to the sides by acanthus leaves (the image is only partially preserved on the left side of the sarcophagus). The upper decorative ribbon is wider than the lower one and divided into several fields by vertical ribbons with vegetable motifs. The first and last fields contain depictions of the leaping winged horses (Pegasus) that surpass the frames set by the vertical ribbons. Small lions were depicted below the winged horses. The second and fourth fields (viewed from left to right) contain relief depictions of wild game (a roe-buck and hare in the second, and a roe-buck chased by a hound in the fourth). The third field contains a depiction of Diana hunting with a hound. Trees are depicted around them in shallow relief. The fifth field contains a scene of an Eros piercing a wild boar with a spear. A landscape, a forest in the background of the scene, is indicated in very shallow relief around the Eros and boar. The lower decorative ribbon is adorned with scenes of sea monsters and dolphins; although at first glance it has nothing to do with the hunting theme and seems to be simple decoration to fill the space, it nonetheless has its origin in sepulchral themes, i.e., maritime motifs were, like hunting motifs, often but not always in the service of eschatology.

Based on a comparison with other mixed-type sarcophaguses in Dalmatia and beyond, this lid has been dated to the period from the early 3rd to the beginning of the 4th century. However, the attire and style of toga draping, as well as the rendering of the mattress,

21 Cambi 2010, str. 102-103.



Sl. 9a. Poklopac sarkofaga s prikazom tugujućih erota u akroterijima prije konzervacije-restauracije (foto: S. Bizjak)

Fig. 9a. Sarcophagus lid displaying grieving Erotes in the acroteria before conservation/restoration treatment (photo: S. Bizjak)

kojoj likovi leže. Površina madraca podijeljena je na dvije vodoravne dekorativne vrpce koje su s bočnih strana uokvirene prikazom akantovih listova (na lijevoj strani sarkofaga prikaz je samo djelomično očuvan). Gornja dekorativna vrpca šira je od donje te je okomitim vrpčama s vegetabilnim motivima podijeljena na nekoliko polja. U prvom i zadnjem polju reljefni su prikazi krilatog konja Pegaza u skoku koji prelazi okvire zadane okomitim vrpčama. Ispod krilatih konja su manji prikazi lavova. U drugom i četvrtom polju (gledano s lijeva nadesno) reljefni su prikazi divljači (u drugom srndać i zec, u četvrtom srndać i pas koji ga lovi). U trećem polju je prikaz Dijane u lovu sa psom. Oko njih su prikazana stabla u plićem reljefu. U petom polju prikazan je erot koji kopljem probada vepra. U izrazito plitkom reljefu oko erota i vepra naznačen je krajolik, šuma u pozadini scene. Donja dekorativna vrpca ukrašena je prikazima morskih čudovišta i dupina; premda na prvi pogled nema veze s tematikom lova i izgleda kao puko dekorativno popunjavanje prostora, ipak ima ishodište u sepulkralnoj tematici, odnosno maritimni motivi su isto kao i motivi lova često, premda ne i uvijek, u službi eshatologije.

Usporedba s ostalim sarkofazima mješovitog tipa u Dalmaciji i svijetu svrstava ovaj pokrov u razdoblje od ranog III. do početka IV. stoljeća. Međutim, odjeća i stil drapiranja toge, kao i izvedba madraca, koja je sigurno pod utjecajem antičkih sarkofaga, поближе datira izradu poklopca u sredinu III. st.²²



Sl. 9b. Poklopac sarkofaga s prikazom tugujućih erota u akroterijima nakon konzervacije-restauracije (foto: I. Donelli)

Fig. 9b. Sarcophagus lid displaying grieving Erotes in the acroteria after conservation/restoration treatment (photo: I. Donelli)

certainly influenced by Attic sarcophaguses, more closely dates the lid to the mid-3rd century.²²

Sarcophagus lid shaped like a roof with tegulae depicted in relief and scenes of grieving Erotes in the acroteria

The other sarcophagus lid made of Proconnesian marble found in the structure of the wall, also entirely preserved, is far more modest and meagre in the quality of its rendering and iconography than the preceding sarcophagus lid. With its enormous proportions, (l) 300 x (w) 177 x (h) 118 cm, the lid is shaped like a saddleback roof, with the front side covered in large tiles (tegulae), their joints covered by wide half-pipes (*imbrices*). The rear side of the sarcophagus is incomplete and coarsely worked with a pointed chisel. There are large corner acroteria on the front and back, of which those on the front, connected by an unadorned ribbon, are more voluminous. The acroteria on the front contain images of winged, almost identical Erotes arranged in antithetical poses. The Erotes each have one hand leaning on their shoulders, which serves as a rest for their bent heads. The elbows of the other arm rest on their raised legs which lean against some type of irregular stone base/pedestal. This pose by the Erotes (with hands under chins) is called the grieving Erotes, and it is closely associated with sepulchral themes and was used to create an atmosphere of sorrow.²³ The difference in the sculptural rendering of the details on the wings and faces of the Erotes points to the possibility that several individuals participated in the work.

22 Bulić 1907; Schönauer 2001, str. 290-297.

22 Bulić 1907; Schönauer 2001, pp. 290-297.

23 On the grieving Erotes, see Cambi 2010, p. 49.



Sl. 10a. Stražnja strana sanduka sarkofaga s prikazom dvaju grifona prije konzervacije-restauracije (foto: S. Bizjak)

Fig. 10a. Back side of the sarcophagus depicting two griffins before conservation/restoration treatment (photo: S. Bizjak)

Poklopac sarkofaga u obliku krova s reljefno prikazanim tegulama i prikazom tugujućih erota u akroterijima

Drugi pokrov sarkofaga, od prokoneškog mramora, također očuvan u cijelosti, pronađen u strukturi zida, kvalitetom obrade i ikonografije znatno je skromniji i siromašniji od prethodno navedenog pokrova sarkofaga. Golemih proporcija, (d) 300 x (š) 177 x (v) 118 cm, pokrov je u formi dvoslivnog krova, s prednje strane prekrivenog velikim crjepovima (*tegulae*), čiji su spojevi prekriveni širokom kupom kanalicom (*imbrices*). Stražnja strana sarkofaga nedovršena je i grubo oblikovana šiljatim dlijetom. S prednje i stražnje strane nalaze se veliki kutni akroteriji, od kojih su volumenom veći oni na prednjoj strani, povezani neukrašenom vrpcom. Na prednjoj strani u akroterijima je prikaz krilatih, gotovo istovjetno zrcalno raspoređenih erota. Eroti se jednom rukom oslanjaju na rame te ona služi kao oslonac nagnutoj glavi. Drugom rukom su nalakćeni na podignutu nogu koja je naslonjena na neku vrstu nepravilne kamene baze/postamenta. Takav stav erota (s rukom ispod brade) ikonografski se naziva tugujući erot, a usko je vezan uz sepulkralnu tematiku i služi ugođaju tuge.²³ Razlika u klesarskoj izvedbi detalja obrade krila i lica erota navodi na mogućnost da je u izradi sudjelovalo nekoliko osoba.

Desni bočni trokutasti zabat ukrašen je jednostavnom plitkom profilacijom i šesterolisnom rozetom u sredini. Lijeva bočna strana sadrži prikaz jednostavnije i manje peterostrane rozete. Obje profilacije uokvirene su kutnim akroterijima koji su bogatije ukrašeni motivima razvijениh vitica, palmeta i rozeta izvedenih



Sl. 10b. Stražnja strana sanduka sarkofaga s prikazom dvaju grifona nakon konzervacije-restauracije (foto: Z. Sunko)

Fig. 10b. Back side of the sarcophagus depicting two griffins after conservation/restoration treatment (photo: Z. Sunko)

The right lateral triangular pediment is adorned with simple shallow moulding and a hexafoil rosette in the middle. The left lateral side contains a depiction of a simpler and smaller five-leaf rosette. Both mouldings are framed with corner acroteria which are more richly adorned with motifs of elaborate tendrils, palmettes and rosettes in shallow relief (a certain similarity to the preceding sarcophagus lid is noticeable in this segment).

Given the simpler iconography, middling craftsmanship of the relief and the poorly polished surface, we may assume that this is a product of a local workshop, more precisely, an imported, previously sketched marble block that was finished in a local workshop; given the iconographic model/formula, it is possible to approximately date it to the 3rd century.

Sarcophagus with a procession of Erotes and griffins

This is an almost entirely preserved sarcophagus receptacle which, according to a comparative analysis, is made of a different type of marble than the other finds.²⁴ Its dimensions are 217 cm (l), 110 cm (w) and 93 cm (h). The difference in material and the drastic difference in the dimensions of the receptacle in comparison to the dimensions of the aforementioned lids led us to reject the possibility that one of the lids belongs to this receptacle.

23 O tugujućim erotima vidi Cambi 2010, str. 49.

24 The type of marble could not be precisely ascertained until conservation/restoration works to clean the surface of the sarcophagus were done.



Sl. 11a. Sanduk sarkofaga s povorkom erota prije konzervacije-restauracije (foto: S. Bizjak)

Fig. 11a. Sarcophagus depicting the procession of Erotes before conservation/restoration treatment (photo: S. Bizjak)

u plitkom reljefu (u ovom segmentu zamjećuje se sličnost s prethodnim poklopcem sarkofaga).

S obzirom na jednostavnu ikonografiju, osrednje izrađen reljef i slabo ugladenu površinu možemo pretpostaviti da je riječ o proizvodu lokalne radionice, točnije, o uvezenom prethodno abociranom mramornom bloku koji je doraden u lokalnoj radionici; s obzirom na ikonografski predložak/obrazac moguće ga je okvirno datirati u III. stoljeće.

Sarkofag s prikazom povorke erota i grifona

To je gotovo u cijelosti očuvan sanduk sarkofaga za koji je, na osnovi vizualnih komparativnih analiza, zaključeno da je izrađen od drugačije vrste mramora u odnosu na ostale nalaze.²⁴ Dimenzije su mu 217 cm (d), 110 cm (š) i 93 cm (v). Razlika u materijalu i drastična razlika u dimenzijama sanduka u odnosu na dimenzije spomenutih poklopaca odmah nas je navela na odbacivanje mogućnosti kako jedan od pokrova pripada kovčegu sarkofaga.

Sve četiri strane sarkofaga su ukrašene, no razlikuju se ikonografski, ali i u intenzitetu i stupnju obrade kamena. Prednja i desna bočna strana sanduka sadrže prikaz povorke erota, na lijevoj bočnoj strani kompozicija se prekida, a prostor ispunjava sfinga izvedena u nešto nižem reljefu. Stražnja strana ukrašena je prikazom dvaju plitko klesanih antitetički raspoređenih grifona.

Veoma slične, gotovo istovjetne motive bića iz imaginarno-mitološke sfere nalazimo na različitim sarkofazima diljem Europe i Bliskog istoka. Tako se primjerice motiv grifona postavljenih jedan nasuprot

24 Vrsta mramora nije mogla biti točno određena dok nisu obavljani konzervatorsko-restauratorski radovi čišćenja površine sarkofaga.



Sl. 11b. Sanduk sarkofaga s povorkom erota nakon konzervacije-restauracije (foto: Z. Sunko)

Fig. 11b. Sarcophagus depicting the procession of Erotes after conservation/restoration treatment (photo: Z. Sunko)

All four sides of the sarcophagus are decorated, but they differ iconographically and also in the intensity and degree of dressing of the stone. The front and right side of the receptacle contain a depiction of a procession of Erotes, while the composition on the left side is intermittent, and the space is filled by a sphinx rendered in somewhat lower relief. The rear side is adorned with a depiction of two shallowly carved antithetically arranged griffins.

Very similar, virtually identical motifs of beings from the realms of the imagination and mythology can be found on various sarcophaguses throughout Europe and the Middle East. Thus, for example, the motif of antithetical griffins with their forepaws on a krater, can be seen on the rear sides of the sarcophagus receptacle from the Museo Nazionale in Rome, the receptacle from Greece located *in situ* in Delphi and the one from Damascus in Syria, found in Al Rastan, and today held in the National Museum in Damascus.²⁵

The procession of Erotes begins on the front, and flows and extends to the right side, thus according to the standard left-to-right scheme.²⁶ Although the procession of drunken Erotes is a very common motif on Classical, particularly Attic, sarcophaguses and it was an exceptionally popular motif in Roman eschatology, the most similar Komos of Erotes can be found on only a few sarcophaguses in the Mediterranean.²⁷ The

25 Koch - Sichtermann 1982, pp. 444 ff.

26 Cambi 1988, pp. 46-47.

27 In Ostia near Rome, Giuliano-Palma, Maniera 1974, Pl. 24, Fig. 60.

In Athens, Giuliano-Palma, Maniera 1974, pp. 13, 4, Pl. 1, Fig. 1.2; Istanbul, Koch - Sichtermann 1982, p. 424, Fig. 455.

drugom, s prednjim šapama na krateru, nalazi na stražnjim stranama sanduka sarkofaga iz *Museo Nazionale* u Rimu, sanduka iz Grčke koji se nalazi *in situ* u Delfima te onoga iz Damaska u Siriji nađenog u Al Rastanu, koji se danas čuva u Nacionalnom muzeju u Damasku.²⁵

Povorka erota započinje na prednjoj strani, a kontinuirano teče i proteže se na desnu bočnu stranu, dakle po standardiziranoj shemi slijeva nadesno.²⁶ Premda je povorka pripitih erota vrlo čest motiv antičkih, posebice antičkih sarkofaga i izrazito popularan motiv rimske eshatologije, najrodnije erotske komose susrećemo na samo nekoliko sarkofaga na Mediteranu.²⁷ Središnji motiv prednje strane sanduka su dva krilata erota u stanju pripitosti koji se međusobno pridržavaju, a ispod njihovih nogu nalaze se plodovi koje ključaju životinje. Slobodna ruka lijevog erota je oštećena, no vidljivo je da je u ruci držao baklju vrhom okrenutu nadolje. Zbog oštećenja sarkofaga prouzročene korozijom željeznog trna nije vidljivo kakav predmet drži erot lijevo od središnjih likova, no sudeći po položaju tijela moguće je pretpostaviti da u rukama drži nekakvo glazbalo, poput lika iza njegovih leđa. Ovoj skupini erota pridružuju se i dionizijski eroti s motivom košare s plodovima (kod jednoga od njih čak je vidljiv srp u ruci), a raspoređeni su na rubovima sarkofaga. Desno od središnjih likova ponavlja se lik erota s bakljom te još jedan, čija radnja nije prepoznata. Desna bočna strana nastavak je povorke na kojoj se ponovno javlja motiv pripitih erota i erota s bakljom okrenutom nadolje (kompozicijski drukčije oblikovani). Čitava kompozicija prekida se prikazom stabla. Krošnja je prikazana s tipično izduženim lišćem, što je svojstveno antičkim radionicama.²⁸ Dionizijski kontekst/karakter prikaza naglašen je dinamičnim, baroknim oblikovanjem likova, koji u svojoj razigranosti i stanju pripitosti gotovo negiraju i razbijaju okvir u koji su postavljeni. Nasuprot tome, prikazi sfinge i grifona na lijevoj bočnoj i stražnjoj strani ukočeni su, statični i lišeni dinamike.²⁹ Upravo razlika u stilskoj obradi i odabiru teme nameće erotski komos kao glavnu prednju kompoziciju. Umjetnik, majstor klesar, poslužio se još jednim trikom kako bi naglasio povorku erota kao glavni motiv, a to je klesarsko oblikovanje. Naime, reljef na prednjoj i desnoj bočnoj strani izrazito

central motif on the front of the receptacle consists of two winged drunken Erotes holding each other, and below their feet there are fruits being pecked at by animals. The free arm of the Eros on the left is damaged, but it is apparent that he holds an inverted torch in his hand. Due to damage to the sarcophagus caused by corrosion of the iron peg, the type of item being held by the Eros to the left of the central figures cannot be seen, but judging by the position of the body one may assume that he held some sort of musical instrument, just like the figure behind his back. This group of Erotes is joined by a group of Dionysian Erotes with a cornucopia motif (one of them is even visibly holding a sickle), and they are arranged on the edges of the sarcophagus. The same figure of an Eros with a torch repeats to the right of the central figures, as well as another whose activity cannot be discerned. The right side features the continuation of the procession, on which the motif of drunken Erotes and an Eros with an inverted torch (albeit compositionally different) once more appear. The entire composition is broken up by the image of a tree. The canopy is depicted with the typically oblong leaves, something typical of Attic workshops.²⁸ The Dionysian context/character of the image is emphasized by the dynamic, Baroque formation of the figures, which in their playfulness and state of intoxication almost negate and break out of the frame in which they have been placed. By contrast, the depictions of the sphinx and griffin on the left and rear sides are stiff, static and bereft of any dynamism.²⁹ The difference in stylistic rendering and the selection of the theme is in fact imposed by the Komos of Erotes as the frontal composition. The artist, the master carver, employed yet another trick in order to emphasize the procession of Erotes as the primary motif, and that was sculptural formation. Namely, the relief on the front and right side are far more plastic and deeper, and a fast-rotating drill was used to render details such as hair and the cornucopia, which achieved a more powerful effect of light and shadow. The difference in rendering is notable not only in the relief depiction but also in the modelling of the pedestal and the upper moulded beams. The pedestal has a simple shape; on the front and right side it consists of five non-uniform ribbons. The third ribbon from the bottom is decorated with a garland of laurel leaves which are disrupted by a single oak leaf. The garland was made with deeply drilled (but individual) holes which create the light and shadow effect in a manner typical of the time after the mid-3rd century.³⁰ The

25 Koch - Sichtermann 1982, str. 444 i d.

26 Cambi 1988, str. 46-47.

27 U Ostiji u blizini Rima, Giuliano-Palma, Maniera 1974, T. 24, sl. 60.

U Ateni, Giuliano-Palma, Maniera 1974, str. 13, 4, T. 1, sl. 1-2; Istanbulu, Koch - Sichtermann 1982, str. 424, sl. 455.

28 Cambi 2010, str. 55.

29 Cambi 1988, str. 49; Cambi 2010, str. 53.

28 Cambi 2010, p. 55.

29 Cambi 1988, p. 49; Cambi 2010, p. 53.

30 Cambi 2010, p. 56.

je plastičniji i dublji, a u obradi detalja poput kose i košara s plodovima korišteno je brzorotirajuće svrdlo kako bi se postigao snažniji efekt svjetla i sjene. Razlika u obradi zamjećuje se ne samo na reljefnom prikazu nego i u modelaciji postolja i gornje profilirane grede. Postolje sanduka jednostavnog je blok tipa, a na prednjoj i desnoj bočnoj strani sastoji se od pet nejednakih vrpca. Treća vrpca odozdo ukrašena je vijencem od lorovova lišća koji se na prednjoj strani prekida jednim hrastovim listom. Vijenac je izrađen duboko svrdlanim (ali pojedinačnim) rupama koje stvaraju efekt svjetla i sjene, na način kakav je svojstven vremenu nakon sredine III. st.³⁰ Postolje bočne lijeve strane sastoji se od tri nejednake i neukrašene vrpce koje se nastavljaju na stražnju stranu sanduka, ali samo u vidu naznake - površina je grubo obrađena i neuglačana. Slična situacija je i kod gornje profilirane grede. Naime, na prednjoj i bočnoj desnoj strani sanduka greda je bogato profilirana, na lijevoj bočnoj strani nešto je siromašnija, dok se profilacija stražnje strane sanduka u potpunosti gubi i poprima oblik neukrašene vrpce.

Prema svim navedenim stilskim značajkama, motivima na sarkofagu s povorkom erota, činilo nam se logičnim da je nastao u radionicama proizvodnog središta Atene te da spada u kasniju fazu atičke produkcije, što bi značilo da se izrada može datirati oko 250. g. n. e. Naravno, sa zaključcima nismo bržali, već smo u neformalnom razgovoru s vodećim svjetskim stručnjacima iz ovog područja G. Köchom i N. Cambijem uzeli u obzir moguću činjenicu da je sarkofag doslovna kopija atičkih sa sličnom tematikom. Iz tog razloga napravili smo testove stabilnih izotopa C i O kako bismo razlikovali i sa sigurnošću dokazali podrijetlo mramora.³¹

Rezultati testova sa sarkofaga s povorkom erota:

$$\begin{aligned}d13C &= +2,2 \text{ ‰ VPDB} \\d18O &= -1,4 \text{ ‰ VPDB}\end{aligned}$$

Usporedba s penteličkim mramorom:

$$\begin{aligned}d13C &= +2,5 \text{ ‰ VPDB} \\d18O &= -7,2 \text{ ‰ VPDB}\end{aligned}$$

pedestal of the left side consists of three non-uniform and unadorned ribbons that continue onto the rear side of the receptacle, but only as indications – the surface is coarsely worked and unpolished. The situation in the upper moulded beam is similar. On the front and right side of the receptacle the beam is richly moulded, on the left side it is somewhat more meagre, while the moulding on the rear side is entirely lost and assumes the form of an unadorned ribbon.

Based on all aforementioned stylistic features, the motifs on the sarcophagus with the procession of Eros, it seems logical to us that it was produced in the workshops of the Athenian production hub and that it belongs to the later phase of Attic production, which would mean that its production can be dated to roughly 250 AD. Naturally, we were not hasty in drawing these conclusions, rather in informal conversations with the world's leading experts in this field, G. Köch and N. Cambi, we took into account the fact that the sarcophagus is literally copy of the Attic examples with similar motifs. It was for this reason that we conducted tests of stable carbon and oxygen isotopes in order to distinguish and prove the origin of the marble with certainty.³¹

Results of tests from the sarcophagus with the procession of Eros:

$$\begin{aligned}d13C &= +2.2 \text{ ‰ VPDB} \\d18O &= -1.4 \text{ ‰ VPDB}\end{aligned}$$

Comparison to Pentelic marble:

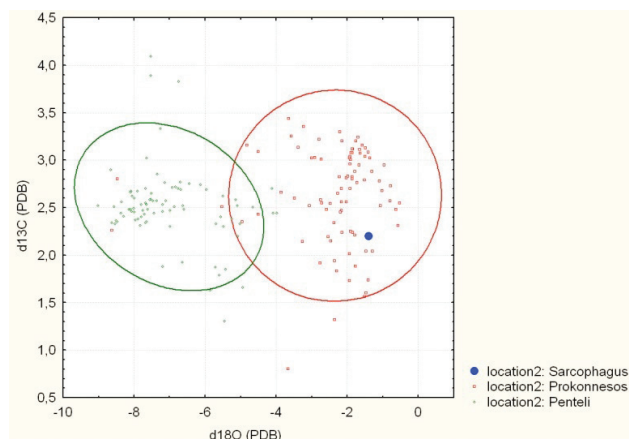
$$\begin{aligned}d13C &= +2.5 \text{ ‰ VPDB} \\d18O &= -7.2 \text{ ‰ VPDB}\end{aligned}$$

In the chart, the Pentelic marble group is marked by a green circle, while the Proconnesian marble group is marked in red. Our sarcophagus, which is indicated by a blue dot, without doubt belongs to the Proconnesian group. Thus, the results have confirmed our suspicions and we have proven that the sarcophagus receptacle with the procession of Eros and the

30 Cambi 2010, str. 56.

31 Testove je obavila dr. Sonja Lojen iz ljubljanskog Instituta *Jožef Štefan*, a prateće analize tekuće inkluzije u uzorcima i analize elemenata u tragovima izradio je dr. Walter Prochaska na Sveučilištu u Loebenu, u Austriji, te im ovom prilikom zahvaljujemo na suradnji. Najbolja vjerojatnost uspjeha dobiva se kombiniranjem najmanje dviju analitičkih metodologija te zajedničkom obradom svih dobivenih podataka. Primjerice, detaljna petrografija mikropresjecima i određivanje stabilnih izotopskih omjera ugljika i kisika (C i O). O tome vidi više u Antonelli, Lazzarini 2015.

31 The tests were conducted by Dr. Sonja Lojen from the Jožef Štefan Institute in Ljubljana, while the accompanying analysis of fluid inclusion in the samples and the analysis of trace elements were conducted by Dr. Walter Prochaska at the University of Loeben, in Austria, and we would like to take this opportunity to thank them for their cooperation. The highest probability is obtained by combining a minimum of two analytical methodologies and joint processing of all data. For example, a detailed petrography of micro-cross-sections and determination of stable isotopic carbon and oxygen (C and O) ratios. For more on this see Antonelli, Lazzarini 2015.



Sl. 12. Grafički prikaz analize stabilnih izotopa koji definira vrstu mramora od kojeg je izrađen sarkofag s paradom erota (foto: W. Prochaska)

Fig. 12. Graphical representation of the stable isotopic analyses which clearly defines the type of marble from which the sarcophagus depicting the procession of Eros is made (photo: W. Prochaska)

Na grafičkom prikazu zelenim je krugom omeđena skupina penteličkih mramora, a crvenom prokoneških. Naš sarkofag, koji je prikazan plavom točkom, bez sumnje spada u prokonešku skupinu. Dakle, rezultati su potvrdili sumnje te smo dokazali da je sanduk sarkofaga s povorkom erota i grifona izrađen od mramora s otoka Prokoneza, dakle ne penteličkog, što smo prema izgledu i usporedbi sa sličnim primjerima prvotno bili zaključili.

Fragmentsi sanduka sarkofaga

Na arheološkom lokalitetu Ribnjak, kao što je već spomenuto u uvodu, pronađen je cijeli niz većih i manjih reljefno obrađenih i profiliranih ploča izrađenih od prokoneškog mramora. Pomnim vizualnim pregledom i analizom ikonografije, nakon konzervatorsko-restauratorskog zahvata čišćenja, uočeno je da se na više ploča ponavlja istovjetan motiv iste stilske i zanatske obrade, što je bio temelj u pokušaju spajanja dijelova u cjelinu.

Mramorne ploče br. 16 i br. 20³² sadrže reljefni prikaz glave gorgone Meduze, uokvirene reljefnom profilacijom i djelomično očuvanim krilatim likovima s lijeve i desne strane.

Točnije, na mramornoj ploči br. 16 očuvan je lijevi lik, a desnom liku vidljivo je samo krilo, dok je na ploči br. 20 situacija obrnuta. Očuvani likovi

griffin was made of marble from the island of Prokonnesos (Marmara), and not Pentelic marble, which we had initially concluded based on appearance and comparisons to similar examples.

Fragments of a sarcophagus receptacle

As already noted in the introduction, an entire series of large and small relief-work and moulded slabs made of Proconnesian marble were found at the Ribnjak archaeological site. A careful visual examination and analysis of the iconography which followed after conservation and restoration cleaning works ascertained that identical stylistic and artisanal renderings are repeated on several tiles, which served as the grounds for an attempt connect several pieces into a single whole.

Marble slabs no. 16 and no. 20³² contain relief depictions of the head of Medusa the Gorgon, framed by relief moulding and partially preserved winged figures to the left and right.

Specifically, on marble slab no. 16, the left-hand figure is preserved, while only the wing of the right-hand figure is visible; on slab no. 20, the situation is the opposite. The preserved figures are identical portrayals of women wearing belted chitons and holding palm fronds in their hands, which undoubtedly indicate that these are depictions of Nike. The preserved portrayals of Nike on the slabs are also the corner figures which continue on the other side of the slab. A corner figure was also noted on fragment no. 17, which contains a portrayal of garlands and the remains of a chiton on both sides. This fragment can be physically connected to fragment no. 16,³³ so that together they form a single unit, or rather a portrayal of Nike in which she holds in her left hand a palm frond and thick garland which extends to the other figure, probably identical, although only a single wing has been preserved. The above-mentioned head of Medusa the Gorgon appears above the garland. Parallel to these, a smaller fragment with a relief depiction of a hand holding a garland was literally physically connected to the fragment under inv. no. 20. If the compatible relief portrayals are viewed as a whole, we may conclude that together they are part of a larger quadratic composition, specifically a sarcophagus receptacle. Confirmation that this is truly a

32 Ovdje napominjemo da je riječ o radioničkim inventarnim brojevima radi lakšeg snalaženja među mnoštvom fragmenata.

32 Here we should note that these workshop inventory numbers are used for easier reference among a multitude of fragments.

33 To be sure, thus far the fragments have only been connected in technical drawings due to their enormous dimensions.



Sl. 13a, b. Spajanje fragmenata bočne stranice sanduka sarkofaga s prikazom meduze (foto: V. Marinković)
 Fig. 13a, b. Connecting fragments of the lateral side of the sarcophagus with relief Medusa (photo: V. Marinković)

istovjetni su prikazi žene odjevene u potpasani hiton koja u ruci drži palminu granu, što nedvojbeno govori da je riječ o prikazu Nike. Očuvani prikazi Nike na pločama ujedno su i ugaoni likovi koji se nastavljaju na drugu stranu ploče. Ugaoni lik zamijećen je i na fragmentu br. 17 koji sadrži prikaz girlande i ostatke hitona s obje strane. Navedeni fragment fizički je moguće pripojiti fragmentu br. 16³³ tako da zajedno tvore cjelinu, odnosno ugaoni prikaz Nike koja u svojoj lijevoj ruci drži granu palme i debelu girlandu koja se proteže do drugog lika, po svoj prilici istovjetnog, kojemu je očuvano samo krilo. Iznad girlande javlja se već spomenuta glava gorgone Meduze. Usporedo s tim fragmentu inv. br. 20 fizički je doslovno pripojen jedan manji fragment s reljefnim prikazom ruke koja pridržava girlandu. Ako kompatibilne reljefne prikaze sagledamo kao cjelinu, možemo zaključiti da su zajedno dio veće kvadratne kompozicije, točnije, sanduka sarkofaga. Potvrdu da je zaista riječ o sarkofagu, a ne o frizu ili nekoj drugoj vrsti nadgrobnog elementa, pronašli smo analizirajući fragment inventarnog broja 77. Velikih dimenzija i grubo obrađene površine s naglašenim plitko klesanim reljefom u desnom kutu ploče koji se nastavlja na drugu bočnu stranu u višem reljefu, fragment se po spoju ne poklapa s ostalim pločama. Međutim, očuvani reljefni prikaz noge i dijela hitona, koji je na bočnoj strani očuvan samo u debljini ploče, tematski i načinom klesarske izvedbe nesumnjivo je dio likovne kompozicije sarkofaga. Neobrađenost i nedovršenost ostatka površine fragmenta nije

sarkofagus rather than a frieze or some other type of grave marker was found by analyzing the fragment under inventory number 77. With large dimensions and coarsely worked surfaces with a non-prominent shallowly carved relief in the right-hand corner of the slab that continues onto the other side in higher relief, the fragment does not fit with the remaining slabs when an attempt at connecting them is made. However, the preserved relief depiction of legs and part of a chiton, which was only preserved in the thickness of the slab on the lateral side, are unquestionably a component of the figural composition of the sarcophagus in terms of their theme and the sculptural technique. The limited rendering and incompleteness of the remains of the fragment surface is neither unusual nor puzzling, rather they point to the fact that this is the rear side of the sarcophagus.³⁴

That this is a case of sepulchral sculpture is further confirmed by the selection of themes that appear in the relief portrayals. Namely, garlands are often seen as decorative motifs on friezes, ossuaries and sarcophaguses,³⁵ and depending on the decorations on the garlands, we may assess the character of the monument to which it belongs. The relief depiction of the garlands that may be interpreted on the fragment of inventory no. 17 was rendered in deep relief and additionally adorned with ribbons, a rosette in the middle and large grape bunch as a pendant. It is in fact the grape bunch, a symbol of Dionysian hope in an

33 Doduše, za sada je zbog izrazito velikih dimenzija spajanje fragmenata izvedeno samo u tehničkom crtežu.

34 Cambi 1988, p. 75.

35 Cambi 1988, p. 48.

ništa neobično i zbunjujuće, naprotiv, upućuje nas na činjenicu da je riječ o stražnjoj stranici sarkofaga.³⁴

Da je riječ o sepulkralnoj plastici, potvrđuje i izbor teme koja se javlja na reljefima. Naime, girlande se često susreću kao dekorativni motiv frizova, osteoteka i sarkofaga,³⁵ a ovisno o ukrasu koji se nalazi na girlandi možemo suditi kakvom karakteru spomenika pripada. Reljefni prikaz girlande koji se može iščitati na fragmentu inventarnog broja 17, izrađen je u dubokom reljefu i dodatno ukrašen vrpcama, rozetom na sredini i krupnim grozdom kao privjeskom. Upravo grozd, simbol dionizijske nade u zagrobni život, potvrđuje da je riječ o nadgrobnom karakteru kompozicije.³⁶

Tolika količina fragmenata koji se spajaju u cjelinu bila je podloga za pokušaj rekonstrukcije sarkofaga u crtežu. Crtež je temelj za približno određivanje dimenzija sarkofaga i polazišna točka za spajanje razasutih dijelova u cjelinu. Grafički prikaz br. 1 pokušaj je hipotetičke rekonstrukcije sanduka sarkofaga iz kojeg je vidljivo da mramorne ploče inv. br. 16 i 17 spojene u cjelinu pripadaju desnoj bočnoj stranici sanduka, a mramorna ploča br. 20 i manja mramorna ploča bez broja zaključno s bočnim dijelom ruba ploče br. 77 tvore cjelinu lijeve stranice sarkofaga. Iz predložene rekonstrukcije moguće je dobiti podatak da su dimenzije bočnih stranica otprilike 160 x 170 cm, dok prednju i stražnju dužinu nažalost nije moguće odrediti zbog nedostatka fragmenata. Bočne stranice pretpostavljenog sarkofaga u dimenzijama se podudaraju s bočnim stranicama poklopca sarkofaga mješovitog tipa pronađenog u strukturi zida. Osim podudarnosti dimenzija i materijala na spomenutim cjelinama javlja se i isti motiv Meduze. Doduše, zamjećuje se stanovita razlika u obradi, modelaciji i čistoći prikaza glava Meduze na sanduku sarkofaga i onih na poklopcu sarkofaga.

Naime, Meduze na poklopcu kvalitetnije su izrade, forme su čistije i oštrije, a naglašena je i zjenica u očima. Objašnjenje za razliku obrade možemo tražiti u tome što su često poklopci i sarkofazi izrađivani odvojeno, ali moguće je i da je sanduk sarkofaga naknadno rađen prema poklopcu (ili obrnuto).

Navedene sličnosti mogu biti temelj da se poklopac sarkofaga mješovitog tipa s krajnjim oprezom poveže u moguću cjelinu sa sandukom sarkofaga s motivom Nike s girlandama.

Među spomenutim fragmentima pronađen je cijeli niz većih i manjih fragmenta, koji se unatoč sličnosti tematike (eroti s girlandama) za sada ne mogu pove-

afterlife, which confirms that the funereal character of the composition.³⁶

Such a quantity of fragments that can be assembled into a whole served as the basis for an attempt at reconstruction of the sarcophagus by means of a sketch. The sketch is a foundation for the approximate determination of the dimensions of the sarcophagus and a point of departure for assembling the scattered pieces into a whole. Graphic figure no. 1 is an attempt at a hypothetical reconstruction of the sarcophagus, from which it is apparent that the marble slabs under inv. no. 16 and 17 connected into a single piece belong to the right side of the receptacle, while marble slab no. 20 and the smaller non-numbered marble slab terminating at the lateral section of edge of slab no. 77 create the entirety of the left side of the sarcophagus. Based on the proposed reconstruction, it is possible to conclude that the dimensions of the lateral sides were approximately 160 x 170 cm, while the front and rear lengths cannot be ascertained due to a lack of fragments. The lateral sides of the assumed sarcophagus in those dimensions correspond to the lateral sides of the mixed-type sarcophagus lid found in the wall structure. Besides corresponding dimensions and materials, the same Medusa motif appears on both units. To be sure, certain differences between the rendering, modelling and purity in the depiction of Medusa's head on the sarcophagus receptacle and lid may also be observed.

Namely, the Medusas on the lid exhibit higher quality rendering, the forms are cleaner and sharper, and the pupils in the eyes are more pronounced. An explanation for the difference in rendering may be sought in the fact that often lids and sarcophaguses were crafted separately, but it is also possible that the sarcophagus receptacle was produced subsequently based on the example of the lid (or vice versa).

These similarities may be grounds for linking the mixed-type sarcophagus lid into a potential whole with the sarcophagus receptacle with the Nike and garlands motif, albeit with considerable caution.

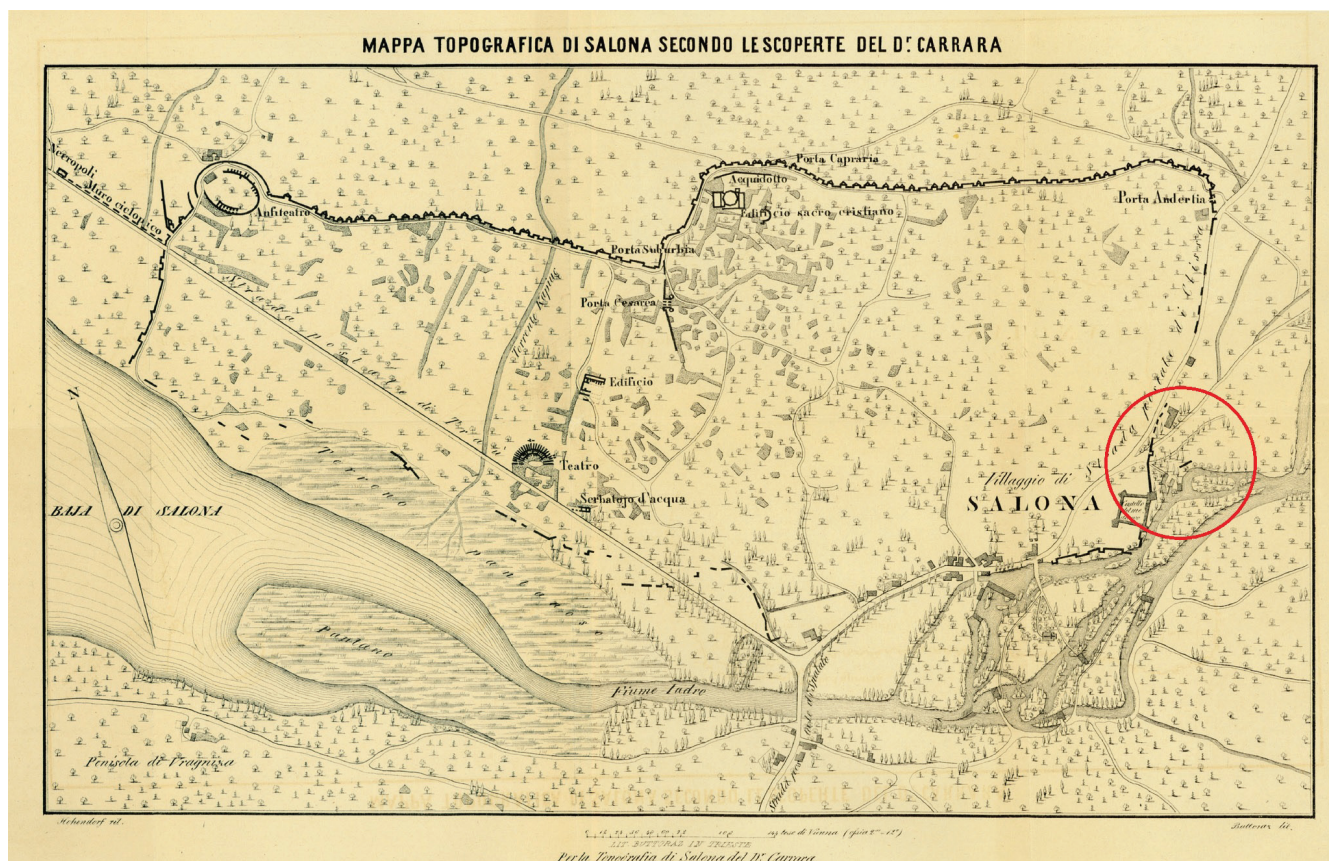
An entire series of larger and smaller pieces were found among the fragments, which despite the thematic similarity (Erotes with garlands) cannot thus far be linked to the proposed sarcophagus receptacle. They are probably part of another sarcophagus, or several, and they must still be subjected to a thorough-going analysis and art-historical scrutiny.

34 Cambi 1988, str. 75.

35 Cambi 1988, str. 48.

36 Cambi 1988, str. 48.

36 Cambi 1988, p. 48.



Sl. 14. Topografska karta Salone (F. Carrara 1850.)
 Fig. 14. Topographic map of Salona (F. Carrara 1850.)

zati s predloženim sandukom sarkofaga. Oni su dio vjerojatno drugog sarkofaga ili nekoliko njih, a njihova temeljita analiza i povijesno-umjetnička obrada tek predstoji.

Izvorni položaj kamenih elemenata, kontekst i vrijeme nastanka riječnog nasipa na lokalitetu Ribnjak

Pitanje koje se nameće čitatelju/stručnjaku, a koje je zbog prirode teksta i slijeda do sada obavljenih radova nepravredno ostalo po strani, svakako je pitanje vezano uz dataciju i podrijetlo, odnosno izvorni smještaj nanovo upotrijebljenih antičkih ulomaka. Nasip s lokaliteta Ribnjak nije usamljen primjer upotrebe spomenika kao građevnog ili reparacijskog materijala uz pomoć kojeg se regulirao riječni tok i popravljale građevine. Postoji niz primjera ovog fenomena u središtu i okolici Salone,³⁷ ali je potrebno spomenuti da reciklirani elementi nigdje ne nadmašuju umjetničku vrijednost ovih iz nasipa pronađenih 2007. godine.

Pomna i sustavna analiza ostalih ulomaka i građevnih elemenata koji su pronađeni u riječnoj strukturi,

Original position of the stone elements, context and time of construction of the river retaining wall at the Ribnjak site

A question that imposes itself to the reader/scholar, and which due to the nature of the texts and the sequence of the papers published thus far has been set aside, is certainly tied to the dating and origin, and the original position of the re-used ancient fragments. The retaining wall from the Ribnjak site is not an isolated example of the use of monuments as construction or recycled material to help regulate the river's flow and repair structures. There is an entire series of examples of this phenomenon in the centre and environs of Salona,³⁷ but it is necessary to underscore that the recycled elements nowhere surpass the artistic value of these from the retaining wall found in 2007.

A careful and systematic analysis of the remaining fragments and construction elements that were found in the river structure, which has yet to be conducted, and a precise dating of each individual fragment and its character will help in determining a specific chronological and historical framework for the

37 Piplović 2005, str. 2-9.

37 Piplović 2005, pp. 2-9.



Sl. 15. Topografska karta tlocrta Salone, detalj (F. Carrara 1850.)

Fig. 15. Topographic map of Salona, detail (F. Carrara 1850.)

koja tek predstoji, odnosno precizna datacija svakog pojedinog ulomka i njegovog karaktera pomoći će u svrstavanju nasipa u određeni vremenski i povijesni okvir, ali i upotpunjavanju povijesno-topografske slike antičke Salone. Kada se spominje topografska slika Salone, potrebno je svakako spomenuti F. Carraru i njegova istraživanja. Naime, F. Carrara je na osnovi sustavnih topografskih istraživanja Salone započelih 1846. godine izradio plan koji je i danas osnova za poznavanje izgleda i veličine tog najvećeg antičkog grada na istočnoj obali Jadrana.³⁸ Zanimljivo je da je Carrara izrađujući topografski nacrt Salone, između ostalog, na karti sjeveroistočno od utvrde Gradina ucrtao strukturu koja svojim položajem i orijentacijom odgovara nasipu pronađenom 2007. godine na istome mjestu. Dakle, sudeći prema crtežu, moguće je da je nasip bio vidljiv u vrijeme Carrarinih istraživanja Salone sredinom 19. stoljeća.³⁹

Preliminarnom i okvirnom analizom ulomaka i građevinskih elemenata iz arhitektonske strukture/nasipa s lokaliteta Ribnjak moguće je zaključiti da je većina ulomaka sepulkralnog karaktera, a da najmlađi od njih potječe iz druge polovice III. stoljeća. S obzirom na funeralni kontekst spomenika, posve je opravdano i logično pretpostaviti da je upotrijebljeni materijal preuzet s neke od obližnjih salonitanskih

retaining wall and supplement the historical and topographic picture of Roman-era Salona. When one mentions the topographic picture of Salona, F. Carrara and his research must inevitably be mentioned. Based on systematic topographic surveys of Salona that commenced in 1846, Carrara developed a map which even today serves as the foundation for knowledge of the appearance and size of this largest Roman-era city in the eastern Adriatic seaboard.³⁸ It is interesting that when drafting the topographic sketch of Salona, Carrara, among other things, drew in a structure on the map north-east of the Gradina fortification which in terms of its position and orientation corresponds to the retaining wall found in 2007 at that same place. Thus, judging by the sketch, it is possible that the retaining wall was visible during the time of Carrara's survey of Salona in the mid-19th century.³⁹

Based on a preliminary and general analysis of the fragments and construction elements from the architectural structure/retaining wall at the Ribnjak site, it is possible to conclude that most of the fragments have a sepulchral character, and that the youngest of them dates to the latter half of the 3rd century. Given the funerary context of the monuments, it is entirely justified and logical to assume that the materials used were taken from some of the nearby Salonitan necropolises. The fact that the retaining wall is located in the immediate vicinity of the eastern and south-eastern Salonitan necropolises rather certainly dictates the actual original location of these graves monuments. Certainly, between these two necropolises, the eastern necropolis is more likely, as its position and orientation vis-à-vis the Porta Caesarea to Zgon site, somewhat farther east than the Porta Andetria,⁴⁰ is much closer to the retaining wall than the south-eastern necropolis. If we take into account the weight of these elements, which for individual examples reaches up to several tons,⁴¹ it is entirely logical to assume that these, at least the heaviest (found in a single piece),

38 Carrara 1850, p. 117.

39 This intriguing fact was noticed by student Ana Doljanin when preparing her master's thesis in 2010.

40 Miletić 1992, p. 21.

41 The calculation is simple: length x height x width = volume; the volume of the block so obtained multiplied by the weight of 1 cubic ton of stone. For example, the approximate weight of the sarcophagus lid with the grieving Erotes from the Ribnjak site is: $3 \times 1.77 \times 1.18 = 6.27 \text{ m}^3$. If we subtract 50% due to its shape, we obtain an approximate value of 3.13 m^3 . If we multiply 3.13 by 2,600, we obtain an imposing weight of 8,138 kg! A stone element with such a weight is difficult to handle even using contemporary heavy machinery, which further validates the assumption that the eastern

38 Carrara 1850, str. 117.

39 Ovu zanimljivu činjenicu primijetila je studentica Ana Doljanin prilikom izrade svojega magistarskog rada 2010. godine.

nekropola. Činjenica da se nasip nalazi u neposrednoj blizini istočne i jugoistočne salonitanske nekropole, pobliže određuje samo izvorno mjesto nadgrobni spomenika. Svakako, između ove dvije nekropole izgledniji kandidat je istočna nekropola, čiji je položaj i orijentacija od *Porta Caesarea* do položaja Zgon, nešto istočnije od *Porta Andetria*,⁴⁰ mnogo bliži nasipu nego jugoistočna nekropola. Uzmemo li u obzir težinu pronađenih elemenata, koja je kod pojedinih primjeraka iznosila i po nekoliko tona,⁴¹ sasvim je logično pretpostaviti da su se elementi, bar oni najteži (i pronađeni u jednom komadu), donosili s najbliže udaljenosti. Istočna nekropola funkcionira od prvih desetljeća I. stoljeća n. e., na istok se, sve do izvora rijeke Jadro, proširila tijekom II. stoljeća, a pokapanje na tom potezu osobito je intenzivno u III. st. n. e.,⁴² što je vremenska poveznica sa za sada datiranim elementima iz nasipa.

Nasip, koji je nesumnjivo sagrađen kao zaštita od vodotoka rijeke Jadro, s obzirom na nedovoljno istraženu i gotovo potpuno nepoznatu hidrološku situaciju pritoka rijeke u povijesti, teško je precizno svrstati u određeni vremenski okvir. Ako međutim u obzir uzmemo već spomenutu činjenicu da najmlađi sekundarno upotrijebljeni fragment potječe iz sredine 3. st., gradnju nasipa najranije možemo datirati u početak 4. st., kada ulomci gube svoju prvotnu funkciju. Potrebno je naglasiti da je ova pretpostavka smjela ako se u obzir uzme rimski običaj da se na nadgrobni spomenicima često nalaze zabrane, kletve i kazne za uzurpatore ako se drznu dirnuti u nadgrobne spomenike, što je često bilo regulirano i zakonima. Dakle, s obzirom na svijest o privatnom vlasništvu grobnih parcela, moguće je gradnju kronološki pomaknuti za još jednu generaciju unaprijed, pa i više, ili opravdanje tražiti u izrazitoj nuždi, kada su stanovnici zbog kriznih uvjeta, preciznije, vremenskih i prirodnih nepogoda u ovom slučaju, bili prisiljeni uzimati građevni materijal s nekropola.

40 Miletić 1992, str. 21.

41 Izračun je jednostavan: duljina x visina x širina = volumen; dobiveni volumen bloka puta prosječna težina 1 kubičnog metra kamena. Primjerice, približna težina poklopca sarkofaga s tugujućim erotima s lokaliteta Ribnjak iznosi: $3 \times 1,77 \times 1,18 = 6.2658 \text{ m}^3$. Oduzmemo li 50 % zbog oblika, dolazimo do približnog volumena od $3,13 \text{ m}^3$. Pomnožimo li $3,13$ sa 2600, dobivamo impozantnu težinu od 8138 kg! Kamenim elementom takve težine teško je manipulirati koristeći se i suvremenom teškom mehanizacijom, što dodatno ide u prilog pretpostavci da je istočna salonitanska nekropola (najbliža nekropola) izvorno mjesto pronađenih elemenata.

42 Miletić 1992, str. 21.

were conveyed over the shortest distance. The eastern necropolis was in function since the initial decades of the 1st century AD, it spread eastward up to the source of the Jadro River during the 2nd century, and interments along this swath were particularly intense in the 3rd century,⁴² which is the chronological link to the thus far dated elements from the retaining wall.

The retaining wall, which was undoubtedly constructed as protection from the water-course of the Jadro River, is rather difficult to precisely classify into a specific chronological framework given the insufficiently researched and almost entirely unknown hydrological situation of the river's tributaries in history. If, however, we take into account the already noted fact that the youngest fragment in secondary use originated in the 3rd century, the construction of the retaining wall may be dated to the beginning of the 4th century at the earliest, when the fragments lost their original function. It should be stressed that this hypothesis is rather bold, if one takes into consideration the Roman custom of imposing prohibitions, curses and fines against usurpers if they dare infringe upon grave monuments, and the frequent elevation of such customs into law. Thus, with regard to the awareness of private ownership of grave plots, it is possible to chronologically move construction forward by one generation, or even more, or seek justification in a pressing need, when the residents, facing a crisis – specifically disastrous weather in this case – were forced to resort to the necropolis for construction material.

Conclusion

After the completion of conservation/restoration works on the archaeological materials from the Ribnjak site next to Salona, an entire spectrum of questions pertaining to their further protection and presentation was opened. Namely, cleaning is only considered the first phase of conservation and restoration, wherein the problems of degradation were addressed, and when certain harmful causes of degradation were removed and analyses of materials were conducted. However, the way to complete and final conservation demands consideration of the fragments as a whole and the resolution of questions pertaining to their further accommodation and presentation.

The actual conservation/restoration process, from analysis of the materials and cleaning to documentation of the fragments, has yielded some very useful

Salonitan necropolis (the closest) was the original site of these elements.

42 Miletić 1992, p. 21.

Zaključak

Nakon završetka konzervatorsko-restauratorskih zahvata izvedenih na arheološkome materijalu s lokaliteta Ribnjak pokraj Salone aktualizirao se širok spektar pitanja koja se odnose na njihovu daljnju zaštitu i prezentaciju. Naime, zahvati čišćenja smatraju se tek prvom fazom konzervacije-restauracije, kojima je obrađena problematika propadanja, u kojoj su uklonjeni neki od štetnih uzročnika propadanja i načinjene analize materijala. Međutim, put do potpune i konačne zaštite zahtijeva sagledavanje fragmenata u cjelinu te rješavanje pitanja njihova daljnjeg smještaja i prezentacije.

Sam proces zahvata restauracije-konzervacije, od analize materijala i čišćenja do dokumentacije fragmenata, doveo je do nekih korisnih spoznaja. Tijekom i neposredno nakon radova na sanduku sarkofaga s erotima, pokrovu sarkofaga s prikazom supružnika, pokrovu sarkofaga s ikonografskim prikazom tugujućih erota i nekoliko reljefnih ploča bilo je moguće temeljito sagledati površinu i ikonografski prikaz ulomaka. Zahvati su rezultirali točnom determinacijom materijala, što je otvorilo put do njihove stilske i povijesne interpretacije. Raskošan i zaista golem pokrov sarkofaga mješovitog tipa s prikazom pokojnika te manje raskošan, ali dimenzijama monumentalniji pokrov sarkofaga na dvije vode s ikonografskim prikazom erota izrađeni su od prokoneškog mramora, a moguće ih je pripisati lokalnim salonitanskim radionicama. Nadalje, u mnoštvu arheološkog materijala utvrđeno je postojanje za sada najmanje još jednog sarkofaga od prokoneškog mramora. Sanduk nije cjelovit, odnosno ne može se spojiti u cjelinu, no jasno je da ikonografski pripada tipu sarkofaga s prikazima Nike i girlandi. Spajanjem fragmenta u crtežu zaključeno je da se dimenzijama podudara s pokrovom sarkofaga mješovitog tipa, što je temelj za povezivanje ulomaka u cjelinu. Na kraju, sarkofag s erotskim komosom, koji se izgledom i ikonografskim komponentama činio kao antička produkcija, a analize gradbenog materijala dokazale su da je izrađen od prokoneškog mramora, izniman je i jedinstven primjerak na istočnoj obali Jadrana.

Daljnjom znanstvenom obradom ulomaka zasigurno bi se došlo do novih spoznaja koje se tiču stilske i povijesnoumjetničke problematike, ali i povezivanja ulomaka u integralnu cjelinu. Također, daljnja kataloška i znanstvena obrada ulomaka pomoći će u raščišćavanju dvojbi oko vremenskog nastanka nasipa, ali i razvojnih promjena antičke Salone i njezine povijesno-topografske slike. Na kraju, prošlo je više od deset godina od opsežnih arheoloških i konzervatorsko-restauratorskih radova na ovim

insights. During and immediately after works on the sarcophagus receptacle with the Eroses, the sarcophagus lid with the depiction of spouses, and sarcophagus lid with the iconographic image of grieving Eroses and several relief slabs, it was possible to thoroughly examine the surface and iconographic images on the fragments. The works resulted in a precise determination of the materials, which in turn opened the way for their stylistic and historical interpretation. The luxurious and truly enormous mixed-type sarcophagus lid bearing an image of the deceased and a less luxurious but more monumentally sized saddleback sarcophagus lid with an iconographic depiction of Eroses are made of Proconnesian marble, and they may be attributed to local Salonitan workshops. Furthermore, in the multitude of archaeological materials, thus far the existence of at least one more sarcophagus made of Proconnesian marble has been ascertained. The receptacle is not complete, i.e., it cannot be assembled into a whole, but in iconographic terms it clearly belongs to the sarcophagus type that bears images of Nike and garlands. Based on the assembly of the fragments by sketch, it was concluded that based on dimensions it corresponds to the mixed-type sarcophagus lid, which served as the foundation for linking the fragments into a whole. Finally, the sarcophagus bearing the Komos of Eroses, which seemed to be an Attic product based on its appearance and iconographic components – while an analysis of its materials showed that it is made of Proconnesian marble – is an exceptional and unique example on the eastern Adriatic seaboard.

Further scholarly analysis of the fragments shall certainly lead to new insights concerning the stylistic and art-historical aspects, as well as the connection of the fragments into an integrated whole. Moreover, further cataloguing and scholarly research into the fragments will help in settling any doubts as to the chronological appearance of the retaining wall, as well as the developmental changes in Roman-era Salona and its historical and topographic picture. Finally, over a decade has passed since the extensive archaeological and conservation/restoration works involving these exceptional examples of Roman-era sepulchral art and nothing has yet been done to exhibit them in a museum setting, rather they are still temporarily being held on the greensward in front of Bulić's Tusculum.

iznimnim primjerima antičke sepulkralne umjetnosti, a da se ništa nije poduzelo na njihovu muzealiziranju, već su do daljnjega privremeno odloženi na travnatu površinu ispred Bulićeva Tusculuma.

LITERATURA / BIBLIOGRAPHY

- Asgari 1992 N. Asgari, *Prokonnesos-1991, Calismari X. Arastrima sonuclari toplantisi*, Ankara 25-29 mayis 1992, 487-509.
- Antonelli, Lazzarini 2015 F. Antonelli, L. Lazzarini, *An updated petrographic and isotopic reference database for white marbles use din antiquity*, Rendiconti Lincei, Scienze fisiche e naturali, Roma 2015, 400-411.
- Bulić 1907 F. Bulić, *Due coperchi marmorei trovati a Salona*, Bullettino di archeologia e storia Dalmata XXX, Split 1907, 99.
- Cambi 1988 N. Cambi, *Atički sarkofazi na istočnoj obali Jadrana*, Split 1988.
- Cambi 1993 N. Cambi, *Rimski nadgrobni spomenici iz Asserije*, Radovi Filozofskog fakulteta u Zadru 31 (18), Zadar 1993, 25-51.
- Cambi 2010 N. Cambi, *Sarkofazi lokalne produkcije u rimskoj Dalmaciji*, Split 2010.
- Carrara 1850 F. Carrara, *Topografia e scavi di Salona*, Trieste 1850.
- Fučić 2004 M. Fučić, *Čišćenje pomoću mlaza/mlazno čišćenje površine kamena u restauratorskom kontekstu*, Zbornik radova KONKAM 2004., Umjetnička akademija u Splitu, Split 2004, 45-55.
- Giuliano, Palma 1978 A. Giuliano, B. Palma, *La maniera ateniese di eta romana. I maestri dei sarcofagi attici*, Studi miscellanei 24, Roma 1978, 13-30.
- Goette 1990 H. R. Goette, *Studien zu römischen Togadarstellungen*, Mainz am Rhein 1990.
- Koch, Sichtermann 1982 G. Koch, H. Sichtermann, *Römische Sarkophage, [Habdbuch der Archäologie]*, München 1982.
- Miletić 1992 Ž. Miletić, *Istočna i jugoistočna nekropola Salone*, Radovi Filozofskog fakulteta u Zadru 30 (17), Zadar 1992, 21-50.
- Nodilo 2008 H. Nodilo, *Lokalitet: Solin - novi most na Jadru*, Hrvatski arheološki godišnjak, 4/2007, Zagreb 2008, 490-492.
- Piplović 2005 S. Piplović, *Recikliranje arhitektonskih i skulpturalnih elemenata u Saloni*, Radovi Zavoda za povijesne znanosti Hrvatske akademije znanosti i umjetnosti u Zadru 47, Zadar 2005, 1-25.
- Santa Maria Scrinari 1995 V. Santa Maria Scrinari, *Il Laterano Imperiale II, Dagli Horti Domitiae alla cappella cristiana*, Città del Vaticano 1995, 124, sl. 146.
- Schönauer 2001 S. Schönauer, *Odjeća, obuća i nakit u antičkoj Dalmaciji na spomenicima iz Arheološkog muzeja u Splitu*, Vjesnik za arheologiju i historiju dalmatinsku 93, Split 2001.